

cannon

# Rack & Panel Connectors Catalog



ITT

# Amazing things happen

## When great things connect

ITT Cannon is a leading global manufacturer of connector products serving international customers in the aerospace and defense, industrial and medical end markets.

Whether delivering critical specs to aircraft pilots, streaming data through communications satellites or enabling ultrasound equipment to give expectant parents a first look at their unborn child, ITT Cannon connects the world's most important information to the people who need it.



### More than a Century of Connections

Since 1915, Cannon products have been used in a history of "firsts." "From the first "talking" movie to the first man on the moon, Cannon has set the standard for reliable, harsh environment interconnect solutions." Today we proudly continue our legacy of innovation with a goal to connect the world and inspire the successes of the next century - because amazing things happen when great things connect.

Visit [ittcannon.com](http://ittcannon.com) to learn more.

### About ITT

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for the transportation, industrial, and energy markets. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life. ITT is headquartered in Stamford, Connecticut, with employees in more than 35 countries and sales in approximately 125 countries.

For more information visit [itt.com](http://itt.com)



Commercial Aerospace



Medical



Military & Defense



Industrial

### ITT Cannon's connector portfolio

is one of the most extensive in the industry, offering customers a range of off-the-shelf and customized interconnect solutions for multiple markets and applications. Visit [ittcannon.com](http://ittcannon.com) to learn more.

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# Introduction: Rack & Panel Connector Solutions

Designed for exceptional performance in harsh environments, ITT Cannon's Rack & Panel interconnect solutions are manufactured to the highest quality and reliability standards for the aerospace & defense industry. At ITT Cannon, our legacy of innovation and expertise in the design and engineering of Rack & Panel connectors has established industry and competitive benchmarks for decades. From our environment-resistant DPK interconnect, which was designed into nearly every U.S. space flight and mission flown during the 1960s, to the groundbreaking expansion of Rack & Panel Connectors with the introduction of our innovative BKAD/E Series in the 1970s, ITT Cannon has achieved significant milestones.

Today, we are recognized as an industry leader in rectangular Rack & Panel interconnect solutions, offering an unparalleled range of off-the-shelf and custom products to align with customer needs. Our latest is the BKA ARINC 600 Rack & Panel with ARINC 801 ASR, an integral part of our end-to-end ARINC 801 Fiber Optic Series for commercial and military aviation. Now and in the future, we remain committed to manufacturing the most reliable, high performance and cost-effective Rack & Panel connectors available to meet the demands of a dynamic marketplace. Because at ITT Cannon, amazing things happen when great things connect.

Learn more about our world-class manufacturing processes, facilities and RoHS compliance on page 121 or visit [ittcannon.com](http://ittcannon.com)

Our tradition of engineering excellence continues with the **BKA Rack & Panel Connector with ARINC 801 ASR**. Designed for use in harsh environment applications that require quick and accurate data transfer such as In-Flight Entertainment/Connectivity, this innovative fiber optic interconnect solution supports transmission speeds of 10 gigabits/sec (Gb/S) or more. Built for optimum performance in the most extreme conditions, the BKA Rack & Panel Connector with ARINC 801 ASR delivers signals, video and data when it matters most. See page 11 for more details or visit [ittcannon.com](http://ittcannon.com)



|                       | BKAD/E/F<br>ARINC 600 | SGA<br>ARINC 600 | DPX<br>ARINC 404 | DPXNE/NA<br>AS81659 | DPK<br>83733-Style | DPA |
|-----------------------|-----------------------|------------------|------------------|---------------------|--------------------|-----|
| Type                  | Plug and Socket       |                  |                  |                     |                    |     |
| Current<br>Rating     | see ARINC 600         |                  | AS39029          |                     |                    |     |
| Contact<br>Resistance | AS39029               |                  |                  |                     |                    |     |
| Contact<br>Material   | AS39029               |                  |                  |                     |                    |     |
| Shell                 | see ARINC 600         |                  | Various          | AS81659             | 83733-Style        |     |
| Shell Material        | Aluminum Alloy        |                  |                  |                     |                    |     |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## Product Overview

BKA connectors represent the standard for Avionic systems developed to support the Air Transportation market. They are blind mate connectors designed per ARINC 600. These connectors are available in 3 and 6 gang configurations and can accommodate up to 800 low insertion force contacts. The inserts are field replaceable. BKA connectors are available in environmental and non-environmental versions.



| BKAC                                                                                                                                                                                                                                                                   | BKAD/E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BKAF/X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Rear Release/Rear Removable<br/>Size 12, 16, 20, 22 Crimp Contacts</p> <p>BKAC is a combination of BKAD (no environmental O-ring) with inserts not potted into the shell. BKAE in which dielectric inserts have a wire seal in the grommet on the rear surface.</p> | <p>Rear Release/Rear Removable<br/>Size 12, 16, 20, 22 Crimp Contacts</p> <p>BKAD/E connectors represent the standard for new avionic systems developed to support the air transportation market. Several important design concerns have been addressed and solved in this new series. High mating forces of pluggable modules in a rack have been reduced by approximately two-thirds.</p> <p>The low insertion force contacts are also interchangeable with the contacts used in the DPX series and permit retrofit of existing equipment.</p> | <p>Front Release/Front Removable<br/>Size 22 Solder Tail and Wrap Post Contacts</p> <p>This new connector is totally intermateable and intermountable with ARINC 600 connectors now in the field.</p> <p>The BKAF permits the user to easily replace a contact in case of problems, rather than disassemble the entire connector--it is available with size 22 contacts in wrap post or solder-tail versions. The system maintains the advantages of low insertion force technology incorporated in all ARINC 600 connectors.</p> <p>BKAX contacts are front release and front removable</p> |

- Low insertion force contacts
  - Both environmental and non- environmental versions
  - Polarizing posts that are removable from the mating face
  - Field replaceable inserts for size 22 and power contacts
- Up to 800 size 22 contacts in one connector
  - Crimp, coax, power, printed circuit and wire wrapable post style contacts
  - Uses standard DPX crimp, insertion/extraction tooling
  - Waveguide connections available

Dimensions shown in inches (mm)  
 Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## Product Overview (continued)

### Performance and Material Specifications

|                   |             | BKAD             | BKAE/C                   | BKAF/X         | Specifications |
|-------------------|-------------|------------------|--------------------------|----------------|----------------|
| Shell & Waveguide | Material    | Aluminum alloy   |                          |                | QQ A-591/A380  |
|                   | Finish      | Alodine 1200     |                          |                | MIL-C-5541     |
| Insulator         | Material    | Thermoset        |                          |                | N/A            |
| Contacts          | Material    | Copper alloy     |                          |                | QQ-C-533       |
|                   | Finish      | Gold over Nickel |                          |                | MIL-G-45204    |
|                   | Termination | Crimp            |                          | P.C./Wrap Post | N/A            |
| Grommets & Seals  | Material    | N/A              | Silicone-based Elastomer | N/A            |                |
| O-Ring            | Material    |                  |                          |                |                |

### Electrical Data

| Contact Size | Wire Size | Insulation O.D. Limits (Inch) Max. | Max. Current for Tests (Amps) per AS39029 and ARINC 600 | Max. Potential Drop (Millivolts) at 25°C |
|--------------|-----------|------------------------------------|---------------------------------------------------------|------------------------------------------|
| 12           | 12        | .135 (3.43)                        | 23.0                                                    | 60                                       |
|              | 14        |                                    | 17.0                                                    | 60                                       |
| 16           | 16        | .103 (2.62)                        | 13.0                                                    | 65                                       |
|              | 20        |                                    | 7.5                                                     | 55                                       |
| 20           | 20        | .071 (1.80)                        | 7.5                                                     | 65                                       |
|              | 22        |                                    | 5.0                                                     | 55                                       |
|              | 24        |                                    | 3.0                                                     | 45                                       |
| 22           | 22        | .054 (1.37)                        | 5.0                                                     | 55                                       |
|              | 24        |                                    | 3.0                                                     | 45                                       |
|              | 26        |                                    | 2.0                                                     | 40                                       |

# BA (ARINC 600)

## How to Order

| Product                               | BKA (Per ARINC 600) |                                                                                                                                                                             |  |  |  |  |  |  |  |  | BKA | R                                | D | 2 | - | A234 | M | - | 3 | 00 | 01* | - | F0 |  |
|---------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|-----|----------------------------------|---|---|---|------|---|---|---|----|-----|---|----|--|
| RoHS Version: (Optional)              | R -                 | RoHS Compliant<br>Finish: Trivalent Chromate                                                                                                                                |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
| Class:                                | C -                 | Same as E, except uses BKAD shells and Less O-rings on plug side                                                                                                            |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | D -                 | Non-Environmental (rear release, crimp contacts)                                                                                                                            |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | E -                 | Environmental (rear release, crimp contacts)                                                                                                                                |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | F -                 | Receptacle only - Non-environmental (front release, solder and wrap post #22 contact, all others are rear release)                                                          |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | PF -                | Plug only - Non-environmental (front release, solder and wrap post #22 contact, all others are rear release)                                                                |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | T -                 | Non-environmental connector using filtered contacts. See ITT Filter Connector catalog for further details. (Reference only)                                                 |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | X -                 | Receptacle only - All contacts are front release, for PCB Applications only                                                                                                 |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | PX -                | Plug only - All contacts are front release, for PCB Applications only                                                                                                       |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       |                     |                                                                                                                                                                             |  |  |  |  |  |  |  |  |     | ARINC 600 Original Mating Forces |   |   |   |      |   |   |   |    |     |   |    |  |
| Shell Size:                           | 1 -                 | Max. contact capacity - 125                                                                                                                                                 |  |  |  |  |  |  |  |  |     | 27 lbs *                         |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | 2 -                 | Max. contact capacity - 400                                                                                                                                                 |  |  |  |  |  |  |  |  |     | 60 lbs *                         |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | 3 -                 | Max. contact capacity - 800                                                                                                                                                 |  |  |  |  |  |  |  |  |     | 105 lbs *                        |   |   |   |      |   |   |   |    |     |   |    |  |
| Connector Layout Description:         |                     | See Pages 12-16 for Connector Layouts                                                                                                                                       |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
| Size 1 Coax Insert Modifier:          | M -                 | Connector contains modified 71W1 or 2W2 insert (four Mounting screw hole locations and coaxial contact used in this insert are interchangeable between other manufacturers) |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
| Shell Style:                          | 3 -                 | Plug (Rack side)                                                                                                                                                            |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | 4 -                 | Receptacle (Box side)                                                                                                                                                       |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
| Connector Mounting Modifier:          |                     | See Page 9 for Connector Mounting Modifiers                                                                                                                                 |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
| Polarizing Position:                  | 01 -                | See Polarization chart on Page 22 for Position 01 through 216 (per ARINC 600)                                                                                               |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       |                     | 00 for polarization indicates that polarizing hardware is not supplied (i.e., BKAD2-313-30000)                                                                              |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
|                                       | 00 -                | Blank or no position indicated means - Polarizing posts or keys not installed but supplied with connector (i.e., BKAD2-313-300)                                             |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |
| Modifier (Contact, Finish, Material): | F0 -                | See Page 10 for Modifiers (Contact, Finish, Material)                                                                                                                       |  |  |  |  |  |  |  |  |     |                                  |   |   |   |      |   |   |   |    |     |   |    |  |

ANY OTHER COMBINATION OF INSERTS WITHIN A SPECIFIC SHELL IS AVAILABLE UPON REQUEST: For additional layouts, consult your account representative.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## How to Order (continued)

### Connector Mounting Modifier

|      |                                                                                                                                                                                                                                                                                                                                           |      |                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 00 - | PLUG AND RECEPTACLE CONNECTORS .148 dia. connector mounting holes. This is a Standard Configuration.                                                                                                                                                                                                                                      | 46 - | PLUG AND RECEPTACLE CONNECTORS .148 dia. connector mounting holes. SURTEC 650V ROHS Compliant plating.                                                                                                               |
| 01 - | PLUG AND RECEPTACLE CONNECTORS With #6 (.138) - 32 ESNA clinch nuts (See Table for quantities)                                                                                                                                                                                                                                            | 47 - | PLUG AND RECEPTACLE CONNECTORS Surtec 650V Plating-With #4 (.112) - 40 ESNA clinch nuts                                                                                                                              |
| 02 - | SIZE 1 RECEPTACLE CONNECTORS ONLY Standard Configuration with three PWB mounting lugs machined off.                                                                                                                                                                                                                                       | 48 - | PLUG AND RECEPTACLE CONNECTORS Electroless Nickel plated shells with 4-40 clinch nuts in all connector mounting holes (See Table for quantities)                                                                     |
| 03 - | PLUG AND RECEPTACLE CONNECTORS With #4 (.112) - 40 ESNA clinch nuts (See Table for quantities)                                                                                                                                                                                                                                            | 50 - | PLUG CONNECTORS ONLY-SIZE 1 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs.                                                                                         |
| 04 - | SIZE 1 RECEPTACLE CONNECTORS ONLY With four #6 (.138) - 32 ESNA clinch nuts. Modified shell - three PWB mounting lugs machined off and O/A length of flange shortened to 6.980. (See Table for quantities)                                                                                                                                | 51 - | PLUG CONNECTORS ONLY-SIZE 1 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs and all holes with #6-32 clinch nuts                                                     |
| 06 - | SIZE1 PLUG CONNECTOR ONLY With #6 (.138) - 32 ESNA clinch nuts (See Table for quantities) and with side mounting lugs machined off. (See Table for quantities)                                                                                                                                                                            | 52 - | PLUG CONNECTORS ONLY-SIZE 2 AND 3 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs and #6-32 clinch nuts in all places.                                               |
| 08 - | SIZE 2 AND 3 PLUG AND RECEPTACLE CONNECTORS ONLY With #4 (.112) - 40 ESNA clinch nuts in all connector mounting holes (See Table for quantities)                                                                                                                                                                                          | 53 - | PLUG CONNECTORS ONLY-SIZE 2 AND 3 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs and #6-32 clinch nuts except in center holes.                                      |
| 09 - | SIZE 2 AND 3 PLUG AND RECEPTACLE CONNECTORS ONLY With #6 (.138) - 32 ESNA clinch nuts in all connector mounting holes (See Table for quantities)                                                                                                                                                                                          | 54 - | PLUG CONNECTORS ONLY-SIZE 2 AND 3 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs with #6-32 clinch nuts (4 places).                                                 |
| 17 - | RECEPTACLE CONNECTOR ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell. The shell is provided without an EMI/grounding spring.                                                                                                                                                                              | 55 - | PLUG CONNECTORS ONLY-SIZE 2 AND 3 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs and all holes with #6-32 clinch nuts (6 places).                                   |
| 22 - | PLUG CONNECTORS ONLY Standard Configuration with .0008-.0012 thick nickel plated shell. The shell is provided with an EMI/Grounding spring. Metallic inserts, if supplied, are selectively plated - I.D. Silver; O.D. Nickel over Silver. The contact retaining/grounding clips are gold plated.                                          | 56 - | PLUG CONNECTORS ONLY-SIZE 2 AND 3 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs and #4-40 clinch nuts in all places.                                               |
| 23 - | PLUG AND RECEPTACLE CONNECTORS With floating eyelets (.048 min. radial float) in four corner connector mounting holes.                                                                                                                                                                                                                    | 57 - | PLUG CONNECTORS ONLY-SIZE 2 AND 3 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs and #6-32 clinch nuts (8 places no center hole clinch nuts).                       |
| 25 - | RECEPTACLE CONNECTORS ONLY 01 mod with #6 (.138) - 32 ESNA clinch nuts and .0008-.0012 thick nickel plated shell. (See Table for quantities)                                                                                                                                                                                              | 58 - | PLUG CONNECTORS ONLY-SIZE 1 ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell and EMI springs. With floating eyelets (.048 min. radial float) in four corner connector mounting holes. |
| 33 - | PLUG CONNECTORS ONLY Standard Configuration with .0008-.0012 thick nickel plated shell, but without EMI/Grounding springs.                                                                                                                                                                                                                |      |                                                                                                                                                                                                                      |
| 37 - | PLUG AND RECEPTACLE CONNECTORS With metric clinch nuts M3 X 6 (See Table for quantities)                                                                                                                                                                                                                                                  |      |                                                                                                                                                                                                                      |
| 38 - | PLUG CONNECTORS ONLY With metric clinch nuts M3 X 6 (See Table for quantities) and with .0008-.0012 thick nickel plated shell. The shell is provided with an EMI/ Grounding spring. Metallic inserts, if supplied, are selectively plated - I.D. Silver; O.D. Nickel over Silver. The contact retaining/ grounding clips are gold plated. |      |                                                                                                                                                                                                                      |
| 45 - | RECEPTACLE CONNECTOR ONLY Standard Configuration with .0008-.0012 thick nickel plated die cast shell. The shell is provided without an EMI/grounding spring.                                                                                                                                                                              |      |                                                                                                                                                                                                                      |

| Mounting Modifier                  | Shell Size | Quantity of Clinch Nuts |                      |
|------------------------------------|------------|-------------------------|----------------------|
|                                    |            | Plug Connector          | Receptacle Connector |
| 01, 03, 04, 06, 25, 37, 38, 47, 50 | 1          | 4                       | 4                    |
|                                    | 2          | 4                       | 6                    |
|                                    | 3          | 8                       | 10                   |
| 08, 09, 48                         | 1          | 4                       | 4                    |
|                                    | 2          | 10                      | 10                   |
|                                    | 3          | 12                      | 14                   |

Dimensions shown in inches (mm)  
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# BAK (ARINC 600)

## How to Order (continued)

### Modifier (Contact, Finish, Material)

#### BKAC/BKAD/BKAE/BKAF/BKAX

|         |                                                                                          |
|---------|------------------------------------------------------------------------------------------|
| BLANK - | Rear release, crimp, signal and power contacts supplied with connector (when applicable) |
| F0 -    | Contacts not supplied with connector (F0 not stamped on connector)                       |
| F00 -   | Less contacts and waveguide (F00 not stamped on connector)                               |

**BKAF - Signal contacts (size 22) are front release, front removable with solder post termination. Power contacts are rear release, rear removable with crimp termination.**

| Stamped Contacts - Receptacle Side Only |                                                                                                                                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| SE -                                    | Front release solder PCB contacts installed .150 (3.81). (Coax, Triax, and Quadrax does not have contacts installed)                            |
| SF -                                    | Front release solder PCB contacts installed .250 (6.35). (Coax, Triax, and Quadrax does not have contacts installed)                            |
| SG -                                    | Front release solder PCB contacts installed .375 (9.53). (Coax, Triax, and Quadrax does not have contacts installed)                            |
| SH -                                    | Front release solder PCB contacts installed .500 (12.7). (Coax, Triax, and Quadrax does not have contacts installed)                            |
| WA -                                    | Front release .025(0.63) Sq. x .250 (6.35) (1 wrap) wrap post and crimp, rear release power contacts (when applicable) supplied with connector  |
| WB -                                    | Front release .025(0.63) Sq. x .375 (9.53) (2 wraps) wrap post and crimp, rear release power contacts (when applicable) supplied with connector |
| STE* -                                  | Stamped PCB contacts installed .150 (3.81). (Coax, Triax, and Quadrax does not have contacts installed)                                         |
| STF -                                   | Stamped PCB contacts installed .250 (6.35). (Coax, Triax, and Quadrax does not have contacts installed)                                         |
| STG -                                   | Stamped PCB contacts installed .375 (9.53). (Coax, Triax, and Quadrax does not have contacts installed)                                         |
| STH* -                                  | Stamped PCB contacts installed .500 (12.7). (Coax, Triax, and Quadrax does not have contacts installed)                                         |

**BKAX - Signal contacts (size 22) are front release, front removable with solder post termination. Power contacts are front release, front removable with solder post termination.**

| Stamped Contacts - Receptacle Side Only |                                                                                                                              |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| SS -                                    | Front release solder PCB contacts installed .150 (3.81) including Coax, Triax, and Quadrax. All contacts to be PCB.          |
| ST -                                    | Front release solder PCB contacts installed .250 (6.35) including Coax, Triax, and Quadrax. All contacts to be PCB.          |
| SU -                                    | Front release solder PCB contacts installed .375 (9.53) including Coax, Triax, and Quadrax. All contacts to be PCB.          |
| SV -                                    | Front release solder PCB contacts installed .500 (12.7) including Coax, Triax, and Quadrax. All contacts to be PCB.          |
| SW -                                    | Front release solder PCB contacts installed .150 (3.81) including Quadrax. (Coax and Triax does not have contacts installed) |
| SX -                                    | Front release solder PCB contacts installed .250 (6.35) including Quadrax. (Coax and Triax does not have contacts installed) |
| SY -                                    | Front release solder PCB contacts installed .375 (9.53) including Quadrax. (Coax and Triax does not have contacts installed) |
| SX -                                    | Front release solder PCB contacts installed .500 (12.7) including Quadrax. (Coax and Triax does not have contacts installed) |
| STS* -                                  | Stamped PCB contacts installed .150 (3.81) including Coax, Triax, and Quadrax. All contacts to be PCB.                       |
| STT -                                   | Stamped PCB contacts installed .250 (6.35) including Coax, Triax, and Quadrax. All contacts to be PCB.                       |
| STU -                                   | Stamped PCB contacts installed .375 (9.53) including Coax, Triax, and Quadrax. All contacts to be PCB.                       |
| STV* -                                  | Stamped PCB contacts installed .500 (12.7) including Coax, Triax, and Quadrax. All contacts to be PCB.                       |
| STW* -                                  | Stamped PCB contacts installed .150 (3.81) including Quadrax. (Coax and Triax does not have contacts installed)              |
| STX -                                   | Stamped PCB contacts installed .250 (6.35) including Quadrax. (Coax and Triax does not have contacts installed)              |
| STY -                                   | Stamped PCB contacts installed .375 (9.53) including Quadrax. (Coax and Triax does not have contacts installed)              |
| STZ* -                                  | Stamped PCB contacts installed .500 (12.7) including Quadrax. (Coax and Triax does not have contacts installed)              |

NOTE: Coaxial contacts to be ordered separately.

All Fiber Optic layouts will not have Fiber Optic contacts installed

\* STE, STH, STS, STV, STW, STZ (Tooling will need to be assessed for these versions)

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## Contact Arrangements

### Fiber Optic Contact Arrangements

#### Introducing the New ARINC 801 Inserts for BKA (ARINC 600) Connectors

Designed for use in applications that require quick and accurate data transfer, Cannon's **ARINC 801 Fiber Optic Interconnect Solutions** are capable of operating at transmission speeds of 10 gigabits/sec (Gb/S) or more. Built for optimum performance in extreme conditions, our ARINC 801 Fiber Optic Series delivers signal, video and data when it matters most.

Several standard ARINC 600 insert arrangements are available for Cannon's Rack & Panel connector family.



12F12



17Q2



12F5C2



20F12Q8  
20F12T8



F36

| Insert             | Description                                        | Shell Size | Shell Style         | Cavity  |
|--------------------|----------------------------------------------------|------------|---------------------|---------|
| 12F12              | 12 #16 Fiber Optic                                 | 1          | BKAC/BKAD/BKAE/BKAF | C       |
| 17Q2               | 12 #16 Fiber Optic<br>3 #16<br>2 #8 (Quadrax)      | 2/3        |                     | C or F  |
| 12F5C2             | 5 #16 Fiber Optic<br>4 #12<br>1 #16<br>2 #5 (Coax) |            |                     |         |
| 20F12Q8<br>20F12T8 | 12 #16 Fiber Optic<br>8 #8 (Quadrax or Twinax)     |            |                     | A,B,D,E |
| F36                | 36 #16 Fiber Optic                                 |            |                     |         |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## Contact Arrangements (continued)

Shell Size 1 - BKAC/BKAD/BKAE/BKAF/BKAX Cavity A or B Contact Arrangements  
 (Plug rear face shown)

**BKAC/BKAD/BKAE**  
 Rear surface white on blue to indicate rear release rear removal contacts

**BKAF/BKAX (Front Release)**  
 Engaging end surface white on red to indicate front release front removal contacts

| 30T2 / 30Q2                                                   | 60     | Blank       |
|---------------------------------------------------------------|--------|-------------|
| 28 #22<br>2 # 8 Twinax/Coax/Quadrax<br>(#8 Grounded to Shell) | 60 #22 | No Contacts |

Shell Size 1 - BKAC/BKAD/BKAE/BKAF/BKAX Shell Cavity C Contact Arrangements  
 (Plug rear face shown)

**BKAC/BKAD/BKAE**  
 Rear surface white on blue to indicate rear release rear removal contacts

**BKAF/BKAX (Front Release)**  
 Engaging end surface white on red to indicate front release front removal contacts

| 4 / 4T4<br>A4W4 | 5W2                         | 40     | 12F12                 | Blank       |
|-----------------|-----------------------------|--------|-----------------------|-------------|
| 4 #12           | 1 #12<br>2 #16<br>2 #5 Coax | 40 #22 | 12 #16<br>Fiber Optic | No Contacts |

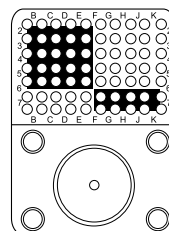
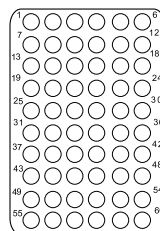
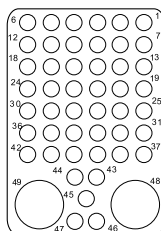
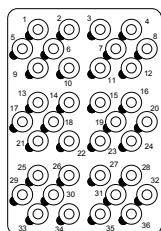
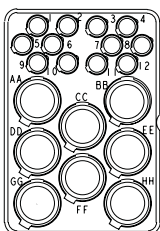
Shell Size 2/3 - BKAC/BKAD/BKAE/BKAF/BKAX Shell Cavity A,B,D,E Contact Arrangements  
 (Plug rear face shown)

| 2W2 / 2G2 | 4W4                                        | 10T10 / 10P10                                                   | 11Q11         | 24     |
|-----------|--------------------------------------------|-----------------------------------------------------------------|---------------|--------|
| 2 #1 Coax | 4 Modified<br>#1 Coax<br>(Metallic Insert) | 10 #8 Triax/Coax<br>(#8 Grounded to Shell)<br>(Metallic Insert) | 11 #8 Quadrax | 24 #12 |

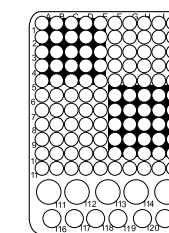
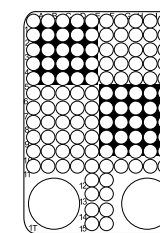
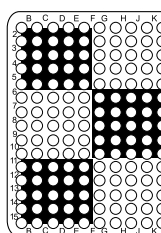
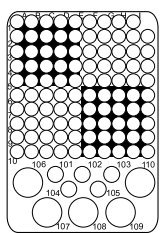
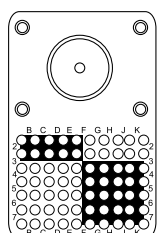
# BKA (ARINC 600)

## Contact Arrangements (continued)

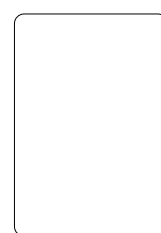
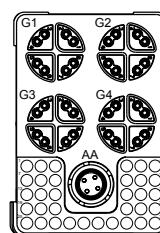
Shell Size 2/3 - BKAC/BKAD/BKAE/BKAF/BKAX Shell Cavity A,B,D,E Contact Arrangements  
(Plug rear face shown)



| 20F12Q8 / 20F12T8                  | F36                | 49T2                 | 60     | 71W1 / 71W1A        |
|------------------------------------|--------------------|----------------------|--------|---------------------|
| 12 #16 Fiber Optic<br>8 #8 Quadrax | 36 #16 Fiber Optic | 47 #20<br>2 #8 Triax | 60 #20 | 70 #22<br>1 #1 Coax |



| 71W1B               | 110                       | 150     | 120T2 / 120Q2                                                | 121                       |
|---------------------|---------------------------|---------|--------------------------------------------------------------|---------------------------|
| 70 #22<br>1 #1 Coax | 100 #22<br>5 #12<br>5 #20 | 150 #22 | 118 #22<br>2 #8 Twinax/Coax/Quadax<br>(#8 Grounded to Shell) | 110 #22<br>5 #16<br>6 #20 |



| 4GQ39                                  | Blank       |
|----------------------------------------|-------------|
| 4 #0 OctoGig<br>1 #8 Quadrax<br>34 #22 | No Contacts |

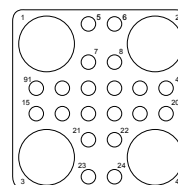
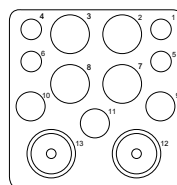
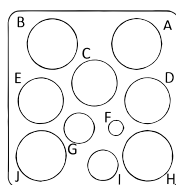
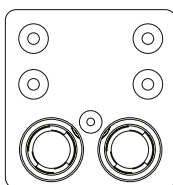
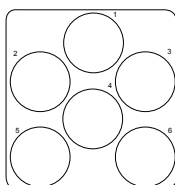
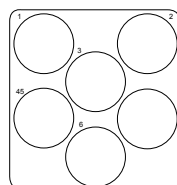
### BKAC/BKAD/BKAE

Rear surface white on blue to indicate rear release rear removal contacts for inserts containing standard signal & power contacts

### BKAF/BKAX (Front Release)

Engaging end surface white on red to indicate front release front removal contacts for inserts containing standard signal & power contacts

Shell Size 2/3 - BKAC/BKAD/BKAE/BKAF/BKAX Shell Cavity C or F Contact Arrangements  
(Plug rear face shown)



| 6    | 6T6 / 6Q6 / 6QA6 / 6P6                  | 7W2                         | 10C5T2                                              | 13W2 / 13Q2 / 13WQ2                               | 24T4 / 24Q4                  |
|------|-----------------------------------------|-----------------------------|-----------------------------------------------------|---------------------------------------------------|------------------------------|
| 6 #8 | 6 #8 Triax/Quadrax<br>(Metallic Insert) | 1 #16<br>4 #12<br>2 #5 Coax | 1 #20<br>2 #20 Insulated<br>2 #8 Triax<br>5 #5 Coax | 4 #20<br>4 #12<br>3 #16<br>2 #5 Coax / #8 Quadrax | 20 #20<br>4 #8 Triax/Quadrax |

For Contacts Cavity Location and Contact Cavity Identification refer to ARINC 600 or Consult Your Account Representative.

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## Contact Arrangements (continued)

Shell Size 2/3 - BKAC/BKAD/BKAE/BKAF/BKAX Shell Cavity C or F Contact Arrangements  
(Plug rear face shown)

|                 |                          |                          |                                                  |                                             |
|-----------------|--------------------------|--------------------------|--------------------------------------------------|---------------------------------------------|
|                 |                          |                          |                                                  |                                             |
| 25              | 34                       | 59                       | 64Q2                                             | 70Q2                                        |
| 25 #16          | 24 #20HD<br>10 #16       | 50 #22<br>5 #16<br>4 #12 | 60 #22<br>2 #16<br>2 #8 Quadrax                  | 68 #22<br>2 #8 Quadrax                      |
|                 |                          |                          |                                                  |                                             |
| 84              | 85                       | 100                      | 12F5C2                                           | 17Q2                                        |
| 80 #22<br>4 #20 | 80 #22<br>4 #20<br>1 #16 | 100 #22                  | 1 #16<br>4 #12<br>2 #5 Coax<br>5 #16 Fiber Optic | 3 #16<br>2 #8 Quadrax<br>12 #16 Fiber Optic |

|             |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                            |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p><b>BKAC/BKAD/BKAE</b></p> <p>Rear surface white on blue to indicate rear release rear removal contacts for inserts containing standard signal &amp; power contacts</p> <p>NOTE: In layouts using #22 contacts mixed with any other contact size (20HD, 16, 12), the size #22 contact type (pin or socket) determines the insulator as a pin insert or a socket insert.</p> | <p><b>BKAF/BKAX (Front Release)</b></p> <p>Engaging end surface white on red to indicate front release, front removal contacts for inserts containing standard signal &amp; power contacts</p> <p>NOTE #22 Contacts are Socket contacts, 20HD,16, 12 are Pin contacts.</p> |
| Blank       |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                            |
| No Contacts |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                            |

For Contacts Cavity Location and Contact Cavity Identification refer to ARINC 600 or Consult your account representative.

### Shell Size 2/3 BKAC/BKAD/BKAE Shell Cavity A,B,D,E Contact Arrangements – PHD Fiber Optic ARINC 600

|       |       |       |        |        |        |
|-------|-------|-------|--------|--------|--------|
|       |       |       |        |        |        |
| PHD-2 | PHD-4 | PHD-8 | PHD-16 | PHD-24 | PHD-32 |

All arrangements utilize PHD-T16-\*\*\*\* size 16 fiber optic termini. Please consult your account representative for higher density (72 and 88 cavity) layouts utilizing PHD-T22-\*\*\*\* size 22 fiber optic termini

All layouts shown are Receptacle engaging face and rear release.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## Shell Cavity Identification

CONNECTOR LAYOUT DESCRIPTION Note: All layouts with "OPEN" insert cavity are not supplied with an insulator. If a blank insert is required, please consult your account representative; all standard blank inserts are plastic. Three digit number contained within the shell layout indicates total number of contacts available (including Waveguide).

### Insert Designator Number - Shell Size 1

| ITT Cannon | Cavity A | Cavity B | Cavity C | ITT Cannon | Cavity A | Cavity B | Cavity C |
|------------|----------|----------|----------|------------|----------|----------|----------|
| 5          | OPEN     | OPEN     | 5W2      | A094       | 30T2     | 60       | 4        |
| 35         | 30T2     | BLANK    | 5W2      | 95         | 60       | 30T2     | 5W2      |
| 60         | OPEN     | 60       | OPEN     | A095       | 30T2     | 60       | 5W2      |
| A060       | 60       | OPEN     | OPEN     | A100       | 60       | BLANK    | 40       |
| 64         | 30T2     | 30T2     | 4        | 120        | 60       | 60       | OPEN     |
| 65         | OPEN     | 60       | 5W2      | 124        | 60       | 60       | 4        |
| A065       | 60       | OPEN     | 5W2      | 125        | 60       | 60       | 5W2      |
| B065       | 30T2     | 30T2     | 5W2      | 130        | 60       | 30T2     | 40       |
| C065       | BLANK    | 60       | 5W2      | A130       | 30T2     | 60       | 40       |
| 94         | 60       | 30T2     | 4        | 160        | 60       | 60       | 40       |

### Insert Designator Number - Shell Size 2

| ITT Cannon | Cavity A  | Cavity B  | Cavity C    | ITT Cannon | Cavity A  | Cavity B  | Cavity C |
|------------|-----------|-----------|-------------|------------|-----------|-----------|----------|
| 13         | OPEN      | OPEN      | 13W2        | B121       | 121       | OPEN      | OPEN     |
| 017M       | 2W2       | 2W2       | 13W2        | 122        | 49T2      | 49T2      | 24T2     |
| 019M       | 4W4       | 2W2       | 13W2        | 124        | BLANK     | 24        | 100      |
| Q34        | 11Q11     | 10T10     | 13Q2        | 133        | 60        | 60        | 13W2     |
| Q035       | 11Q11     | 11Q11     | 13Q2        | A133       | 24        | 24        | 85       |
| 59         | BLANK     | BLANK     | 59          | Q135       | 11Q11     | 24        | 100      |
| 66         | BLANK     | 60        | 6           | 137        | 121       | 10T10     | 6T6      |
| Q69        | 11Q11     | 24        | 34          | 142        | 71W1      | 71W1      | OPEN     |
| 71         | OPEN      | 71W1      | OPEN        | 143        | 120T2     | 10T10     | 13W2     |
| A071       | 71W1      | OPEN      | OPEN        | Q144       | 120T2     | 11Q11     | 13W2     |
| Q074       | 4W4       | 11Q11     | 59          | Q154       | 120T2     | 11Q11     | 13W2     |
| Q075       | 11Q11     | BLANK     | 64Q2        | 155        | 71W1      | 71W1      | 13W2     |
| Q81        | 11Q11     | 11Q11     | 59          | 155M       | 71W1A     | 71W1A     | 13W2     |
| 084M       | BLANK     | 71W1A     | 13W2        | V155M      | 71W1B     | 71W1A     | 13W2     |
| 085M       | WAVEGUIDE | 71W1      | 13W2        | 158M       | 2W2       | 71W1A     | 85       |
| A085M      | 71W1      | WAVEGUIDE | 13W2        | A158M      | 2W2       | 71W1B     | 85       |
| B085       | OPEN      | OPEN      | 85          | 163        | OPEN      | 150       | 13W2     |
| 086M       | 2W2       | 71W1A     | 13W2        | A163       | 150       | OPEN      | 13W2     |
| Q086       | 11Q11     | 11Q11     | 64Q2        | QB163      | OPEN      | 150       | 13Q2     |
| Q089       | 4W4       | BLANK     | 85          | 164        | 150       | WAVEGUIDE | 13W2     |
| 93         | 4W4       | 4W4       | 85          | A164       | WAVEGUIDE | 150       | 13W2     |
| Q096       | BLANK     | 11Q11     | 85          | A165M      | 2W2       | 150       | 13W2     |
| 100        | OPEN      | OPEN      | 100         | 167        | 4W4       | 150       | 13W2     |
| A100       | BLANK     | OPEN      | 100         | 173M       | 2W2       | 71W1B     | 100      |
| Q107       | 11Q11     | 11Q11     | 85          | A173       | 150       | 10T10     | 13W2     |
| 109        | 60        | 49T2      | BLANK       | B173       | 10T10     | 150       | 13W2     |
| 120        | 60        | 60        | METAL BLANK | 187        | 24        | 150       | 13W2     |
| 121        | OPEN      | 121       | OPEN        | Q225       | 11Q11     | 150       | 64Q2     |
| A121       | 121       | BLANK     | BLANK       | A234M      | 71W1A     | 150       | 13W2     |

OTHER COMBINATION OF INSERTS WITHIN A SPECIFIC SHELL ARE AVAILABLE UPON REQUEST, PLEASE CONSULT YOUR ACCOUNT REPRESENTATIVE.

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## Shell Cavity Identification (continued)

CONNECTOR LAYOUT DESCRIPTION Note: All layouts with "OPEN" insert cavity are not supplied with an insulator. If a blank insert is required, please consult your account representative; all standard blank inserts are plastic. Three digit number contained within the shell layout indicates total number of contacts available (including Waveguide).

### Insert Designator Number - Shell Size 2 (continued)

| ITT Cannon | Cavity A  | Cavity B | Cavity C | ITT Cannon | Cavity A | Cavity B | Cavity C |
|------------|-----------|----------|----------|------------|----------|----------|----------|
| 235        | 150       | BLANK    | 85       | 301        | 121      | 121      | 59       |
| 240        | 60        | 121      | 59       | 306        | 150      | 150      | 6T6      |
| 246        | 120T2     | 120T2    | 6T6      | 313        | 150      | 150      | 13W2     |
| Q246       | 150       | 11Q11    | 85       | Q313       | 150      | 150      | 13WQ2    |
| 248        | 121       | 121      | 6T6      | 324        | 150      | 150      | 24T4     |
| 250        | OPEN      | 150      | 100      | Q324       | 150      | 150      | 24Q4     |
| A250       | 150       | BLANK    | 100      | 327        | 121      | 121      | 8        |
| 251        | WAVEGUIDE | 150      | 100      | 330        | 150      | 121      | 59       |
| Q253       | 120T2     | 120T2    | 13WQ2    | 340        | 120T2    | 120T2    | 100      |
| 254        | 110       | 110      | 34       | 342        | 121      | 121      | 100      |
| A284       | 121       | 150      | 13W2     | 370        | 120T2    | 150      | 100      |
| 300        | 150       | 150      | OPEN     | 400        | 150      | 150      | 100      |

### Insert Designator Number - Shell Size 3

| ITT Cannon | Cavity A | Cavity B    | Cavity C    | Cavity D | Cavity E | Cavity F |
|------------|----------|-------------|-------------|----------|----------|----------|
| 21         | 4W4      | 4W4         | 13W2        | BLANK    | OPEN     | OPEN     |
| 26         | OPEN     | OPEN        | 13W2        | OPEN     | OPEN     | 13W2     |
| 113        | OPEN     | OPEN        | 100         | OPEN     | OPEN     | 13W2     |
| A113       | OPEN     | OPEN        | 13W2        | OPEN     | OPEN     | 100      |
| 114        | 4W4      | 4W4         | 13W2        | 4W4      | 4W4      | 85       |
| Q198       | 11Q11    | 11Q11       | 13Q2        | 11Q11    | 11Q11    | 13Q2     |
| Q209       | 11Q11    | 11Q11       | BLANK       | 11Q11    | 150      | 13Q2     |
| Q253       | 150      | 121         | 13W2        | 11Q11    | 24       | 34       |
| Q261       | 4W4      | 120T2       | BLANK       | 4W4      | 120T2    | 13Q2     |
| 269M       | 2W2      | 2W2         | 13W2        | 2W2      | 150      | 100      |
| 271C       | 4W4      | 4W4         | 13W2        | BLANK    | 150      | 100      |
| 271M       | 2W2      | 2W2         | 13W2        | 4W4      | 150      | 100      |
| Q274       | 4W4      | 120T2       | 13Q2        | 4W4      | 120T2    | 13Q2     |
| 284        | 71W1     | 71W1        | OPEN        | 71W1     | 71W1     | OPEN     |
| Q307       | 110      | 11Q11       | 6Q6         | 24       | 150      | 6Q6      |
| 310        | 71W1     | 71W1        | 13W2        | 71W1     | 71W1     | 13W2     |
| Q324       | 11Q11    | METAL BLANK | METAL BLANK | 150      | 150      | 13Q2     |
| 326        | OPEN     | 150         | 13W2        | OPEN     | 150      | 13W2     |
| 330M       | 2W2      | 2W2         | 13W2        | 150      | 150      | 13W2     |
| A330M      | 150      | 150         | 13W2        | 2W2      | 2W2      | 13W2     |
| Q435       | 11Q11    | 11Q11       | 13Q2        | 150      | 150      | 100      |
| Q487       | 11Q11    | 150         | 13Q2        | 150      | 150      | 13Q2     |
| 496        | 121      | 121         | 6T6         | 121      | 121      | 6T6      |
| 600        | 150      | 150         | OPEN        | 150      | 150      | OPEN     |
| Q619       | 150      | 150         | 13Q2        | 150      | 150      | 6T6      |
| 626        | 150      | 150         | 13W2        | 150      | 150      | 13W2     |
| Q626       | 150      | 150         | 13Q2        | 150      | 150      | 13Q2     |
| 713        | 150      | 150         | 100         | 150      | 150      | 13W2     |
| 734        | 150      | 150         | 100         | 150      | 150      | 34       |
| 800        | 150      | 150         | 100         | 150      | 150      | 100      |

OTHER COMBINATION OF INSERTS WITHIN A SPECIFIC SHELL ARE AVAILABLE UPON REQUEST, PLEASE CONSULT YOUR ACCOUNT REPRESENTATIVE.

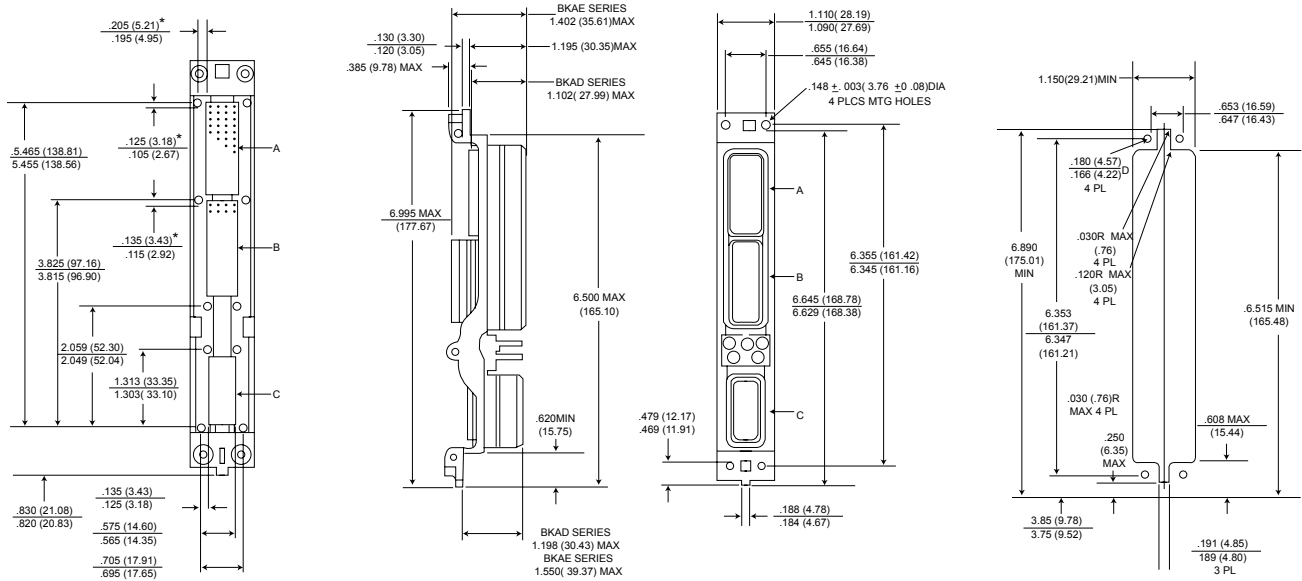
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# BKA (ARINC 600)

## Shell Dimensions

### Plug Dimensions – Shell Size 1

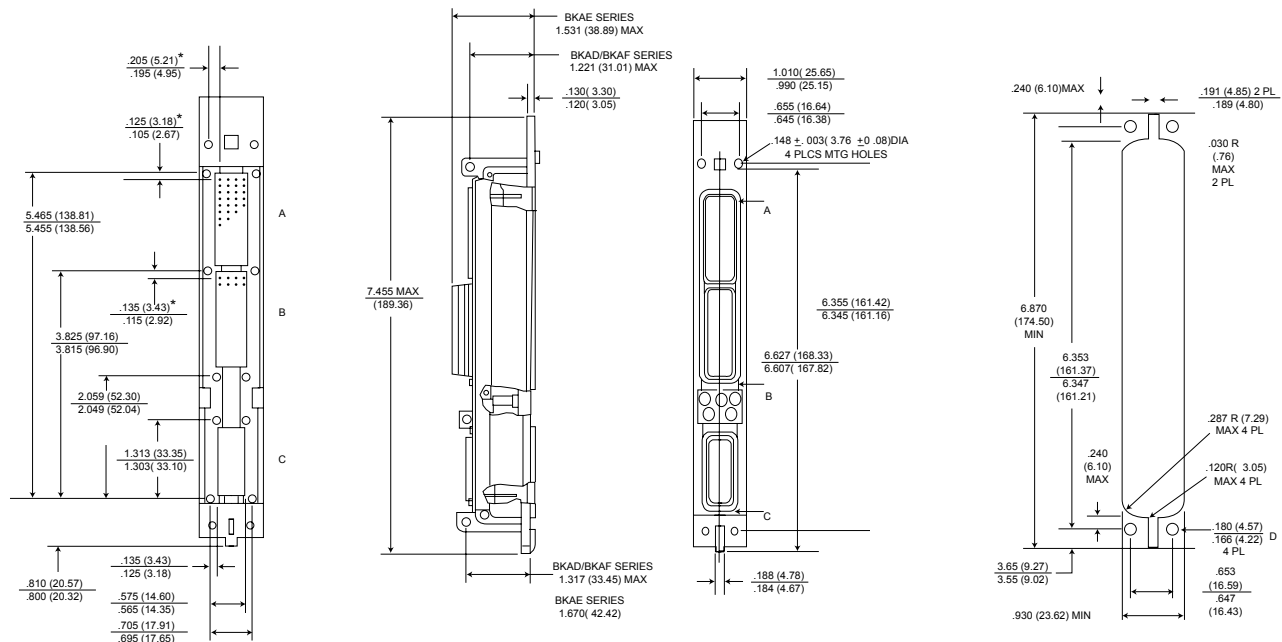


Retainer Plate

Size 1 Plug

Panel Cutout

### Receptacle Dimensions – Shell Size 1



Retainer Plate

Size 1 Receptacle

Panel Cutout

For further information, refer to ARINC 600 specification or consult your account representative.

\*This dimension indicates distance from centerline of retaining screw to the centerline of first contact cavity.

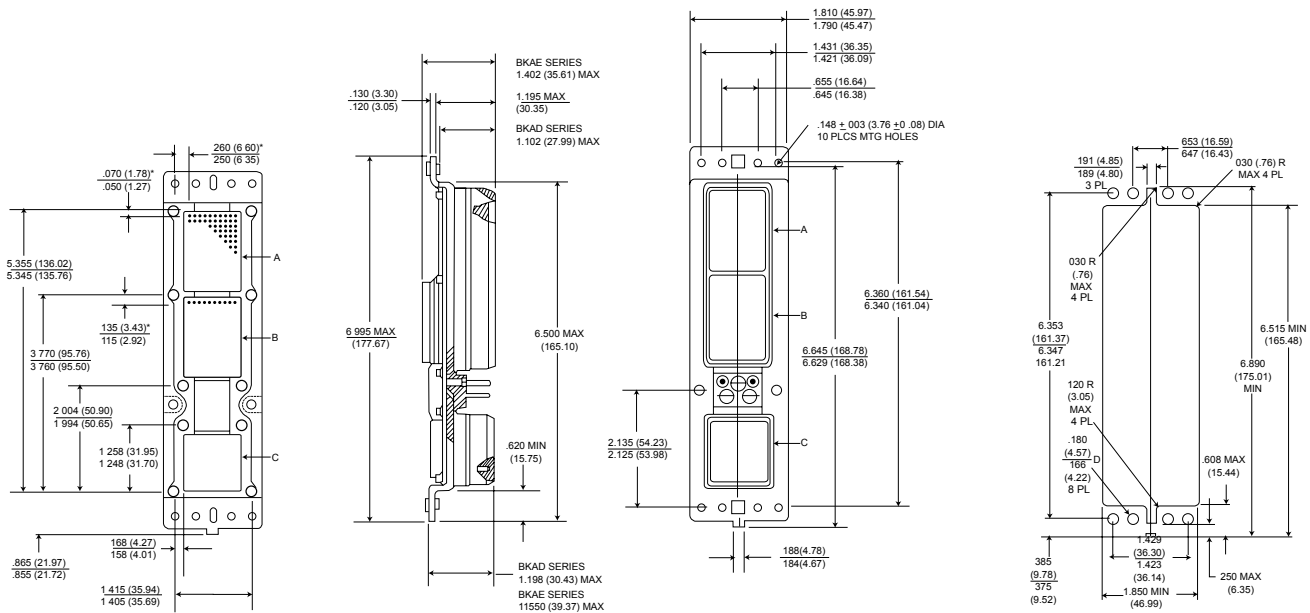
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

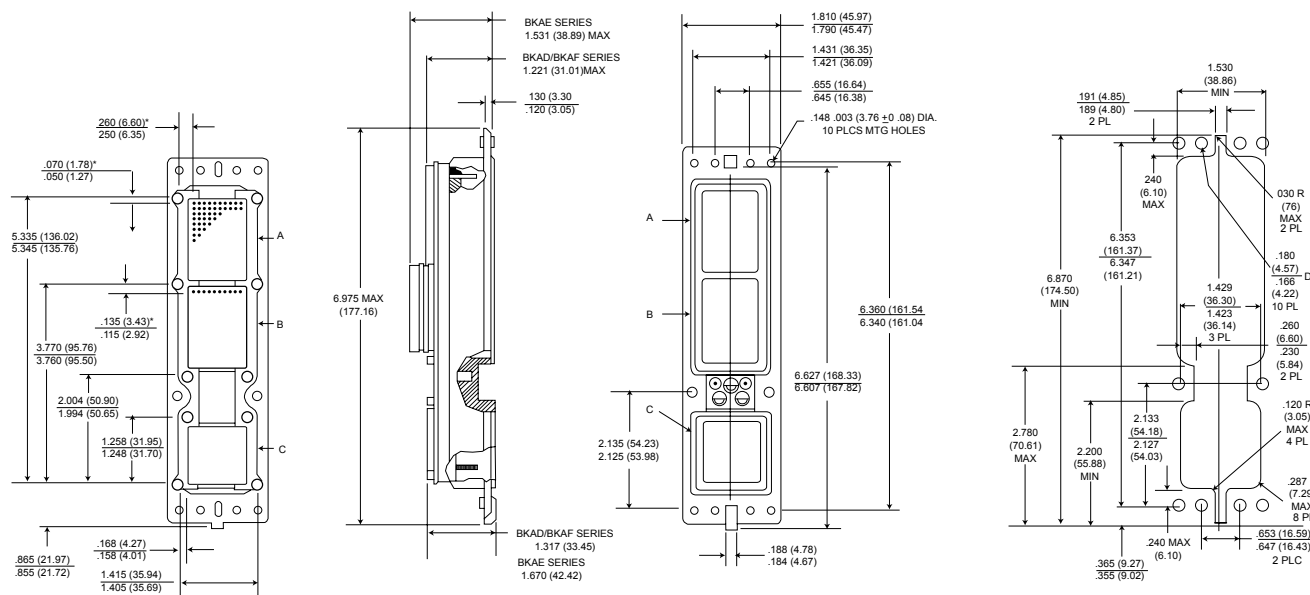
# BKA (ARINC 600)

## Shell Dimensions – (continued)

### Plug Dimensions – Shell Size 2



### Receptacle Dimensions – Shell Size 2



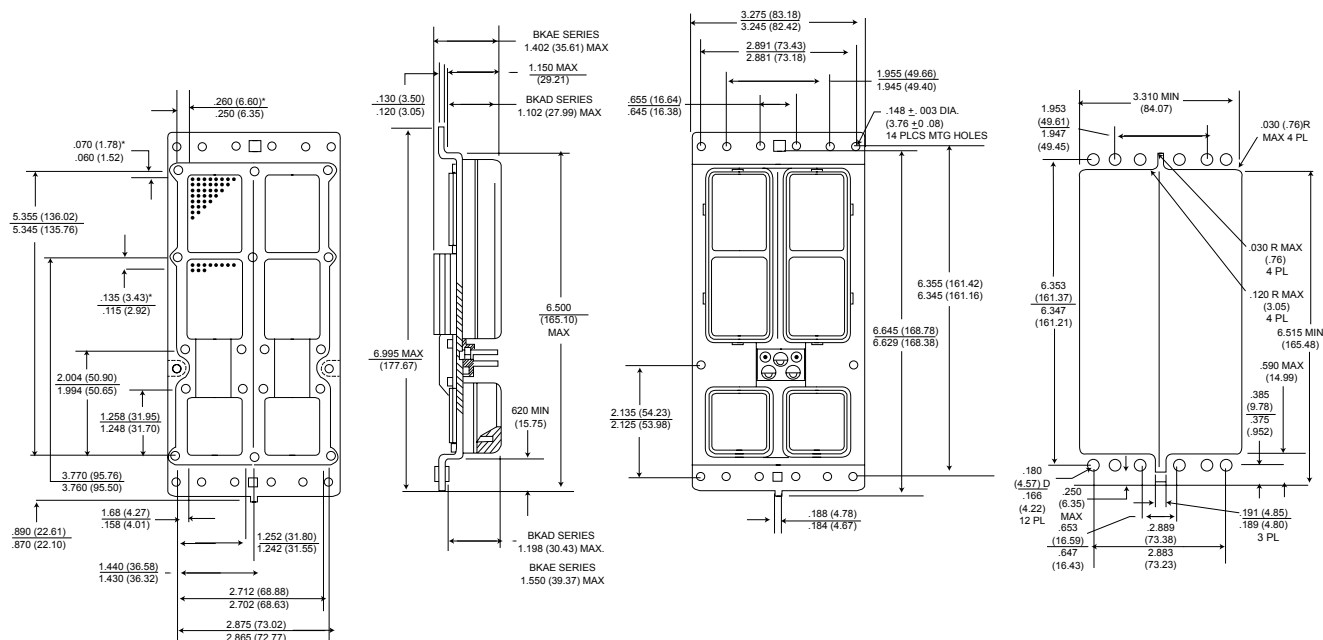
\*This dimension indicates distance from centerline of retaining screw to the centerline of first contact cavity.  
For further information, refer to ARINC 600 specification or consult factory.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

## BAK (ARINC 600)

## Shell Dimensions – (continued)

## Plug Dimensions – Shell Size 3

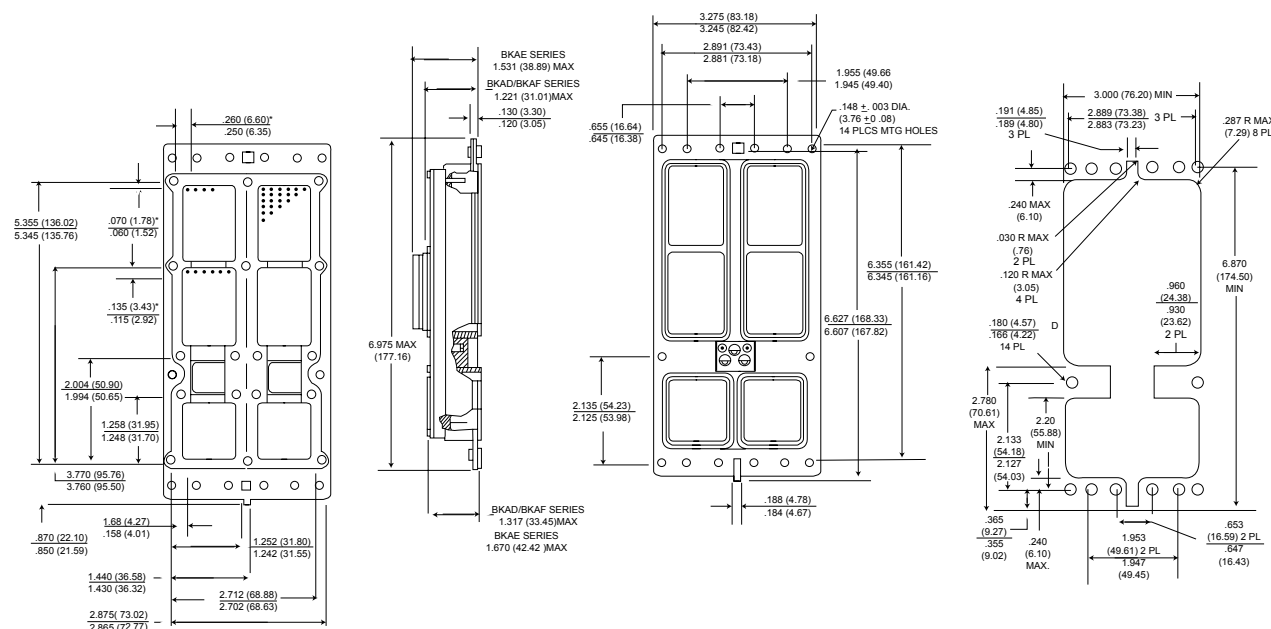


Retainer Plate

Size 3 Plug

Panel Cutout

### Receptacle Dimensions – Shell Size 3



Retainer Plate

Size 3 Receptacle

Panel Cutout

\*This dimension indicates distance from centerline of retaining screw to the centerline of first contact cavity.

For further information, refer to ARINC 600 specification or consult factory.

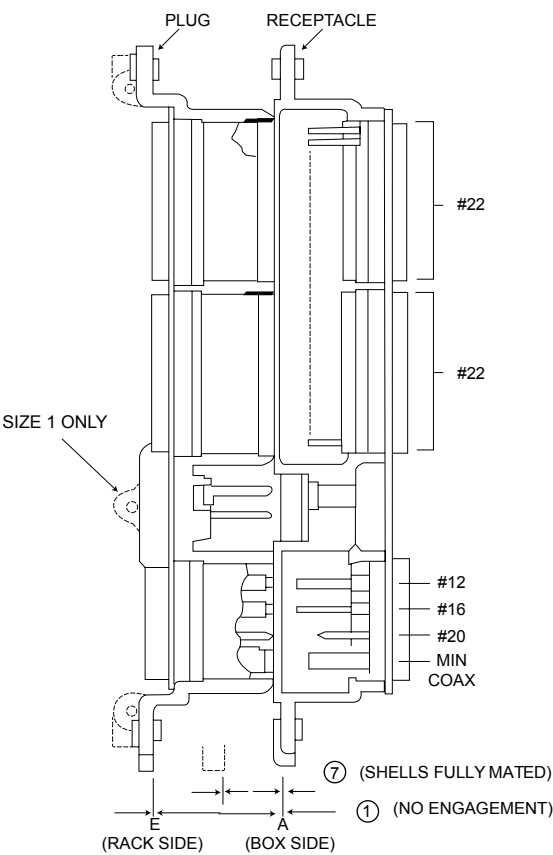
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# BA (ARINC 600)

## Shell Dimensions (continued)

### ARINC 600 Connector Engaging Sequence



| Mating Sequence | Flange Position With:              | Flange Spacing in. (mm)                        |
|-----------------|------------------------------------|------------------------------------------------|
| ①               | No Engagement                      | 1.245 (31.62)<br>Nom.                          |
| 2               | Shells Initially Engaged           | 1.110 (28.19)<br>1.073 (27.25)                 |
| 3               | Polarizing Pins Entering Keys      | 1.073 (27.25)<br>1.023 (25.88)                 |
| 4               | Contacts Entering Mating Insulator | #22 .800 (22.32)<br>.748 (18.99)               |
|                 |                                    | #20 .805 (20.44)<br>.741 (18.82)               |
|                 |                                    | #16 1.012 (25.70)<br>.949 (24.10)              |
|                 |                                    | #12 1.008 (23.60)<br>.953 (24.20)              |
|                 |                                    | Miniature Coax Varies; See Mil-Spec. (#5 Coax) |
| 5               | Contacts Electrically Engaged      | #22 .642 (16.30)<br>.547 (13.89)               |
|                 |                                    | #20 .649 (16.48)<br>.553 (14.04)               |
|                 |                                    | #16 .728 (18.49)<br>.818 (20.77)               |
|                 |                                    | #12 .772 (19.60)<br>.692 (17.57)               |
|                 |                                    | Miniature Coax Varies; See Mil-Spec. (#5 Coax) |
| 6               | "O" Ring Engagement (BKAE Only)    | .618 (15.70)<br>.578 (14.68)                   |
| ⑦               | Shells Fully Mated                 | .522 (13.26)<br>.488 (12.40)                   |

Notes:

Flush head screws are not permitted for connector mounting as they would position connector incorrectly

Dimension 7 was calculated to provide clearance for:

MCU backplate material thickness of 2.5 mm (.10 in)

Rack backplate material thickness of 2.5 mm (.10 in)

Connector mounting pan head screws, MCU 2.0 mm (.08 in)

Tolerance allowance: 3.2 mm (.13 in.) rack 2.0 mm (.08 in.)

Total: 12.2 (.50 in) (minimum)

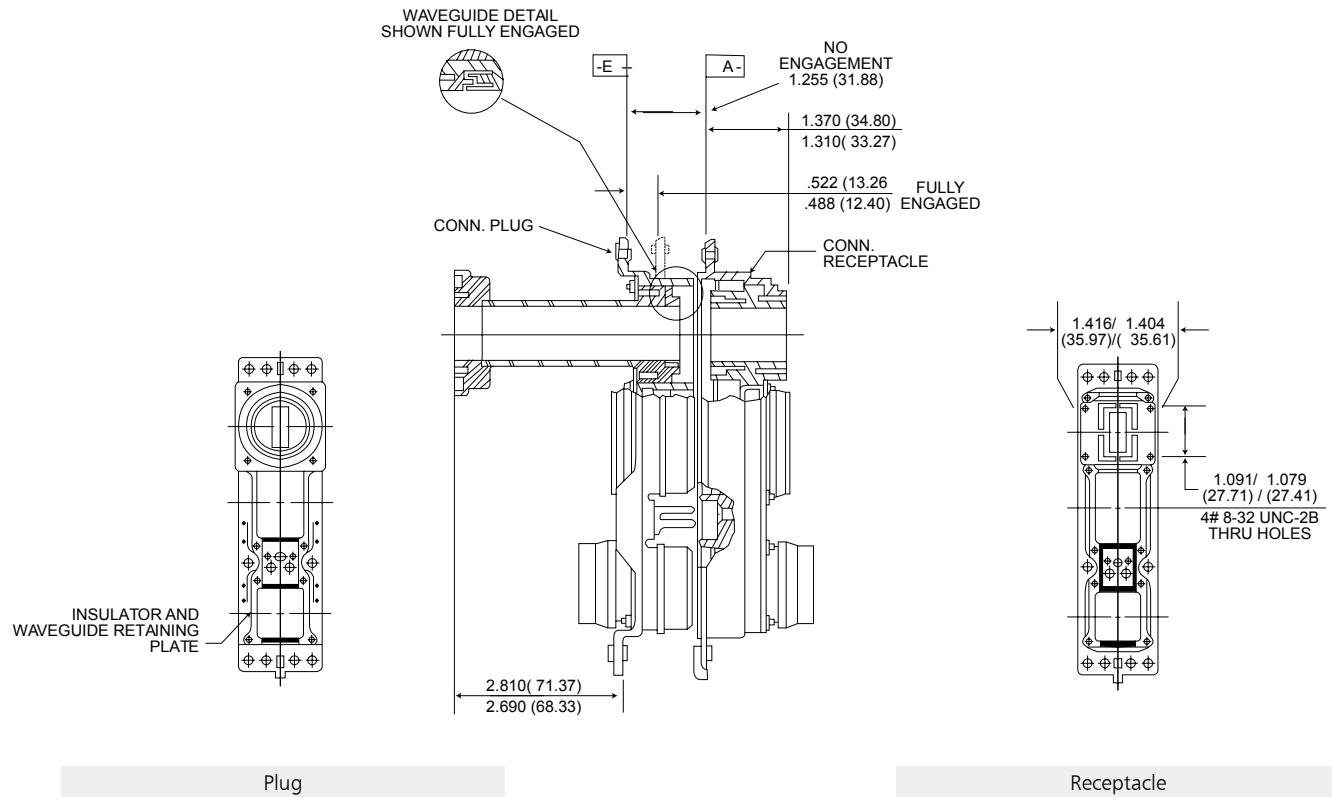
4-40 polarizations screws maximum torque value: 5 in-lbs.

6-32 clinch nut fastening maximum terminal tightening torque: 9.6 in-lbs.

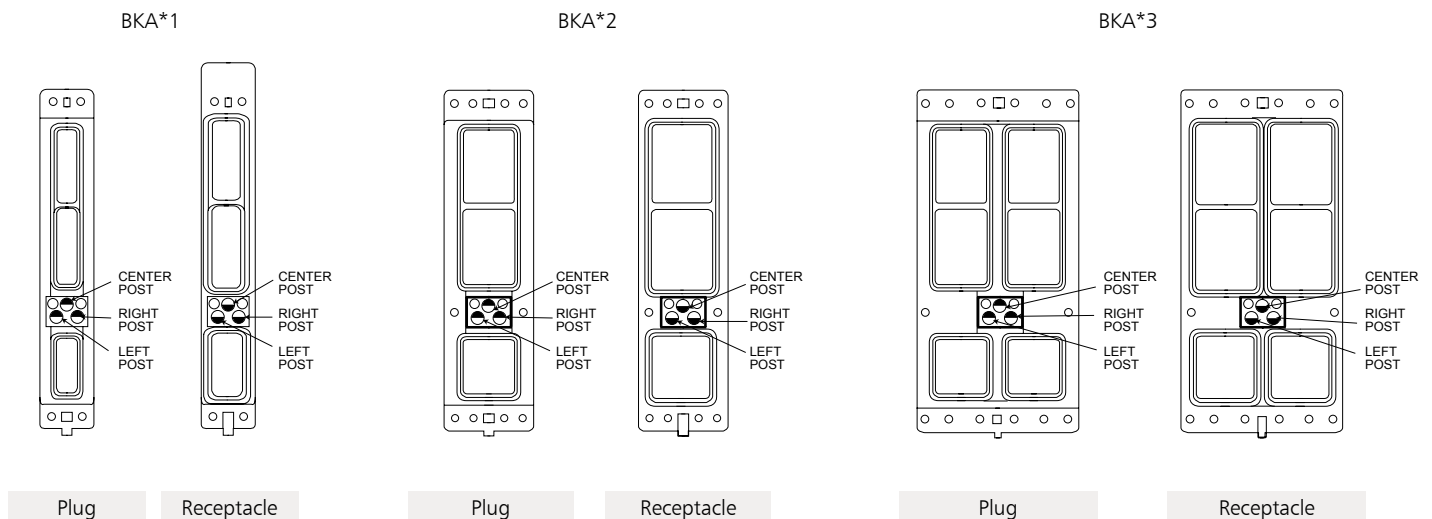
# BKA (ARINC 600)

## Shell Dimensions (continued)

### Waveguide Connections



### Polarization (Engaging End)

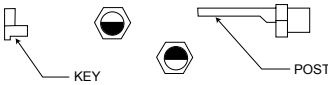


Dimensions shown in inches (mm)  
 Specifications and dimensions subject to change. Product images are reference only.

# BA (ARINC 600)

## Polarization

### Polarizing Positions



Dark area represents post on a plug, light area represents key opening on a receptacle

Polarization Kits available  
- See Page 77

| CONNECTOR PLUG |           |             |            |          |           |             |            |          |           |             |            | CONNECTOR RECEPTACLE |           |             |            |          |           |             |            |          |           |             |            |
|----------------|-----------|-------------|------------|----------|-----------|-------------|------------|----------|-----------|-------------|------------|----------------------|-----------|-------------|------------|----------|-----------|-------------|------------|----------|-----------|-------------|------------|
| Position       | Last Post | Center Post | Right Post | Position | Last Post | Center Post | Right Post | Position | Last Post | Center Post | Right Post | Position             | Last Post | Center Post | Right Post | Position | Last Post | Center Post | Right Post | Position | Last Post | Center Post | Right Post |
| 01             | 1         | 1           | 1          | 73       | 1         | 3           | 1          | 145      | 1         | 5           | 1          | 01                   | 4         | 4           | 4          | 73       | 4         | 2           | 4          | 145      | 4         | 6           | 4          |
| 02             | 2         | 1           | 1          | 74       | 2         | 3           | 1          | 146      | 2         | 5           | 1          | 02                   | 4         | 4           | 3          | 74       | 4         | 2           | 3          | 146      | 4         | 6           | 3          |
| 03             | 3         | 1           | 1          | 75       | 3         | 3           | 1          | 147      | 3         | 5           | 1          | 03                   | 4         | 4           | 2          | 75       | 4         | 2           | 2          | 147      | 4         | 6           | 2          |
| 04             | 4         | 1           | 1          | 76       | 4         | 3           | 1          | 148      | 4         | 5           | 1          | 04                   | 4         | 4           | 1          | 76       | 4         | 2           | 1          | 148      | 4         | 6           | 1          |
| 05             | 5         | 1           | 1          | 77       | 5         | 3           | 1          | 149      | 5         | 5           | 1          | 05                   | 4         | 4           | 6          | 77       | 4         | 2           | 6          | 149      | 4         | 6           | 6          |
| 06             | 6         | 1           | 1          | 78       | 6         | 3           | 1          | 150      | 6         | 5           | 1          | 06                   | 4         | 4           | 5          | 78       | 4         | 2           | 5          | 150      | 4         | 6           | 5          |
| 07             | 1         | 1           | 6          | 79       | 1         | 3           | 6          | 151      | 1         | 5           | 6          | 07                   | 5         | 4           | 4          | 79       | 5         | 2           | 4          | 151      | 5         | 6           | 4          |
| 08             | 2         | 1           | 6          | 80       | 2         | 3           | 6          | 152      | 2         | 5           | 6          | 08                   | 5         | 4           | 3          | 80       | 5         | 2           | 3          | 152      | 5         | 6           | 3          |
| 09             | 3         | 1           | 6          | 81       | 3         | 3           | 6          | 153      | 3         | 5           | 6          | 09                   | 5         | 4           | 2          | 81       | 5         | 2           | 2          | 153      | 5         | 6           | 2          |
| 10             | 4         | 1           | 6          | 82       | 4         | 3           | 6          | 154      | 4         | 5           | 6          | 10                   | 5         | 4           | 1          | 82       | 5         | 2           | 1          | 154      | 5         | 6           | 1          |
| 11             | 5         | 1           | 6          | 83       | 5         | 3           | 6          | 155      | 5         | 5           | 6          | 11                   | 5         | 4           | 6          | 83       | 5         | 2           | 6          | 155      | 5         | 6           | 6          |
| 12             | 6         | 1           | 6          | 84       | 6         | 3           | 6          | 156      | 6         | 5           | 6          | 12                   | 5         | 4           | 5          | 84       | 5         | 2           | 5          | 156      | 5         | 6           | 5          |
| 13             | 1         | 1           | 5          | 85       | 1         | 3           | 5          | 157      | 1         | 5           | 5          | 13                   | 6         | 4           | 4          | 85       | 6         | 2           | 4          | 157      | 6         | 6           | 4          |
| 14             | 2         | 1           | 5          | 86       | 2         | 3           | 5          | 158      | 2         | 5           | 5          | 14                   | 6         | 4           | 3          | 86       | 6         | 2           | 3          | 158      | 6         | 6           | 3          |
| 15             | 3         | 1           | 5          | 87       | 3         | 3           | 5          | 159      | 3         | 5           | 5          | 15                   | 6         | 4           | 2          | 87       | 6         | 2           | 2          | 159      | 6         | 6           | 2          |
| 16             | 4         | 1           | 5          | 88       | 4         | 3           | 5          | 160      | 4         | 5           | 5          | 16                   | 6         | 4           | 1          | 88       | 6         | 2           | 1          | 160      | 6         | 6           | 1          |
| 17             | 5         | 1           | 5          | 89       | 5         | 3           | 5          | 161      | 5         | 5           | 5          | 17                   | 6         | 4           | 6          | 89       | 6         | 2           | 6          | 161      | 6         | 6           | 6          |
| 18             | 6         | 1           | 5          | 90       | 6         | 3           | 5          | 162      | 6         | 5           | 5          | 18                   | 6         | 4           | 5          | 90       | 6         | 2           | 5          | 162      | 6         | 6           | 5          |
| 19             | 1         | 1           | 4          | 91       | 1         | 3           | 4          | 163      | 1         | 5           | 4          | 19                   | 1         | 4           | 4          | 91       | 1         | 2           | 4          | 163      | 1         | 6           | 4          |
| 20             | 2         | 1           | 4          | 92       | 2         | 3           | 4          | 164      | 2         | 5           | 4          | 20                   | 1         | 4           | 3          | 92       | 1         | 2           | 3          | 164      | 1         | 6           | 3          |
| 21             | 3         | 1           | 4          | 93       | 3         | 3           | 4          | 165      | 3         | 5           | 4          | 21                   | 1         | 4           | 2          | 93       | 1         | 2           | 2          | 165      | 1         | 6           | 2          |
| 22             | 4         | 1           | 4          | 94       | 4         | 3           | 4          | 166      | 4         | 5           | 4          | 22                   | 1         | 4           | 1          | 94       | 1         | 2           | 1          | 166      | 1         | 6           | 1          |
| 23             | 5         | 1           | 4          | 95       | 5         | 3           | 4          | 167      | 5         | 5           | 4          | 23                   | 1         | 4           | 6          | 95       | 1         | 2           | 6          | 167      | 1         | 6           | 6          |
| 24             | 6         | 1           | 4          | 96       | 6         | 3           | 4          | 168      | 6         | 5           | 4          | 24                   | 1         | 4           | 5          | 96       | 1         | 2           | 5          | 168      | 1         | 6           | 5          |
| 25             | 1         | 1           | 3          | 97       | 1         | 3           | 3          | 169      | 1         | 5           | 3          | 25                   | 2         | 4           | 4          | 97       | 2         | 2           | 4          | 169      | 2         | 6           | 4          |
| 26             | 2         | 1           | 3          | 98       | 2         | 3           | 3          | 170      | 2         | 5           | 3          | 26                   | 2         | 4           | 3          | 98       | 2         | 2           | 3          | 170      | 2         | 6           | 3          |
| 27             | 3         | 1           | 3          | 99       | 3         | 3           | 3          | 171      | 3         | 5           | 3          | 27                   | 2         | 4           | 2          | 99       | 2         | 2           | 2          | 171      | 2         | 6           | 2          |
| 28             | 4         | 1           | 3          | 100      | 4         | 3           | 3          | 172      | 4         | 5           | 3          | 28                   | 2         | 4           | 1          | 100      | 2         | 2           | 1          | 172      | 2         | 6           | 1          |
| 29             | 5         | 1           | 3          | 101      | 5         | 3           | 3          | 173      | 5         | 5           | 3          | 29                   | 2         | 4           | 6          | 101      | 2         | 2           | 6          | 173      | 2         | 6           | 6          |
| 30             | 6         | 1           | 3          | 102      | 6         | 3           | 3          | 174      | 6         | 5           | 3          | 30                   | 2         | 4           | 5          | 102      | 2         | 2           | 5          | 174      | 2         | 6           | 5          |
| 31             | 1         | 1           | 2          | 103      | 1         | 3           | 2          | 175      | 1         | 5           | 2          | 31                   | 3         | 4           | 4          | 103      | 3         | 2           | 4          | 175      | 3         | 6           | 4          |
| 32             | 2         | 1           | 2          | 104      | 2         | 3           | 2          | 176      | 2         | 5           | 2          | 32                   | 3         | 4           | 3          | 104      | 3         | 2           | 3          | 176      | 3         | 6           | 3          |
| 33             | 3         | 1           | 2          | 105      | 3         | 3           | 2          | 177      | 3         | 5           | 2          | 33                   | 3         | 4           | 2          | 105      | 3         | 2           | 2          | 177      | 3         | 6           | 2          |
| 34             | 4         | 1           | 2          | 106      | 4         | 3           | 2          | 178      | 4         | 5           | 2          | 34                   | 3         | 4           | 1          | 106      | 3         | 2           | 1          | 178      | 3         | 6           | 1          |
| 35             | 5         | 1           | 2          | 107      | 5         | 3           | 2          | 179      | 5         | 5           | 2          | 35                   | 3         | 4           | 6          | 107      | 3         | 2           | 6          | 179      | 3         | 6           | 6          |
| 36             | 6         | 1           | 2          | 108      | 6         | 3           | 2          | 180      | 6         | 5           | 2          | 36                   | 3         | 4           | 5          | 108      | 3         | 2           | 5          | 180      | 3         | 6           | 5          |
| 37             | 1         | 2           | 1          | 109      | 1         | 4           | 1          | 181      | 1         | 5           | 1          | 37                   | 4         | 3           | 4          | 109      | 4         | 1           | 4          | 181      | 4         | 5           | 4          |
| 38             | 2         | 2           | 1          | 110      | 2         | 4           | 1          | 182      | 2         | 5           | 1          | 38                   | 4         | 3           | 3          | 110      | 4         | 1           | 3          | 182      | 4         | 5           | 3          |
| 39             | 3         | 2           | 1          | 111      | 3         | 4           | 1          | 183      | 3         | 5           | 1          | 39                   | 4         | 3           | 2          | 111      | 4         | 1           | 2          | 183      | 4         | 5           | 2          |
| 40             | 4         | 2           | 1          | 112      | 4         | 4           | 1          | 184      | 4         | 5           | 1          | 40                   | 4         | 3           | 1          | 112      | 4         | 1           | 1          | 184      | 4         | 5           | 1          |
| 41             | 5         | 2           | 1          | 113      | 5         | 4           | 1          | 185      | 5         | 5           | 1          | 41                   | 4         | 3           | 6          | 113      | 4         | 1           | 6          | 185      | 4         | 5           | 6          |
| 42             | 6         | 2           | 1          | 114      | 6         | 4           | 1          | 186      | 6         | 5           | 1          | 42                   | 4         | 3           | 5          | 114      | 4         | 1           | 5          | 186      | 4         | 5           | 5          |
| 43             | 1         | 2           | 6          | 115      | 1         | 4           | 6          | 187      | 1         | 5           | 6          | 43                   | 5         | 3           | 4          | 115      | 5         | 1           | 4          | 187      | 5         | 5           | 4          |
| 44             | 2         | 2           | 6          | 116      | 2         | 4           | 6          | 188      | 2         | 5           | 6          | 44                   | 5         | 3           | 3          | 116      | 5         | 1           | 3          | 188      | 5         | 5           | 3          |
| 45             | 3         | 2           | 6          | 117      | 3         | 4           | 6          | 189      | 3         | 5           | 6          | 45                   | 5         | 3           | 2          | 117      | 5         | 1           | 2          | 189      | 5         | 5           | 2          |
| 46             | 4         | 2           | 6          | 118      | 4         | 4           | 6          | 190      | 4         | 5           | 6          | 46                   | 5         | 3           | 1          | 118      | 5         | 1           | 1          | 190      | 5         | 5           | 1          |
| 47             | 5         | 2           | 6          | 119      | 5         | 4           | 6          | 191      | 5         | 5           | 6          | 47                   | 5         | 3           | 6          | 119      | 5         | 1           | 6          | 191      | 5         | 5           | 6          |
| 48             | 6         | 2           | 6          | 120      | 6         | 4           | 6          | 192      | 6         | 5           | 6          | 48                   | 5         | 3           | 5          | 120      | 5         | 1           | 5          | 192      | 5         | 5           | 5          |
| 49             | 1         | 2           | 5          | 121      | 1         | 4           | 5          | 193      | 1         | 5           | 5          | 49                   | 6         | 3           | 4          | 121      | 6         | 1           | 4          | 193      | 6         | 5           | 4          |
| 50             | 2         | 2           | 5          | 122      | 2         | 4           | 5          | 194      | 2         | 5           | 5          | 50                   | 6         | 3           | 3          | 122      | 6         | 1           | 3          | 194      | 6         | 5           | 3          |
| 51             | 3         | 2           | 5          | 123      | 3         | 4           | 5          | 195      | 3         | 5           | 5          | 51                   | 6         | 3           | 2          | 123      | 6         | 1           | 2          | 195      | 6         | 5           | 2          |
| 52             | 4         | 2           | 5          | 124      | 4         | 4           | 5          | 196      | 4         | 5           | 5          | 52                   | 6         | 3           | 1          | 124      | 6         | 1           | 1          | 196      | 6         | 5           | 1          |
| 53             | 5         | 2           | 5          | 125      | 5         | 4           | 5          | 197      | 5         | 5           | 5          | 53                   | 6         | 3           | 6          | 125      | 6         | 1           | 6          | 197      | 6         | 5           | 6          |
| 54             | 6         | 2           | 5          | 126      | 6         | 4           | 5          | 198      | 6         | 5           | 5          | 54                   | 6         | 3           | 5          | 126      | 6         | 1           | 5          | 198      | 6         | 5           | 5          |
| 55             | 1         | 2           | 4          | 127      | 1         | 4           | 4          | 199      | 1         | 5           | 4          | 55                   | 1         | 3           | 4          | 127      | 1         | 1           | 4          | 199      | 1         | 5           | 4          |
| 56             | 2         | 2           | 4          | 128      | 2         | 4           | 4          | 200      | 2         | 5           | 4          | 56                   | 1         | 3           | 3          | 128      | 1         | 1           | 3          | 200      | 1         | 5           | 3          |
| 57             | 3         | 2           | 4          | 129      | 3         | 4           | 4          | 201      | 3         | 5           | 4          | 57                   | 1         | 3           | 2          | 129      | 1         | 1           | 2          | 201      | 1         | 5           | 2          |
| 58             | 4         | 2           | 4          | 130      | 4         | 4           | 4          | 202      | 4         | 5           | 4          | 58                   | 1         | 3           | 1          | 130      | 1         | 1           | 1          | 202      | 1         | 5           | 1          |
| 59             | 5         | 2           | 4          | 131      | 5         | 4           | 4          | 203      | 5         | 5           | 4          | 59                   | 1         | 3           | 6          | 131      | 1         | 1           | 6          | 203      | 1         | 5           | 6          |
| 60             | 6         | 2           | 4          | 132      | 6         | 4           | 4          | 204      | 6         | 5           | 4          | 60                   | 1         | 3           | 5          | 132      | 1         | 1           | 5          | 204      | 1         | 5           | 5          |
| 61             | 1         | 2           | 3          | 133      | 1         | 4           | 3          | 205      | 1         | 5           | 3          | 61                   | 2         | 3           | 4          | 133      | 2         | 1           | 4          | 205      | 2         | 5           | 4          |
| 62             | 2         | 2           | 3          | 134      | 2         | 4           | 3          | 206      | 2         | 5           | 3          | 62                   | 2         | 3           | 3          | 134      | 2         | 1           | 3          | 206      | 2         | 5           | 3          |
| 63             | 3         | 2           | 3          | 135      | 3         | 4           | 3          | 207      | 3         | 5           | 3          | 63                   | 2         | 3           | 2          | 135      | 2         | 1           | 2          | 207      | 2         | 5           | 2          |
| 64             | 4         | 2           | 3          | 136      | 4         | 4           | 3          | 208      | 4         | 5           | 3          | 64                   | 2         | 3           | 1          | 136      | 2         | 1           | 1          | 208      | 2         | 5           | 1          |
| 65             | 5         | 2           | 3          | 137      | 5         | 4           | 3          | 209      | 5         | 5           | 3          | 65                   | 2         | 3           | 6          | 137      | 2         | 1           | 6          | 209      | 2         | 5           | 6          |
| 66             | 6         | 2           | 3          | 138      | 6         | 4           | 3          | 210      | 6         | 5           | 3          | 66                   | 2         | 3           | 5          | 138      | 2         | 1           | 5          | 210      | 2         | 5           | 5          |
| 67             | 1         | 2           | 2          | 139      | 1         | 4           | 2          | 211      | 1         | 5           | 2          | 67                   | 3         | 3           | 4          | 139      | 3         | 1           | 4          | 211      | 3         | 5           | 4          |
| 68             | 2         | 2           | 2          | 140      | 2         | 4           | 2          | 212      | 2         | 5           | 2          | 68                   | 3         | 3           | 3          | 140      | 3         | 1           | 3          | 212      | 3         | 5           | 3          |
| 69             | 3         | 2           | 2          | 141      | 3         | 4           | 2          | 213      | 3         | 5           | 2          | 69                   | 3         | 3           | 2          | 141      | 3         | 1           | 2          | 213      | 3         | 5           | 2          |
| 70             | 4         | 2           | 2          | 142      | 4         | 4           | 2          | 214      | 4         | 5           | 2          | 70                   | 3         | 3           | 1          | 142      | 3         | 1           | 1          | 214      | 3         | 5           | 1          |
| 71             | 5         | 2           | 2          | 143      | 5         | 4           | 2          | 215      | 5         | 5           | 2          | 71                   | 3         | 3           | 6          | 143      | 3         | 1           | 6          | 215      | 3         | 5           | 6          |
| 72             | 6         | 2           | 2          | 144      | 6         | 4           | 2          | 216      | 6         | 5           | 2          | 72                   | 3         | 3           | 5          | 144      | 3         | 1           | 5          | 216      | 3         | 5           | 5          |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# SGA (Single Gang ARINC 600)

## Product Overview

- Available Rear Release/Rear Removable Front Release/ Front Removable
- Low Insertion force contacts
- Both environmental and non-environmental versions
- Polarizing post that are removable from the mating face
- Field replaceable inserts
- Up to 150 Size #22 contacts per connector
- Crimp, coax, twinax, printed circuit and wire wrapable post style contacts
- Uses standard DPX crimp, insertion/extraction tooling



SGA connectors utilize all the Signal cavity inserts and contacts from the ARINC 600 connector series. They are designed to be used where there are space constraints, in which a standard ARINC 600 connector cannot be used. ITT's SGA connector fills the need for a 150 maximum contact connector with a smaller shell design than Shell Size 2 of ARINC 600, and it has more contacts available than single gang DPX with 106 Size 22 contacts.

## Material Specifications

|                  |             | SGAD                        | SGAE                     | SGAF           | Specifications |
|------------------|-------------|-----------------------------|--------------------------|----------------|----------------|
| Shell            | Material    | Aluminum alloy              |                          |                | QQ-A-591/A380  |
|                  | Finish      | Clear chromate over cadmium |                          |                | QQ-P-416       |
| Insulator        | Material    | Thermoplastic               |                          | Thermoset      | N/A            |
| Contacts         | Material    | Copper alloy                |                          |                | QQ-C-533       |
|                  | Finish      | Gold over Nickel            |                          |                | MIL-G-45204    |
|                  | Termination | Crimp                       |                          | P.C./Wrap Post | N/A            |
| Grommets & Seals | Material    | N/A                         | Silicone-based Elastomer | N/A            |                |
| O-Ring           |             |                             |                          |                |                |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# SGA (Single Gang ARINC 600)

## How to Order

| Product                               | SGA (Per ARINC 600)                                                                                                                                                                                                                                                                                                                                                               | SGA | 4 | R | F | 150 | S | 00 | 01 | * | - | F0 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---|---|---|-----|---|----|----|---|---|----|
| Shell Style:                          | <div>3 - Plug (Rack side)</div> <div>4 - Receptacle (Box side)</div>                                                                                                                                                                                                                                                                                                              |     |   |   |   |     |   |    |    |   |   |    |
| RoHS Version:                         | <div>R - RoHS Compliant Finish: Trivalent Chromate</div>                                                                                                                                                                                                                                                                                                                          |     |   |   |   |     |   |    |    |   |   |    |
| Class:                                | <div>C - Non-environmental with Grommet only, insulators are not potted into the connector shell</div> <div>D - Non-environmental (rear release crimp contacts)</div> <div>E - Environmentally sealed (rear release crimp contacts)</div> <div>F - Non-environmental (front release, printed circuit or wire wrap posts)</div>                                                    |     |   |   |   |     |   |    |    |   |   |    |
| Contact Arrangements:                 | See Pages 12-14 (BKA ARINC 600 contact arrangements)                                                                                                                                                                                                                                                                                                                              |     |   |   |   |     |   |    |    |   |   |    |
| Contact Type:                         | <div>P - Pin Contacts</div> <div>S - Socket Contacts</div>                                                                                                                                                                                                                                                                                                                        |     |   |   |   |     |   |    |    |   |   |    |
| Connector Mounting Modifier:          | See Page 25 for Connector Mounting Modifiers                                                                                                                                                                                                                                                                                                                                      |     |   |   |   |     |   |    |    |   |   |    |
| Polarizing Position:                  | <div>01 - See Polarization Position chart on Page 28 for Positions 01 through 36</div> <div>00 - 00 for polarization indicates that polarizing hardware is not supplied Blank or no position indicated means - Polarizing posts or keys not installed but supplied with connector. This allows the user to position the post and stamp the appropriate number on the shell.</div> |     |   |   |   |     |   |    |    |   |   |    |
| Plating Finish Modifier:              | A - PTFE-Ni RoHS Compliant Shell Finish                                                                                                                                                                                                                                                                                                                                           |     |   |   |   |     |   |    |    |   |   |    |
| Modifier (Contact, Finish, Material): | See Page 10 for Modifiers (Contact, Finish, Material).                                                                                                                                                                                                                                                                                                                            |     |   |   |   |     |   |    |    |   |   |    |

A Refer to page 61 for replacement contact part numbers and required termination tooling information

ANY OTHER COMBINATION OF INSERTS WITHIN A SPECIFIC SHELL IS AVAILABLE UPON REQUEST: For additional layouts, consult your account representative.

# SGA (Single Gang ARINC 600)

## How to Order (continued)

### Connector Mounting Modifier

Mounting modifiers 00, 03, 06, 14, 15, hole location is .705 basic from connector vertical centerline

00 - .151 Dia. Mounting holes.

03 - .156 with #4-40 Self-Locking Clinch Nuts (ESNA #22NCFMA2-40) 4 per connector.

06 - .188 Dia. For #6-32 Clinch nuts (ESNA #12NCFMA2-62) 4 per connector.

14 - .137 Dia. Countersunk 82° x .230 Dia., Engaging face of mounting flange.

15 - .137 Dia. Countersunk 82° x .230 Dia., Engaging face of mounting flange. Supplied with slant shield grounding spring.

Mounting modifiers 05, 07, 08, 09, 10, 11, 12, 13, hole location is .650 basic from connector vertical centerline

05 - .208 Dia. for Floating Eyelet.

07 - .212/.204 Slot 4 places.

08 - .120 Dia. Countersunk 82° x .230 Dia., Engaging face of mounting flange.

09 - .120 Dia. Countersunk 82° x .230 Dia., Rear face of mounting flange.

10 - .120 Dia. Countersunk 100° x .230 Dia., Engaging face of mounting flange.

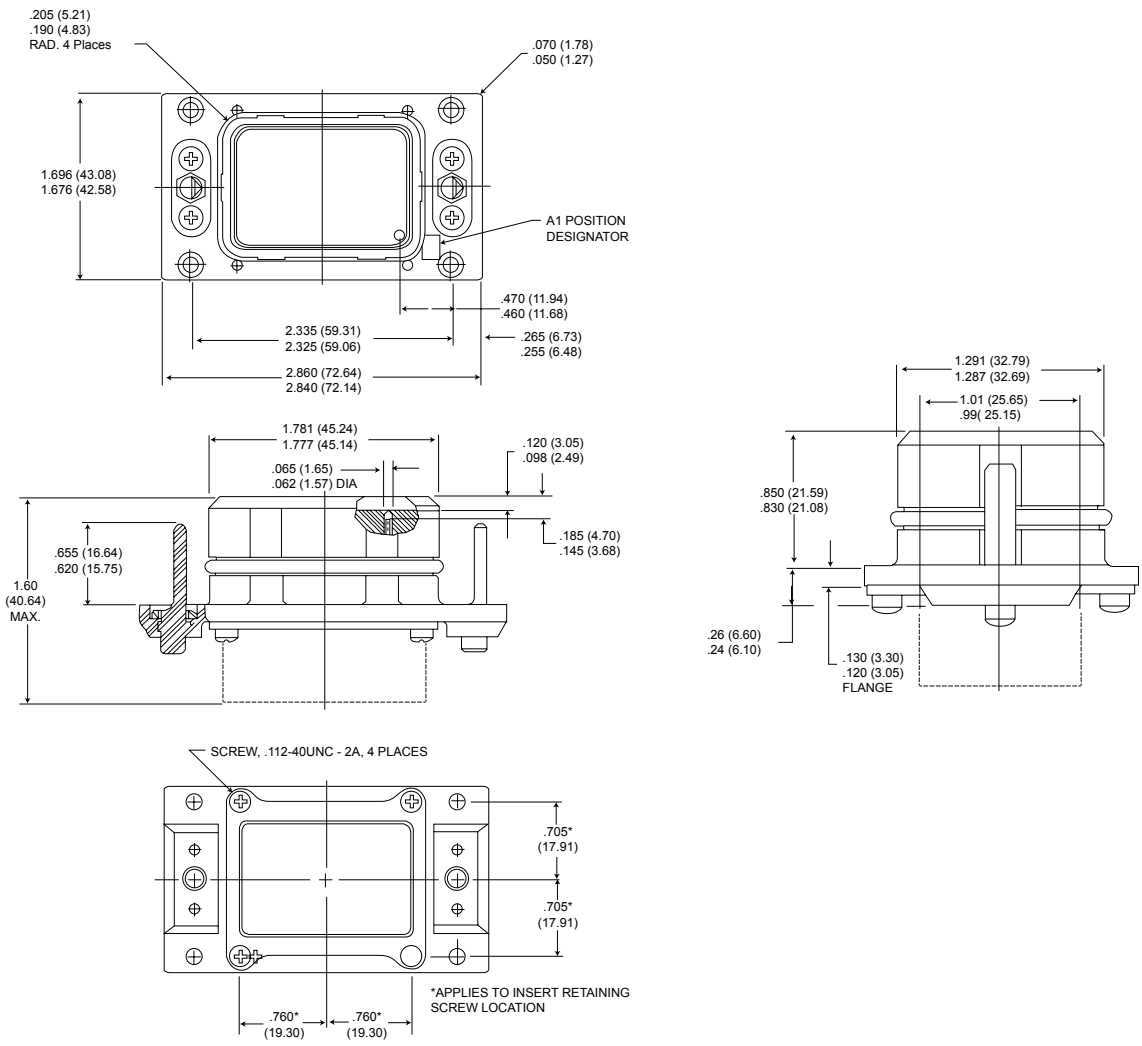
11 - .120 Dia. Countersunk 100° x .230 Dia., Rear face of mounting flange.

13 - .137 Dia. Countersunk 82° x .230 Dia., Rear face of mounting flange.

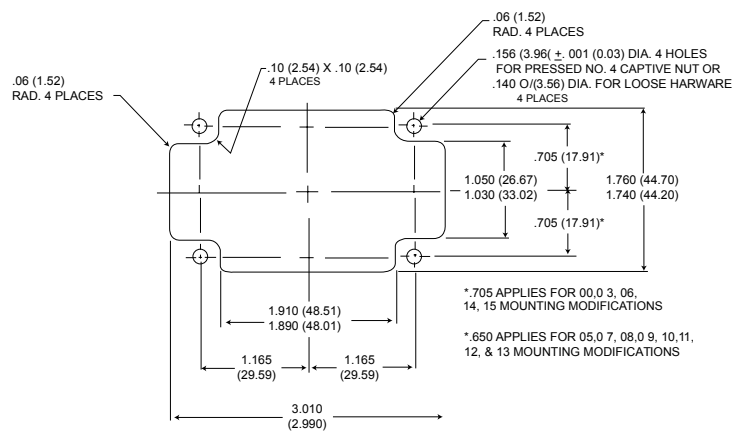
# SGA (Single Gang ARINC 600)

## Shell Dimensions

### Plug Shell Dimensions



### Recommended Panel Cutout - Plug

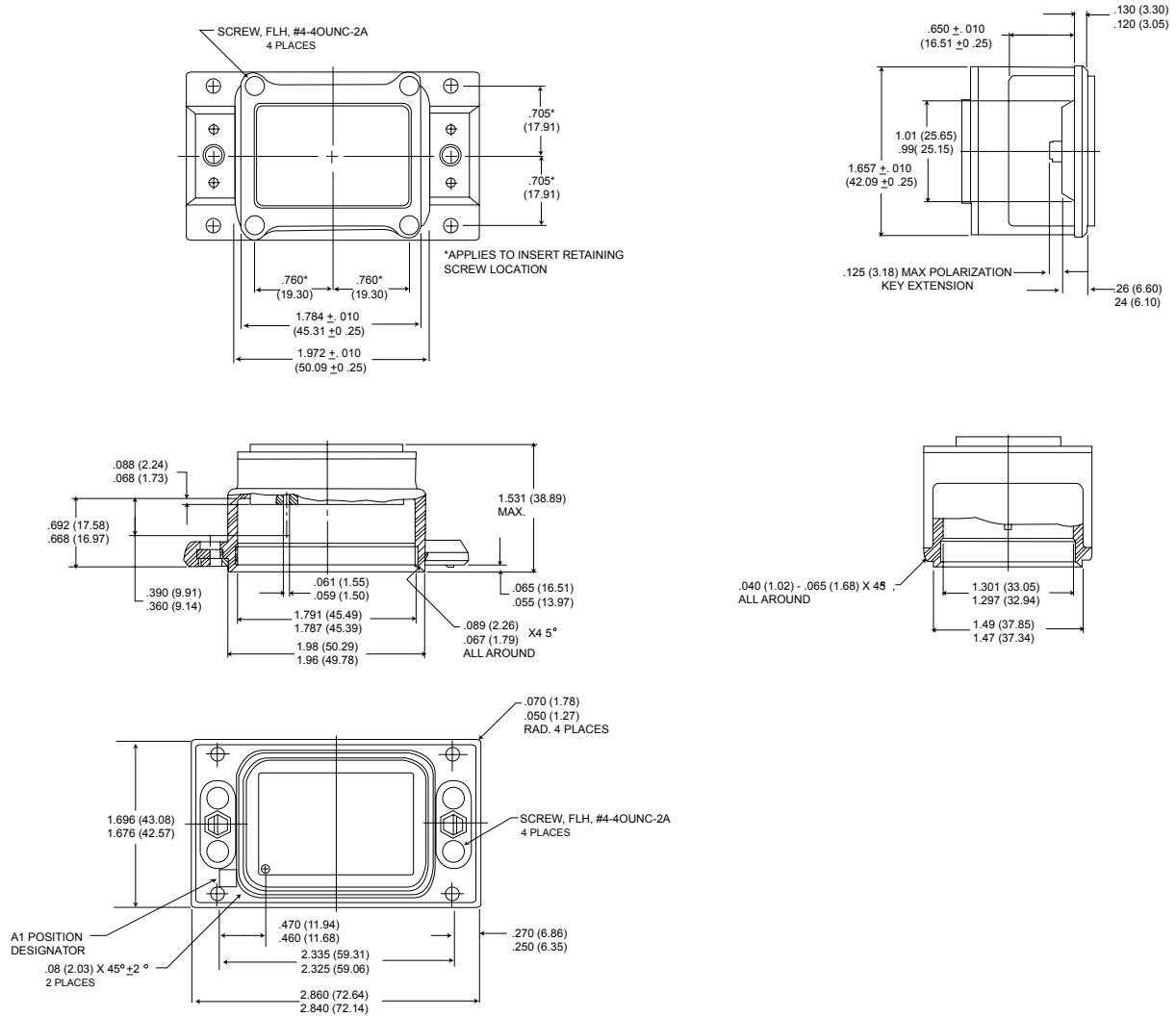


Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

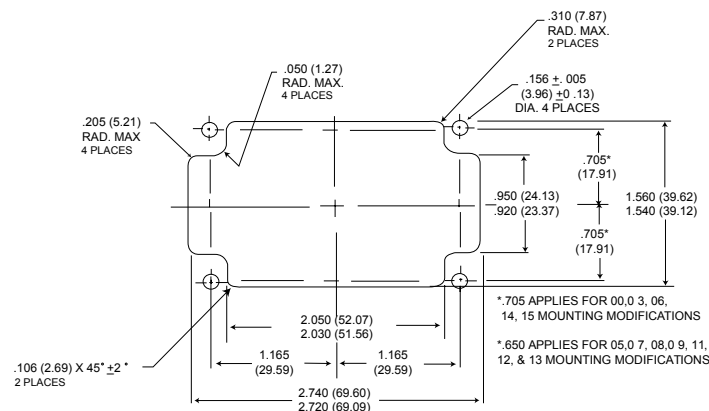
# SGA (Single Gang ARINC 600)

## Shell Dimensions (continued)

### Receptacle Shell Dimensions



### Recommended Panel Cutout - Receptacle



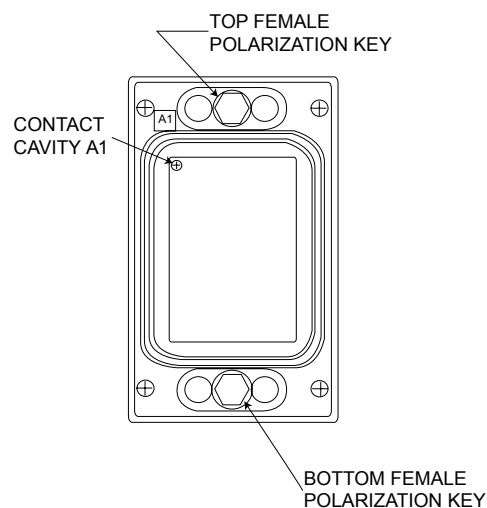
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

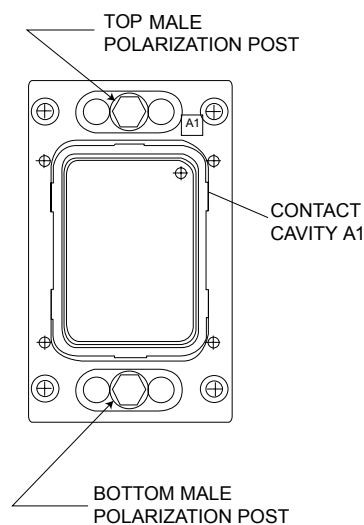
# SGA (Single Gang ARINC 600)

## Polarization

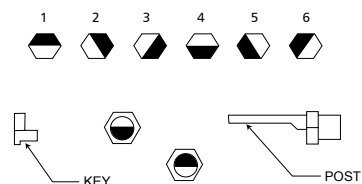
### Polarizing Positions



Receptacle (Box side)



Plug (Rack side)



Dark areas represent post

| Position | Connector Receptacle |            | Connector Plug |             |
|----------|----------------------|------------|----------------|-------------|
|          | Top Key              | Bottom Key | Top Post       | Bottom Post |
| 01       | 1                    | 1          | 4              | 4           |
| 02       | 3                    | 4          | 2              | 1           |
| 03       | 2                    | 4          | 3              | 1           |
| 04       | 1                    | 4          | 4              | 1           |
| 05       | 6                    | 4          | 5              | 1           |
| 06       | 5                    | 4          | 6              | 1           |
| 07       | 4                    | 5          | 1              | 6           |
| 08       | 3                    | 5          | 2              | 6           |
| 09       | 2                    | 5          | 3              | 6           |
| 10       | 1                    | 5          | 4              | 6           |
| 11       | 6                    | 5          | 5              | 6           |
| 12       | 5                    | 5          | 6              | 6           |
| 13       | 4                    | 6          | 1              | 5           |
| 14       | 3                    | 6          | 2              | 5           |
| 15       | 2                    | 6          | 3              | 5           |
| 16       | 1                    | 6          | 4              | 5           |
| 17       | 6                    | 6          | 5              | 5           |
| 18       | 5                    | 6          | 6              | 5           |
| 19       | 4                    | 1          | 1              | 4           |
| 20       | 3                    | 1          | 2              | 4           |
| 21       | 2                    | 1          | 3              | 4           |
| 22       | 4                    | 4          | 1              | 1           |
| 23       | 6                    | 1          | 5              | 4           |
| 24       | 5                    | 1          | 6              | 4           |
| 25       | 4                    | 2          | 1              | 3           |
| 26       | 3                    | 2          | 2              | 3           |
| 27       | 2                    | 2          | 3              | 3           |
| 28       | 1                    | 2          | 4              | 3           |
| 29       | 6                    | 2          | 5              | 3           |
| 30       | 5                    | 2          | 6              | 3           |
| 31       | 4                    | 3          | 1              | 2           |
| 32       | 3                    | 3          | 2              | 2           |
| 33       | 2                    | 3          | 3              | 2           |
| 34       | 1                    | 3          | 4              | 2           |
| 35       | 6                    | 3          | 5              | 2           |
| 36       | 5                    | 3          | 6              | 2           |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## Product Overview

The DPX connector comes in single, two, three and four gang versions and can accommodate up to 424 contacts. The DPX\*MA connector features the LITTLE CAESAR contact assembly for rear insertion, release and extraction of crimp type contacts. DPXA shells utilize their keystone shape for polarization posts that are capable of providing up to 99 polarization positions.



DPXA-34



DPX2-34B



DPX3-34



DPXB-33



DPX2-33B



DPX4-33

| DPXA – Single Shell DPX<br>DPXB – Polarized ARINC Shel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | DPX2 - Two Gang DPX Series<br>DPX2A - ARINC A Shell<br>DPX2B - ARINC B Shell                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DPX3 – Three Gang DPX Series<br>DPX4 – Four Gang DPX Series                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>DPXA - Single Shell DPX</b><br/>DPXA connectors are one-piece shell miniature rack/panel connectors. The construction offers high strength and maximum utilization of insert area for contact arrangements accommodating up to 106 contacts. Shells are keystone-shaped for polarization. Operating temperature for the DPXA is -54.2°C to +125°C (-67°F to +257°F).</p> <p><b>DPXB - Polarized ARINC Shell</b><br/>DPXB connectors are DPXA connectors with an ARINC B shelf. Additional polarization is provided by three hexagonal polarizing posts.</p> | <p><b>DPX2 - Two Gang DPX Series</b><br/>DPX2 connectors are the original two-gang versions of the DPX, and are made of the same materials and accommodate the same contact arrangements. Keystone shaped shells accommodate two DPX inserts with up to 212 contacts. The DPX2 has three polarizing posts with 99 polarizing positions.</p> <p><b>DPX2A - ARINC A Shell</b><br/>DPX2A connectors are DPX2 connectors with an ARINC A shell. This shell type has the receptacle flange placed .344 (8.74) from the front of the engaging portion of the shell, and short aluminum alloy polarizing posts permit polarization before contacts engage.</p> <p><b>DPX2B - ARINC B Shell</b><br/>DPX2B connectors supersede the DPX2A and have an ARINC B Shell. This Shell type has the receptacle flange placed .060 (1.52) from the front of the engaging portion of the shell, and polarizing posts permit polarization before the shells engage.</p> | <p><b>DPX3 - Three Gang DPX Series</b><br/>DPX3 connectors are three-gang versions of the DPX, made of the same materials, and accommodate the same contact arrangements. The three-gang version can therefore accommodate up to a total of 318 in the keystone shaped shells, with three polarizing posts that are capable of providing up to 99 polarizing positions.</p> <p><b>DPX4 - Four Gang DPX Series</b><br/>DPX4 connectors are four gang versions of the DPX, made of the same materials, and can accommodate four separate arrangements that can total up to 424 contacts. The DPX4 has three polarizing posts with 99 polarizing positions.</p> |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## Product Overview (continued)

### Product Overview



DPXBMA-33



DPX2BME-33

| DPX*MA - LITTLE CAESAR Contact Assembly                                                                                                                                                                                                                                                                                                                                                     | DPX*ME - Environmental with LITTLE CAESAR Contact Assembly                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <p>DPX*MA connectors are DPX connectors with the LITTLE CAESAR contact assembly for rear insertion, release, and extraction of crimp type contacts.</p> <p>Insertion requires no tool; extraction requires an expendable plastic tool. A hard dielectric, closed-entry socket insert has lead-in chamfers for positive mating of contacts. Contacts are crimpable with the M22501 tool.</p> | <p>DPX*ME connectors are DPXMA connectors with environmental interfacial and grommet seals, and olive drab shell finish.</p> |

### Performance and Material Specification

|                      |             | DPXA/DPXB/DPX2                     | DPX*MA/DPX2*MA/ME                                            | SPECIFICATIONS |
|----------------------|-------------|------------------------------------|--------------------------------------------------------------|----------------|
| Shell                | Material    | Aluminum alloy                     |                                                              | QQ- A-591/A380 |
|                      | Finish      | Cadmium plate with yellow chromate | Cadmium plate with yellow chromate for MA, Olive drab for ME | QQ-P-416       |
| Insulator            | Material    | Melamine or Phenolic               | Diallyl phthalate or epoxy                                   | MIL-M-14       |
| Contacts             | Material    | Copper alloy                       |                                                              | QQ-C-533       |
|                      | Finish      | Gold over Nickel                   |                                                              | MIL-G-45204    |
|                      | Termination | Solder Pot                         | Crimp                                                        | N/A            |
| Polarizing Posts     | Material    | Die Cast                           |                                                              | QQ-P-416       |
|                      | Finish      | Cadmium                            |                                                              | QQS-630-637    |
| Screws & Lockwashers | Material    | Steel                              |                                                              | QQ-P-416       |
|                      | Finish      | Cadmium Plate                      |                                                              | N/A            |
| Seals                | Material    | N/A                                | Silicone-based Elastomer                                     | N/A            |

### Electrical Data

| Contact Size | Wire Size | Insulation O.D. Limits (Inch) Max. | Test Current per AS39029 | Max. Current for Tests (Amps) per AS39029 | Max. Potential Drop (Millivolts) at 25°C |
|--------------|-----------|------------------------------------|--------------------------|-------------------------------------------|------------------------------------------|
| 12           | 12        | .135 (3.43)                        | 23.0                     | 23.0                                      | 63                                       |
|              | 14        |                                    | 17.0                     | 17.0                                      | 60                                       |
| 16           | 16        | .103 (2.62)                        | 13.0                     | 13.0                                      | 68                                       |
|              | 20        |                                    | 7.5                      | -                                         | 75                                       |
| 20           | 20        | .071 (1.80)                        | 7.5                      | 7.5                                       | 83                                       |
|              | 24        |                                    | 3.0                      | 3.0                                       | 68                                       |
| 22           | 22        | .054 (1.37)                        | 5.0                      | 5.0                                       | 110                                      |
|              | 26        |                                    | 2.0                      | 2.0                                       | 80                                       |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## How to Order

### DPXA/DPXB Single Gang

| Product                         | DPX (ARINC 404)                                                                                                                    | DPX<br>DPX | A<br>B | R | MA | - | 32C2<br>67 | - | 34<br>33 | P<br>S | - | 7<br>00 | 01 | - | F0 |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------|--------|---|----|---|------------|---|----------|--------|---|---------|----|---|----|
| Shell Style:                    | A - Single Shell<br>B - Polarized ARINC Shell                                                                                      |            |        |   |    |   |            |   |          |        |   |         |    |   |    |
| RoHS Version:<br>(Optional)     | R - RoHS Compliant<br>Finish: Electroless Nickel                                                                                   |            |        |   |    |   |            |   |          |        |   |         |    |   |    |
| Class:                          | Blank - Solder Type<br>MA - Crimp Type with LITTLE CAESAR Contact Assembly<br>ME - Environmental Crimp Type<br>MB - Wire Separator |            |        |   |    |   |            |   |          |        |   |         |    |   |    |
| Contact Arrangement:            | See Pages 38-42 for contact arrangements 2 through 106                                                                             |            |        |   |    |   |            |   |          |        |   |         |    |   |    |
| Shell Type:                     | 33 - Plug<br>34 - Receptacle                                                                                                       |            |        |   |    |   |            |   |          |        |   |         |    |   |    |
| Contact Type:                   | P - Pin<br>S - Socket                                                                                                              |            |        |   |    |   |            |   |          |        |   |         |    |   |    |
| Connector<br>Modification Code: | DPXA, See Page 33<br>DPXB, See Pages 35-37                                                                                         |            |        |   |    |   |            |   |          |        |   |         |    |   |    |
| Polarizing Position:            | For DPXB shell style only, See Page 60                                                                                             |            |        |   |    |   |            |   |          |        |   |         |    |   |    |
| Contact Modification Code:      | See Page 34 for Contact Modification Code                                                                                          |            |        |   |    |   |            |   |          |        |   |         |    |   |    |

### DPX2 Two Gang

| Product                              | DPX (ARINC 404)                                                                                                | DPX<br>DPX | 2<br>2 | R | MA<br>MA | 57<br>57 | P<br>P | 57<br>57 | P<br>P | 33<br>33 | B<br>A | 00<br>03 | 01<br>02 | 01<br>01 | - | F0 |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------|------------|--------|---|----------|----------|--------|----------|--------|----------|--------|----------|----------|----------|---|----|
| Shell:                               | 2 - Two Gang Shell                                                                                             |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| RoHS Version:<br>(Optional)          | R - RoHS Compliant<br>Finish: Electroless Nickel                                                               |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| Class:                               | Blank - Solder Type<br>MA - Crimp Type with LITTLE CAESAR<br>Contact Assembly<br>ME - Environmental Crimp Type |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| Contact Arrangement<br>(Side A / B): | See Pages 38-42 for contact a<br>rrangements 2 through 106                                                     |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| Contact Type:                        | P - Pin<br>S - Socket                                                                                          |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| Shell Type:                          | 33 - Plug<br>34 - Receptacle                                                                                   |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| Shell Style:                         | Blank - Original Two Gang DPX<br>A - ARINC A Shell<br>B - ARINC B Shell                                        |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| Connector Modification Code:         | See Pages 35-37 for Connector Modification Code                                                                |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| Polarizing Position:                 | See Polarization Position chart on Page 60                                                                     |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |
| Contact Modification Code:           | See Page 34 for Contact Modification Code                                                                      |            |        |   |          |          |        |          |        |          |        |          |          |          |   |    |

Dimensions shown in inches (mm)

Specifications and dimensions subject to change

\* RoHS Finish: Zinc Plate per ASTM-B-C33 with Trivalent Chromate (same as Clear Trivalent Chromate over Zinc?)

# DPXMA/ME (ARINC 404)

## How to Order (continued)

### DPX3/DPX4 Three and Four Gang

|                                                 |                                                                                                                                                                         |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|----------|----------|-----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|-----------|-----------|-----------|
| <b>Product</b>                                  | <b>DPX (ARINC 404)</b>                                                                                                                                                  | <b>DPX</b> | <b>3</b> | <b>4</b> | <b>R</b> | <b>ME</b> | <b>57</b> | <b>P</b> | <b>57</b> | <b>P</b> | <b>57</b> | <b>P</b> | <b>57</b> | <b>P</b> | <b>34</b> | <b>00</b> | <b>01</b> | <b>F0</b> |
|                                                 |                                                                                                                                                                         | DPX        | 4        |          |          | ME        | 57        | P        | 57        | P        | 57        | P        | 57        | P        | 34        | 00        | 01        | F0        |
| Shell Style:                                    | 3 - Three Gang Shell<br>4 - Four Gang Shell                                                                                                                             |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
| RoHS Version:<br>(Optional)                     | R - RoHS Compliant<br>Finish: Electroless Nickel                                                                                                                        |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
| Class:                                          | MA - Crimp Type with LITTLE CAESAR<br>Contact Assembly<br>ME - Environmental Crimp Type                                                                                 |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
| Contact<br>Arrangement<br>(Side A / B / C / D): | See Pages 38 to 42 for applicable arrangements.<br>Please specify each arrangement number as indicated in<br>ordering nomenclature for 3 or 4 gang if not listed below. |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
| Contact Type                                    | P - Pin<br>S - Socket                                                                                                                                                   |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
| Shell Type:                                     | 33 - Plug<br>34 - Receptacle                                                                                                                                            |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
| Connector<br>Modification Code:                 | See Pages 35-37 for Connector Modification Code                                                                                                                         |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
| Polarizing Position:                            | See Polarization Position chart on Page 60                                                                                                                              |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |
| Contact<br>Modification Code:                   | See Page 34 for Contact Modification Code                                                                                                                               |            |          |          |          |           |           |          |           |          |           |          |           |          |           |           |           |           |

### DPXMA/DPXME Shell Layouts

| DPXMA/DPXME - 3 Shell Layouts            |  |  |  |  |  |  |
|------------------------------------------|--|--|--|--|--|--|
| Insert - Used in shell position as noted |  |  |  |  |  |  |

| Layout | MA:<br>ME: | W8<br>AW8 | 32W4<br>A32W4 | 57      | 67      | A106    |
|--------|------------|-----------|---------------|---------|---------|---------|
| *E24   |            | A,B,C     |               |         |         |         |
| *F122  |            | A,B       |               |         |         | C       |
| G122   |            | B         |               | A, C    |         |         |
| *E142  |            | C         |               |         | A, B    |         |
| *A166  |            |           | C             |         | A, B    |         |
| 171    |            |           |               | A, B, C |         |         |
| 201    |            |           |               |         | A, B, C |         |
| *C205  |            |           | C             |         | A       | B       |
| B240   |            |           |               |         | A, C    | B       |
| C240   |            |           |               |         | A,B     | C       |
| *D244  |            |           | C             |         |         | A, B    |
| A279   |            |           |               |         | C       | A, B    |
| A318   |            |           |               |         |         | A, B, C |

\*Applicable to "ME" only. Consult your account representative for similar layouts application to "MA."

NOTE: For pictorial views of above layouts see pages 38-42.

| DPXMA/DPXME - 4 Shell Layouts            |  |  |  |  |  |  |  |  |
|------------------------------------------|--|--|--|--|--|--|--|--|
| Insert - Used in shell position as noted |  |  |  |  |  |  |  |  |

| Layout | MA:<br>ME: | W8<br>AW8 | 26    | 32W4<br>A32W4 | 57      | 67      | A106    | None |
|--------|------------|-----------|-------|---------------|---------|---------|---------|------|
| 145    |            |           | A,B,C |               |         | D       |         |      |
| *B148  |            | C,D       | B     |               |         |         | A       |      |
| B150   |            | A,B       |       |               | A, C    | C,D     |         |      |
| *181   |            | B         |       |               |         | A       | C       | D    |
| *B189  |            | C,D       |       |               |         | B       | A       |      |
| *A198  |            |           |       | C,D           | A, B, C | A,B     |         |      |
| 268    |            |           |       |               |         | A,B,C,D |         |      |
| *E287  |            | D         |       |               |         | B       | A,C     |      |
| *220   |            | B         |       |               |         |         | C,D     | A    |
| *A233  |            |           |       | A             |         | B,C,D   |         |      |
| 279    |            |           |       |               |         | A       | C,D     | B    |
| *F287  |            | B         |       |               |         | A       | C,D     |      |
| *E326  |            | B         |       |               |         |         | A,C,D   |      |
| A346   |            |           |       |               |         | C,D     | A,B     |      |
| B346   |            |           |       |               |         | A,B     | C,D     |      |
| 385    |            |           |       |               |         | A       | B,C,D   |      |
| A424   |            |           |       |               |         |         | A,B,C,D |      |

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## How to Order (continued)

### Description of Modification Codes for Special Connector Insert Assemblies

| Class | DPX Insert Type                                                                             | Class                            | DPX Insert Type                                                                                                                        |
|-------|---------------------------------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| None  | SERIES: DPXA, DPXB<br>Two (2) pieces, solder pot.                                           | F *                              | Rear release, crimp (MB type only).                                                                                                    |
| MA    | SERIES: DPXAMA, DPXBMA<br>LITTLE CAESAR rear release contact retention assembly, crimp pot. | DPX2                             | Standard 2 pieces, solder pot, both sides.<br>Ex: DPX2-57S57S-33-0001                                                                  |
| MAS   | LITTLE CAESAR assembly, solder pot.                                                         | DPX2MA                           | Standard LITTLE CAESAR assembly, crimp pot both sides Ring-loc coax.<br>EX:DPX2MA-57S57S-33-0001                                       |
| MB    | LITTLE CAESAR rear release contact retention assembly, crimp pot, with separator.           | DPX2MAS                          | LITTLE CAESAR assembly, solder pot, both sides Ring-Loc coax. EX: DPX2MAS-57S57S-33-001                                                |
| MS    | Ring-Loc, solder pot.                                                                       | DPX2MS                           | Ring-Loc, solder pot. Layout 25C3 pin only and 40C1 Pin and socket.<br>EX: DPX2MS-40W1S40W1S-33-0001                                   |
| ME    | Environmental, connector.                                                                   | DPX2CA<br>DPX2AC<br>(Reverse CA) | A side: (MAS) LITTLE CAESAR assembly, solder pot (32W2S)<br>B side; Standard 2 Piece, solder pot. (57S)<br>Ex: DPX2CA-32W2S57S-33-0001 |
| A *   | Two (2) pieces, solder pot (Standard 2 pieces insert).                                      | DPX2AF                           | A side: Standard solder pot.<br>B side: Rear release crimp with separator.<br>Ex: DPX2AF-13S26S-33B-0001                               |
| B *   | Ring-Loc, solder pot. (See MS)                                                              | DPX2BA                           | A side: Ring-Loc solder pot. (40W1S)<br>B Side: 2 Piece, Solder Pot. (57S)<br>Ex: DPX2BA-40W1S57S-33-0001                              |
| C *   | (MAS) LITTLE CAESAR assembly, Solder pot.                                                   | DPX2DA                           | A side: (MA) LITTLE CAESAR assembly, Crimp. (67S)<br>B Side: 2 Piece, solder pot. (57S)<br>Ex: DPX3DA-67S57S-33-0001                   |
| D *   | (MA) LITTLE CAESAR assembly, crimp pot, (Cat. A)                                            | DPX2EB                           | A side: Metal plates for grounding (Coaxes).<br>B side: Ring-Loc, solder pot.<br>Ex: DPX2EB-C1P40W1P-34B-0001                          |
| E *   | Metal plates.                                                                               |                                  |                                                                                                                                        |

\*NOTE: When any two of these letters are used in combination, the inserts ("A" and "B") side have the style contacts indicated.

### DPXA Modification Codes

|      |                                                                 |      |                                                                                       |
|------|-----------------------------------------------------------------|------|---------------------------------------------------------------------------------------|
| 4 -  | Mounting holes .120 (3.05) dia. c'sink 100° to .225 (5.72) dia. | 16 - | A106 insert with separator.                                                           |
| 5 -  | 4-40 clinch nuts.                                               | 17 - | With grommet and mounting holes .120 (3.05) dia. countersunk 100° to .225 (5.72) dia. |
| 6 -  | Removable insert retainer plate.                                | 70 - | Standard mounting with (LIF) contacts.                                                |
| 7 -  | Mounting holes .120 (3.05) dia. c'sink 82° to .230 (5.84) dia.  | 77 - | Same as -7 except with low insertion force (LIF) contacts (for LIF contact data).     |
| 12 - | Mounting holes .132 (3.35)/.125 (3.18).                         | 78 - | EMI/Environmental Panel sealed version                                                |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## How to Order (continued)

### Contact Modification Code

|         |                                                                                          |      |                                                                                                              |
|---------|------------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------------------|
| BLANK - | Rear release, crimp, signal and power contacts supplied with connector (when applicable) | SD - | Receptacle Only (socket) PCB contacts .525 (13.34), not installed.                                           |
| F0 -    | Contacts not supplied with connector (F0 not stamped on connector)                       | SE - | Solder PCB contacts installed .150" min (3.81mm) (Coax, Triax, and Quadrax does not have contacts installed) |
| SA -    | Receptacle Only (socket) PCB contacts .175 (4.45), not installed.                        | SF - | Solder PCB contacts installed .250 min (6.35mm) (Coax, Triax, and Quadrax does not have contacts installed)  |
| SB -    | Receptacle Only (socket) PCB contacts .275 (6.99), not installed.                        | SG - | Solder PCB contacts installed .375 min (9.53 mm) (Coax, Triax, and Quadrax does not have contacts installed) |
| SC -    | Receptacle Only (socket) PCB contacts .375 (9.53), not installed.                        | SH - | Solder PCB contacts installed .500 min (12.7 mm) (Coax, Triax, and Quadrax does not have contacts installed) |

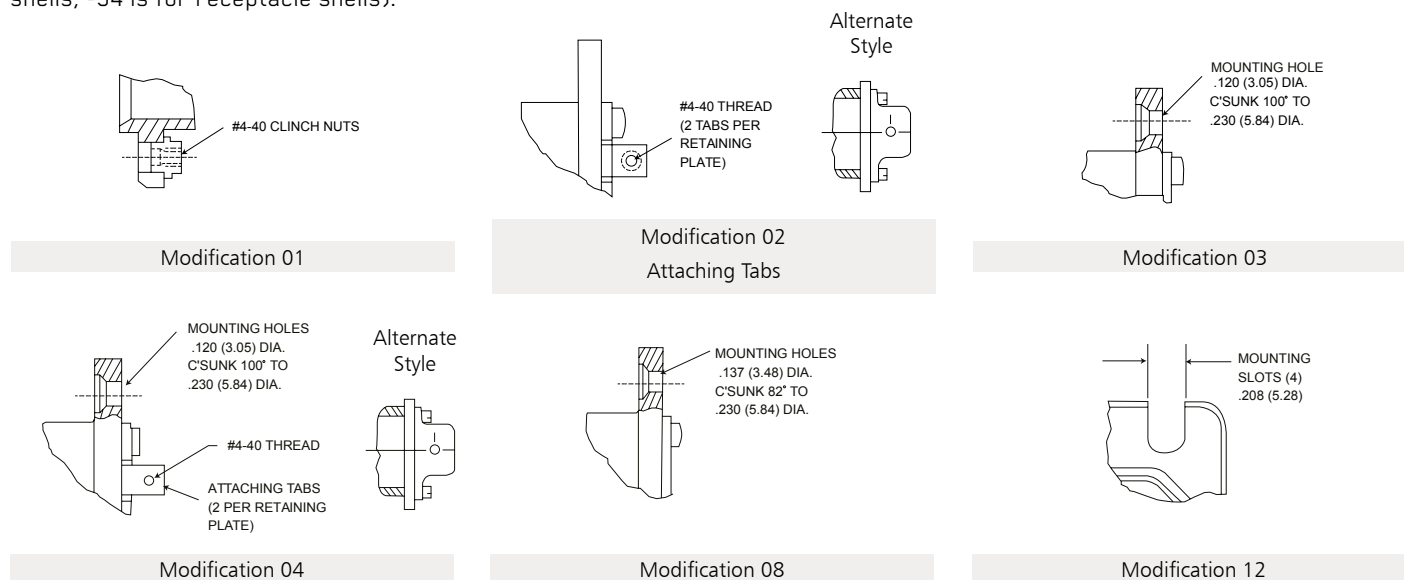
NOTE: Coaxial contacts to be ordered separately.  
All Fiber Optic layouts will not have Fiber Optic contacts installed

# DPXMA/ME (ARINC 404)

## How to Order (continued)

### Connector Modification Codes: DPXB and DPX2/3/4

Some of the modification numbers used in the DPX only certain types. The following chart gives the type in which they may be used (-33 is for plug lines apply to all types and some are applicable for modification number, the description, and the shell shells, -34 is for receptacle shells).



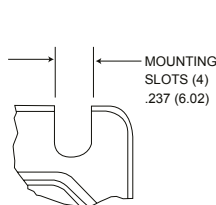
| Modification | Applicable Series                                                                                | Definition                                                                                                   | Notes                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 00**         | DPX2-33 & 34, DPX2-33A, DPX2-33F & 34F, DPX2-33M & 34M                                           | Standard construction, mounting holes .120 (3.05) dia. and with tabs for junction shells.                    | Applicable for all MA, ME, NA & NE Series Connectors.<br>**Indicates polarizing position (See Page 60) |
| 00           | DPX2-34A                                                                                         | Standard construction - six floating eyelets and tabs for junction shells.                                   |                                                                                                        |
|              | DPXB-33, DPX2-33B, DPX3-33, DPX4-33                                                              | Standard construction, mounting holes .120 (3.05) dia. countersunk 82° to .230 (5.84) dia. - no tabs.        | Applicable for all MA, ME, NA & NE Series Connectors.                                                  |
|              | DPXB-34, DPX2-34B, DPX3-34, DPX4-34                                                              | Standard construction, mounting holes 120 (3.05) dia. - no tabs.                                             | Applicable for all MA, ME, NA & NE Series Connectors.                                                  |
| 01           | DPX2-33 & 34, DPX2-33A & 34A, DPX2-33F & 34F, DPX2-33M & 34M                                     | Standard construction and with standard junction shells.                                                     |                                                                                                        |
|              | DPXB-34, DPX2-33B & 34B                                                                          | With four #4-40 clinch nuts in mounting holes.                                                               |                                                                                                        |
|              | DPX3-34                                                                                          | With six #4-40 clinch nuts in mounting holes.                                                                | Applicable for all MA, ME, NA & NE Series Connectors.                                                  |
|              | DPX4-34                                                                                          | With ten #440 clinch nuts in mounting holes.                                                                 | Applicable for all MA, ME, NA & NE Series Connectors.                                                  |
| 02           | DPX2-33 & 34, DPX2-33A, DPX2-34A, DPX2-33F & 34F, DPX2-33M & 34M                                 | Standard construction and with 90° junction shells.                                                          |                                                                                                        |
|              | DPXB-33 & 34, DPX2-33B & 34B, DPX3-33 & 34, DPX4-33 & 34                                         | Standard construction and with tabs for attaching junction shells.                                           | Applicable for all MA, ME, NA & NE Series Connectors.                                                  |
|              | DPXBME-33 & 34, DPX2ME-33 & 34, DPX3ME-33 & 34, DPX4ME-33 & 34                                   | Standard construction and with tabs for attaching junction shells.                                           | Applicable for NE Series.                                                                              |
| 03           | DPXB-33 & 34, DPX2-33 & 34, DPX2-33A, DPX2-33F & 34F, DPX2-33M & 34M, DPX3-33 & 34, DPX4-33 & 34 | Mounting holes .120 (3.05) dia. countersunk 100° to .230(5.84) dia.                                          | Applicable for all MA, ME, NA & NE Series Connectors.                                                  |
| 04**         | DPXB-33, DPX2-33B, DPX3-33, DPX4-33                                                              | .120 (3.05) dia. mounting holes countersunk 100° to .230 (5.84) dia. and tabs for attaching junction shells. | Applicable for all MA, ME, NA & NE Series Connectors.<br>**Indicates polarizing position (See Page 60) |
| 08           | DPX2-33 & 34, DPX2-33F & 34F                                                                     | Mounting holes .137 (3.48) dia. countersunk 82° to .230 (5.84) dia.                                          |                                                                                                        |
| 12           | DPXB-34, DPX2-34B                                                                                | With mounting slots .208 (5.28) wide.                                                                        |                                                                                                        |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

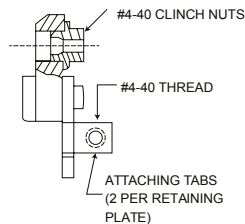
# DPXMA/ME (ARINC 404)

## How to Order (continued)

### Connector Modification Codes: DPXB and DPX2/3/4 (continued)

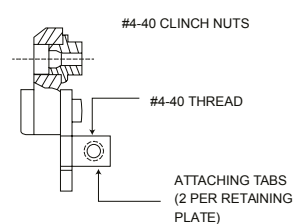
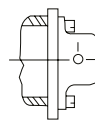


Modification 13



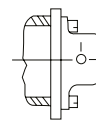
Modification 17

Alternate Style

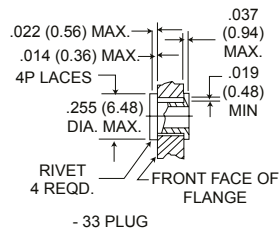


Modification 18

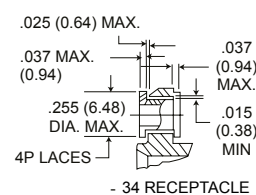
Alternate Style



Modification 19



Modification 23



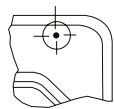
| Modification | Applicable Series                                                                                          | Definition                                                                            | Notes                                                                                                |
|--------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 13           | DPXB-34, DPX2-34B                                                                                          | With mounting slots .237 (6.02) wide.                                                 |                                                                                                      |
| 14           | DPXB-33 & 34, DPX2-33B & 34B, DPX3-33 & 34                                                                 | With straight junction shelf.<br>(Not available on DPX4)                              | Applicable for all MA, ME, NA & NE Series Connectors. See Page 75 for Junction Shell Configurations. |
| 17           | DPXB-33 & 34, DPX2-33B & 34B                                                                               | With four #4-40 clinch nuts in mounting holes and tabs for attaching junction shells. | Applicable for all MA, ME, NA & NE Series Connectors.                                                |
|              | DPX3-34                                                                                                    | With six #4-40 clinch nuts in mounting holes and tabs far attaching junction shells.  | Applicable for all MA, ME, NA & NE Series Connectors.                                                |
|              | DPX4-34                                                                                                    | With ten #4-40 clinch nuts in mounting holes and tabs for attaching junction shells.  | Applicable for all MA, ME, NA & NE Series Connectors.                                                |
| 18           | DPXB-33 & 34, DPX2-33B & 34B, DPX3-34                                                                      | With six #4-40 clinch nuts in mounting holes and tabs for attaching junction shells.  | Applicable for all MA, ME, NA & NE Series Connectors.                                                |
| 19**         | DPXB-33 & 34, DPX2-33B & 34B, DPX3-33                                                                      | With six #4-40 clinch nuts in mounting holes.                                         | **Indicates polarizing position (See Page 60)                                                        |
|              | DPX3-34 (Same as Code -01)                                                                                 | Do not assign - use -01 code                                                          |                                                                                                      |
| 20           | DPX2-33A & 34A                                                                                             | Standard construction without tabs on insert retaining plate.                         |                                                                                                      |
| 22           | DPXB-33, DPXBME, DPX2ME, DPX2-33 & 34, DPX2-33A, DPX2-33B, DPX2-33M & 34M, DPX2-33F & 34F, DPX3ME, DPX3-33 | With eight #4-40 clinch nuts in mounting holes.                                       |                                                                                                      |
|              | DPX4ME - 33 only                                                                                           | Same as 01. 01 Recommended                                                            |                                                                                                      |
| 23           | DPXB-33 & 34, DPX2-33 & 34, DPX2-33A, DPX2-33B & 34B, DPX2-33F & 34F, DPX3-33 & 34, DPX4-33 & 34           | With floating eyelets.                                                                | Applicable for all MA, ME, NA & NE Series Connectors.                                                |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

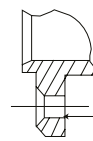
## How to Order (continued)

### Connector Modification Codes: DPXB and DPX2/3/4 (continued)



MOUNTING  
HOLES(4), .156(3.96)  
DIA.

Modification 25



MOUNTING  
HOLES(4), .120 (3.05)  
DIA., C'SUNK 82° TO  
.230 (5.84) DIA.

Modification 25

| Modification | Applicable Series                                                      | Definition                                                                                                      | Notes                                                                                              |
|--------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 24           | DPX2-34A, DPX2-33B                                                     | With six mounting holes .208 (5.28) dia. (Floating eyelets omitted)                                             |                                                                                                    |
| 25           | DPX2-34B, DPXB-34                                                      | With four mounting holes .157 (3.99)/.155 (3.94) dia. (Clinch nuts omitted)                                     | Applicable for all MA, ME, NA & NE Series Connectors.                                              |
| 26           | DPX2-34B, DPXB-34, DPX3-34                                             | Mounting holes .120 (3.05) dia. countersunk 82° to .230 (5.84) dia. and has tabs for attaching junction shells. | Applicable for all MA, ME, NA & NE Series Connectors.                                              |
| 29           | DPX2-34A                                                               | With interfacial seal (if pins) without junction shell tabs and military gold plating on the contact.           |                                                                                                    |
|              | DPXBME-33S & 34P, DPX2ME-33S & 34P, DPX3ME-33S & 34P, DPX4ME-33S & 34P | Standard except less grommet*<br>*On the A106S layout the grommet is replaced by the separator.                 | Applicable for all MA, ME, NA & NE Series Connectors.                                              |
| 30           | DPXBME-34P, DPX2ME-34P, DPX3ME-34P, DPX4ME-34P                         | Standard except less grommet and with tabs for attaching junction shells. (-34 pin only)                        | Applicable for NE Series.                                                                          |
| 31           | DPXBME-34P, DPX2ME-34P, DPX3ME-34P, DPX4ME-34P                         | Standard except less grommet and with floating bushings. (Slatted shells).                                      | Applicable for NE Series.                                                                          |
| 33           | DPXBME-34P, DPX2ME-34P, DPX3ME-34P, DPX4ME-34P                         | Standard except less grommet and with clinch nuts in mounting holes.                                            | Applicable for NE Series.                                                                          |
| 37           | DPXBME-34P, DPX2ME-34P, DPX3ME-34P, DPX4ME-34P                         | Standard less grommet and with clinch nuts in mounting holes and with tabs for attaching junction shells.       | Applicable for NE Series.                                                                          |
| 39**         | DPXB-33 & 34, DPX2-33B & 34B, DPX3-33 & 34, DPX4-33 & 34               | With floating eyelets & tabs for attaching junction shells.                                                     | Applicable for all MA, ME, NA & NE Series Connectors. **Indicates polarizing position. See Page 60 |
| 70**         | All DPX series with LITTLE CAESAR retention                            | Same as -00 with addition of LIF contacts See Contact Section Page 61.                                          | **Indicates polarizing position. See Page 60                                                       |
| 71           |                                                                        | Same as -31 with addition of LIF contacts See Contact Section Page 61.                                          |                                                                                                    |
| 72           |                                                                        | Same as -01 with addition of LIF contacts See Contact Section Page 61.                                          |                                                                                                    |
| 73           |                                                                        | Same as -23 with addition of LIF contacts See Contact Section Page 61.                                          |                                                                                                    |
| 74           |                                                                        | Same as -33 with addition of LIF contacts See Contact Section Page 61.                                          |                                                                                                    |
| 75           |                                                                        | Same as -02 with addition of LIF contacts See Contact Section Page 61.                                          |                                                                                                    |
| 76           | All DPX as listed for code -22                                         | Same as -22 with addition of LIF contacts                                                                       |                                                                                                    |
| 77           | All DPXB series                                                        | Mounting holes .120 (3.05) dia. countersunk 82° to .230 (5.84) dia. and has LIF contacts.                       |                                                                                                    |
| 78           | DPXA and DPX2ME                                                        | EMI/Environmental Panel sealed version                                                                          |                                                                                                    |
| 79           | All DPX series with LITTLE CAESAR retention                            | Same as -29 with addition of LIF contacts                                                                       |                                                                                                    |
| 92           | DPXA, DPXB                                                             | Nickel-Plated Shells With EMI Spring                                                                            |                                                                                                    |
| 93           | DPX NICKEL PLATED REC                                                  | Nickel-Plated Receptacle Shells                                                                                 |                                                                                                    |
| 94           | DPXB, DPX2-33B & 34B, DPX3-33 & 34, DPX4-33 & 34                       | Standard finish with M3 clinch nuts                                                                             |                                                                                                    |

The 7\* Modification Codes are reserved for connectors which have Low Insertion Force (LIF) Contacts.

The LIF design is not applicable to thermocouple contacts, coaxial contacts and contacts larger than size 8 and Standard size 20

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## Contact Arrangements

### DPX Solder Type - Captive Contacts

|                                  |                                           |                              |                                 |
|----------------------------------|-------------------------------------------|------------------------------|---------------------------------|
|                                  |                                           |                              |                                 |
| <b>C2</b><br>2 Coax<br>(RG-9/U)  | <b>C7</b><br>7 Coax                       | <b>8</b><br>8 #12            | <b>10C3</b><br>7 #20<br>3 Coax  |
|                                  |                                           |                              |                                 |
| <b>B16C3</b><br>13 #16<br>3 Coax | <b>17</b><br>17 #20                       | <b>23</b><br>23 #20          | <b>25C3</b><br>22 #20<br>3 Coax |
|                                  |                                           |                              |                                 |
| <b>26</b><br>26 #16              | <b>30C4</b><br>15 #20<br>11 #16<br>4 Coax | <b>32</b><br>29 #20<br>3 #16 | <b>32C2</b><br>30 #20<br>2 Coax |
|                                  |                                           |                              |                                 |
| <b>40</b><br>40 #20              | <b>40C1</b><br>39 #20<br>1 Coax           | <b>45</b><br>45 #20          | <b>57</b><br>57 #20             |
|                                  |                                           |                              |                                 |
| <b>67</b><br>64 #20<br>3 #16     | <b>00</b><br>BLANK                        |                              |                                 |

Face view of pin insert shown  
NOTE: See pages 66-67 for Coaxial/Power Contact Termination Data

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## Contact Arrangements (continued)

### DPX Solder Type - Captive Contacts (continued)

| Contact Arrangement | No. of Contacts & Wire Size  | Test Voltage AC (RMS)                     | Contacts Arr. No. | PIN             |                                |                                   | SOCKET          |                                |                  |                |
|---------------------|------------------------------|-------------------------------------------|-------------------|-----------------|--------------------------------|-----------------------------------|-----------------|--------------------------------|------------------|----------------|
|                     |                              |                                           |                   | No. of Contacts | Contact Type Code              | Contact Numbers                   | No. of Contacts | Contact Type Code              | Contact Numbers  |                |
| C2                  | 2 coax (RG-9/U)              | 1000 (1,2)V matched impedance             | C2                | 2               | R                              | 1-2                               | 2               | R                              | 1-2              |                |
|                     |                              |                                           | C2C               |                 | AB                             |                                   |                 | Consult Account Representative |                  |                |
|                     |                              |                                           | C2M               |                 | Consult Account Representative |                                   |                 | AC                             |                  |                |
| C7                  | 7 coax                       | 1000 (1-7)V                               | C7                | 7               | K                              | 1-7                               | 4               | F                              | 1,2,4,5<br>3,6,7 |                |
|                     |                              |                                           | C7A               |                 | A                              |                                   | 3               | G                              |                  |                |
|                     |                              |                                           | C7B               |                 | B                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | C7B               |                 | Same as Socket (Use C7)        |                                   | 7               | K                              | 1-7              |                |
|                     |                              |                                           | C7M               |                 | C                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | C7X               |                 | AA                             |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | C7AA              |                 | Z                              |                                   | Same as Pin     |                                |                  |                |
| 8                   | 8 #12                        | 2000V                                     | 8                 | 8               | N                              | 1-8                               | Same as Pin     |                                |                  |                |
| 10C3                | 7 #20<br>3 coax              | 1500 (1-4, 8-10)V                         | 10C3              | 7               | L                              | 1-4, 8-10<br>5,6,7                | Same as Pin     |                                |                  |                |
|                     |                              |                                           | A10C3             | 3               | L                              |                                   | Same as Pin     |                                |                  |                |
| B16C3               | 13 #16<br>3 coax             | 1500 (4-16)V<br>1000 (1-3)V               | B16C3             | 13              | M                              | 4-16<br>1-3                       | Same as Pin     |                                |                  |                |
|                     |                              |                                           | C16C3             |                 | A                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | G16C3             |                 | M                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | J16C3             |                 | B                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | ZE16C3            |                 | M                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | ZF16C3            |                 | C                              |                                   | Same as Pin     |                                |                  |                |
| 17                  | 17 #20                       | 2000V                                     | 17                | 17              | L                              | 1-17                              | Same as Pin     |                                |                  |                |
| 23                  | 23 #20                       | 2000 (15-23).<br>1500 (1-14)V.            | 23                | 23              | L                              | 1-23                              | Same as Pin     |                                |                  |                |
| 25C3                | 22 (#20)<br>3 coax           | 1500 (4-25)V.<br>1000 (1-3)V              | 25C3              | 22              | L                              | 4-25<br>1-3                       | 22              | L                              | 4-25<br>1,3<br>2 |                |
|                     |                              |                                           | F25C3             |                 | K                              |                                   | 2               | F                              |                  |                |
|                     |                              |                                           | G25C3             |                 | L                              |                                   | 1               | G                              |                  |                |
|                     |                              |                                           | J25C3             |                 | C                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | Q25C3             |                 | A                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | R25C3             |                 | L                              |                                   | Same as Pin     |                                |                  |                |
| 26                  | 26 #16                       | 1500V                                     | 26                | 26              | AA                             | 1-26                              | Same as Pin     |                                |                  |                |
| 30C4                | 15 #20.<br>11 #16,<br>4 coax | 1500 (2-5 & 7-13)V<br>1000 (1,6 & 14-26)V | A30C4             | 15              | M                              | 1,6 14-26,<br>2-5, 7-13,<br>27-30 | Same as Pin     |                                |                  |                |
|                     |                              |                                           | B30C4             |                 | Z                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | C30C4             |                 | L                              |                                   | Same as Pin     |                                |                  |                |
| 32                  | 3 #16<br>29 #20              | 2000 (1-6)<br>1500 (7-32)V                | 32                | 29              | L                              | 1,3,4,7-32,<br>2,5,6              | Same as Pin     |                                |                  |                |
|                     |                              |                                           | 3                 | M               | Same as Pin                    |                                   |                 |                                |                  |                |
| 32C2                | 30 #20 2 COAX                | 1500 (1-30)V<br>1000 (A1, A2)V            | 32C2              | 30              | L                              | 1-30<br>A1, A2                    | 30              | L                              |                  | 1-30<br>A1, A2 |
|                     |                              |                                           | A32C2             |                 | K                              |                                   | 2               | F                              |                  |                |
|                     |                              |                                           | C32C2             |                 | A                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | D32C2             |                 | L                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | M32C2             |                 | B                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | N32C2             |                 | C                              |                                   | Same as Pin     |                                |                  |                |
| 40                  | 40 #20                       | 1500V                                     | 40                | 40              | L                              | 1-40                              | Same as Pin     |                                |                  |                |
| 40C1                | 39 #20<br>1 coax             | 1500 (1-39)V<br>1000 (A1)V                | 40C1              | 39              | L                              | 1-39<br>A1                        | Same as Pin     |                                |                  |                |
|                     |                              |                                           | A40C1             |                 | B                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | F40C1             |                 | L                              |                                   | 39              | L                              | 1-39<br>A1       |                |
|                     |                              |                                           | J40C1             |                 | K                              |                                   | 1               | F                              |                  |                |
|                     |                              |                                           | K40C1             |                 | L                              |                                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           | L40C1             |                 | C                              |                                   | Same as Pin     |                                |                  |                |
| 45                  | 45 #20                       | 1500V                                     | 45                | 45              | L                              | 1-45                              | Same as Pin     |                                |                  |                |
| 57                  | 57 #20                       | 1500V                                     | 57                | 57              | L                              | 1-57                              | Same as Pin     |                                |                  |                |
| 67                  | 64 #20<br>3 #16              | 1000V                                     | 67                | 64,<br>3        | L                              | 1-2,6-67<br>3-5                   | Same as Pin     |                                |                  |                |
|                     |                              |                                           |                   |                 | M                              |                                   | Same as Pin     |                                |                  |                |

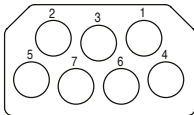
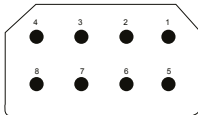
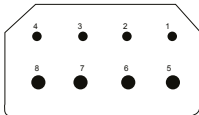
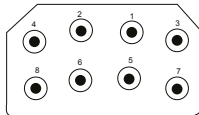
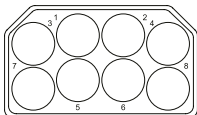
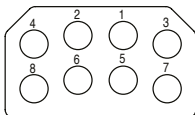
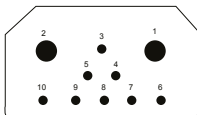
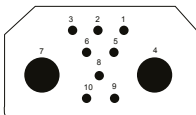
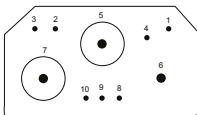
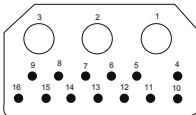
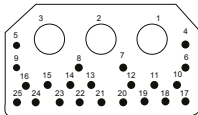
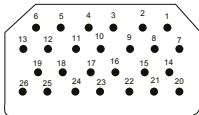
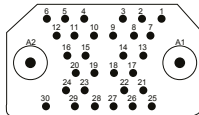
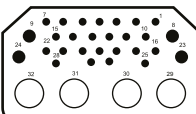
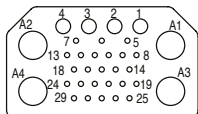
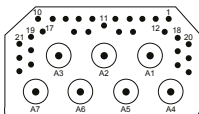
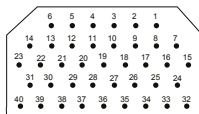
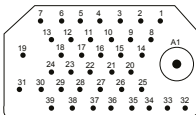
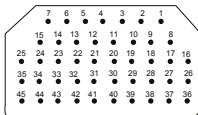
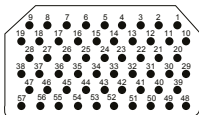
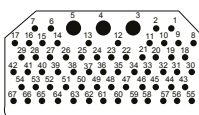
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## Contact Arrangements (continued)

### DPX MA/ME Series - Crimp Type

|                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|    |    |    |    |                                                                                     |
| 7Q7<br>7 #8 Quadrax                                                                 | 8<br>8 #12                                                                          | D8<br>4 #16<br>4 #12                                                                 | W8<br>8 Coax                                                                          |                                                                                     |
|    |    |     |     |  |
| N8<br>8 #8                                                                          | 8Q8<br>8 #5 Quadrax                                                                 | 10<br>2 #8<br>8 #20                                                                  | A10<br>8 #16<br>2 #4                                                                  | 10W3<br>7 #20HD<br>3 Coax                                                           |
|   |   |   |   |                                                                                     |
| B16W3<br>13 #16<br>3 Coax                                                           | 25W3<br>22 #20<br>3 Coax                                                            | 26<br>26 #16                                                                         | 32W2<br>30 #20HD<br>2 Coax                                                            |                                                                                     |
|  |  |  |  |                                                                                     |
| 32W4<br>24 #20HD<br>4 #16<br>4 Coax                                                 | 33Q4M<br>25 #20HD<br>4 #16<br>4 #5 Quadrax                                          | 36W7<br>29 #22<br>7 Coax (Size 5)                                                    | 40<br>40 #20                                                                          |                                                                                     |
|  |  |  |  |                                                                                     |
| 40W1<br>39 #20<br>1 Coax                                                            | 45<br>45 #20                                                                        | 57<br>57 #20                                                                         | 67<br>64 #20HD<br>3 #16                                                               |                                                                                     |

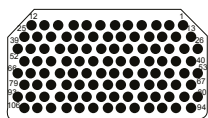
Face view of pin insert shown  
NOTE: See Pages 69-74 for Coaxial and Crimp Contact data

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## Contact Arrangements (continued)

### DPX MA/ME Series - Crimp Type (continued)



**A106† and F106**

106 #22



**00**

BLANK

NOTE: See Pages 69-74 for Coaxial and Crimp Contact data

† A106 arrangements have the POS-ALINE connector design. See Page 43.

NOTE: Engaging force of each layout arrangement shall not exceed 45 lbs. maximum.

### DPX MA/ME Series - Crimp Type Detail

| Contact Arrangement |                                    | No. of Contacts & Wire Size | Test Voltage AC (RMS)                                                          | Contacts Arr. No. | No. of Contacts | Contact Size or Code Letter | Contact Numbers        |
|---------------------|------------------------------------|-----------------------------|--------------------------------------------------------------------------------|-------------------|-----------------|-----------------------------|------------------------|
| 7Q7                 | 7Q7                                | 7 #8 Quadrax                |                                                                                | 7                 | 7               | Quadrax                     | 1-7                    |
| 8                   | 8                                  | 8 #12                       |                                                                                | 8                 | 8               | 12                          | 1-8                    |
| D8                  | D8                                 | 4 #16<br>4 #12              |                                                                                | D8                | 4<br>4          | 16<br>12                    | 1-4<br>5-8             |
| W8                  | W8*<br>(For MA)<br>AW8<br>(For ME) | 8 Coax                      | 1000V (1-8)V                                                                   | W8                | 8               | Coax                        | 1-8                    |
|                     |                                    |                             |                                                                                | C8A               |                 | G                           |                        |
|                     |                                    |                             |                                                                                | C8B               |                 | F                           |                        |
|                     |                                    |                             |                                                                                | C8C               |                 | H                           |                        |
|                     |                                    |                             |                                                                                | C8E               |                 | R                           |                        |
|                     |                                    |                             |                                                                                | C8G               |                 | S                           |                        |
|                     |                                    |                             |                                                                                | C8H               |                 | AB                          |                        |
| 8Q8                 | 8Q8                                | 8 #5 Quadrax                |                                                                                | 8                 | 8               | Quadrax                     | 1-8                    |
| 10                  | 10                                 | 2 #8<br>8 #20               | 1500V                                                                          | 10                | 2<br>8          | B<br>20                     | 1,2<br>3-10            |
| A10                 | A10                                | 8 #16<br>2 #4               | 1500V                                                                          | A10               | 8<br>2          | 16<br>4                     | 1-3, 5-6, 8-10<br>4, 7 |
| 10W3                | 10W3*                              | 7 #20HD<br>3 Coax           | 1500<br>(1-4, 8-10)V                                                           | 10W3              | 7<br>3          | 20HD<br>Coax                | 1-4, 8-10<br>5-7       |
|                     |                                    |                             |                                                                                | A10C3             |                 | 20HD<br>AC                  |                        |
|                     |                                    |                             |                                                                                | B10C3             |                 | 20HD<br>AC                  |                        |
| B16W3               | SOCKET<br>ONLY<br>B16W3            | 13 #16<br>3 Coax            | 1500 (4-16)<br>1000 (1-3)V<br>socket side only<br>(Not available in ME series) | B16W3             | 13<br>3         | 16<br>Coax                  | 4-16<br>1-3            |
| 25W3                | 25W3                               | 22 #20<br>3 Coax            | 1500 (4-25)V<br>1000 (1-3)V<br>(Not available in ME series)                    | 25W3              | 22<br>3         | 20<br>Coax                  | 4-25<br>1-3            |
|                     |                                    |                             |                                                                                | 25A3              |                 | 20<br>C                     |                        |
|                     |                                    |                             |                                                                                | 25B3              |                 | 20<br>D                     |                        |
|                     |                                    |                             |                                                                                | 25D3              |                 | 20<br>B                     |                        |
| 26                  | 26                                 | 26 #16                      | 1500V                                                                          | 26                | 26              | 16                          | 1-26                   |

\* Crimp rear release Coaxial contacts.

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## Contact Arrangements (continued)

### DPX MA/ME Series - Crimp Type Detail (continued)

| Contact Arrangement |                                        | No. of Contacts & Wire Size       | Test Voltage AC (RMS)            | Contacts Arr. No. | No. of Contacts | Contact Size or Code Letter | Contact Numbers                            |
|---------------------|----------------------------------------|-----------------------------------|----------------------------------|-------------------|-----------------|-----------------------------|--------------------------------------------|
| 32W2                | 32W2*<br>(For MA)<br>A32W2<br>(For ME) | 30 #20HD<br>2 Coax                | 1500 (1-30)<br>1000 (A1,A2)V     | 32W2              | 30<br>2         | 20<br>Coax                  | 1-30<br>A1,A2                              |
|                     |                                        |                                   |                                  | 32A2              |                 | 20<br>B                     |                                            |
|                     |                                        |                                   |                                  | 32B2              |                 | 20<br>A                     |                                            |
|                     |                                        |                                   |                                  | 32C2              |                 | 20<br>D                     |                                            |
|                     |                                        |                                   |                                  | D32C2             |                 | 20<br>J                     |                                            |
|                     |                                        |                                   |                                  | 32F2              |                 | 20<br>P                     |                                            |
|                     |                                        |                                   |                                  | 32G2              |                 | 20<br>C                     |                                            |
| 32W4                | 32W4*<br>(For MA)<br>A32W4<br>(For ME) | 24 #20HD<br>4 #16<br>4 Coax       | 1500 (1-28)<br>1000 (29-32)V     | 32W4              | 24<br>4<br>4    | 20HD<br>16<br>Coax          | 1-7, 10-22, 25-28<br>8, 9, 23, 24<br>29-32 |
|                     |                                        |                                   |                                  | 32C4              |                 | 20HD<br>16<br>S             |                                            |
|                     |                                        |                                   |                                  | B32C4             |                 | 20HD<br>6<br>H              |                                            |
|                     |                                        |                                   |                                  | C32C4             |                 | 20HD<br>16<br>R             |                                            |
|                     |                                        |                                   |                                  | D32C4             |                 | 20HD<br>16<br>G             |                                            |
|                     |                                        |                                   |                                  | E32C4             |                 | 20HD<br>16<br>AA            |                                            |
|                     |                                        |                                   |                                  | H32C4             |                 | 20HD<br>16<br>AB            |                                            |
| 33Q4M               | 33Q4M                                  | 25 #20HD<br>4 #16<br>4 #5 Quadrax |                                  | 33Q4M             | 25<br>4<br>4    | 20HD<br>16<br>Quadrax       | 5-25<br>1-4<br>A1-A4                       |
| 36W7                | 36W7*                                  | 29 #22<br>7 Coax (Size 5)         | 1000                             | 36W7              | 29<br>7         | 22<br>Coax                  | 1-29<br>A1-A7                              |
| 40                  | 40                                     | 40 #20                            | 1500V                            | 40                | 40              | 20                          | 1-40                                       |
| 40W1                | 40W1*<br>(For MA)<br>A40W1<br>(For ME) | 39 #20<br>1 Coax                  | 1500 (1-39)<br>1000 (A1)V        | 40W1              | 39<br>1         | 20<br>Coax                  | 1-39<br>A1                                 |
|                     |                                        |                                   |                                  | 40B1              |                 | 20<br>B                     |                                            |
|                     |                                        |                                   |                                  | 40F1              |                 | 20<br>P                     |                                            |
|                     |                                        |                                   |                                  | F40C1             |                 | 20<br>J                     |                                            |
| 45                  | 45                                     | 45 #20                            | 1500V                            | 45                | 45              | 20                          | 1-45                                       |
| 57                  | 57                                     | 57 #20                            | 1500V                            | 57                | 57              | 20                          | 1-57                                       |
| 67                  | 67                                     | 64 #20HD<br>3 #16                 | 1500 (3-5)<br>1000 (1, 2, 6-67)V | 67                | 64<br>3         | 20HD<br>16                  | 1-2, 6-67<br>3, 4, 5                       |
| A106                | A106†                                  | 106 #22                           | 1000V                            | A106              | 106             | 22                          | 1-106                                      |
|                     |                                        |                                   |                                  | F106              |                 |                             |                                            |

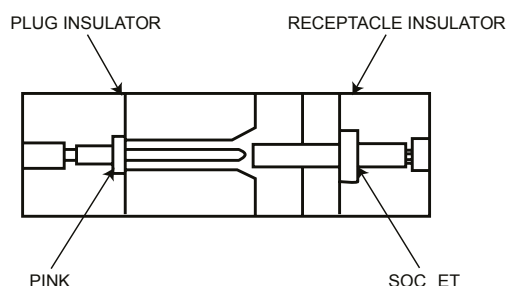
\* Crimp rear release Coaxial contacts.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

## Contact Arrangements (continued)

### Positive Contact Alignment Design



Rear insertion, release and extraction of crimp snap-in contacts

In the POS-ALIGN connector construction, the entire pin contact is recessed in an individual cavity in the plug insulator while the sturdy socket members are exposed and extend from the connector receptacle face.

There is a lead-in chamfer that guides the socket contact into the pin cavity assuring proper contact alignment during mating and protecting the pin contact from damage and wear.

The ITT Cannon LITTLE CAESAR contact assembly permits contacts to be inserted, released, and extracted from the rear of the connector with a simply, expendable plastic tool.

The contact is inserted from the rear of the connector through a cylindrical clip in the insulator until indented tines of the clip snap securely behind the contact shoulder. The contact is released as the plastic tool is inserted into the rear of the connector, expanding the tines beyond the contact shoulder, permitting contact extraction. The simplified contact design has a single holding shoulder and no undercuts for improved bend resistance.

Other features of the LITTLE CAESAR contact assembly include: hard dielectric socket face with lead-in chamfers for positive mating of contacts; good contact stability with minimum clearance between the contact and the insulator cavity wall; plus a "closed-down" design of the insulator's hard dielectric around each pin contact.

This LITTLE CAESAR contact assembly was selected by the National Aerospace Standards Committee as the system to be used in a major industry connector specification for vital programs demanding great operational reliability.

The LITTLE CAESAR contact assembly is currently available in the BKA, DPX\*MA, DPK, DPDMA, and DPAMA Series.

# DPXNA/DPXNE

## Product Overview



DPXNA/DPXNE (AS81659) (non-environmental, Type IV) and DPXNE (environmental, Types II and III) rack and panel connectors are designed to meet or exceed the requirements of SAE-AS81659, Revision B. They are used in military and aerospace applications and computer periphery equipment requirements, and are designed to operate in temperatures ranging from -65°C to +125 °C. DPXNA/NE connectors are available in single, 2, 3 and 4 gang configurations with a total of 12 contact arrangements that accommodate contact sizes 12, 16, 20, as well as 22, and combination standard and coaxial contacts. Contact retention of these crimp snap-in contacts is provided by the LITTLE CAESAR rear release contact retention assembly. Environmental sealing is accomplished by wire sealing grommets and interfacial seals.

### Material Specifications

| Description                                      | Material                               | Finish                                                                                            |
|--------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------|
| Shell                                            | Aluminum alloy                         | Cadmium plating, Type II, Class 3/QQ-P-416 with yellow chromate finish (underplating may be used) |
| Insulator                                        | Thermoplastic or Thermosetting Plastic | N/A                                                                                               |
| Elastomers                                       | Silicone Rubber                        |                                                                                                   |
| Contacts                                         | Copper alloy                           | Gold plate per MIL-G-45204, Type 1, Grade C, Class 1 with suitable underplating (silver not used) |
| Insulator Retaining Plate                        | Aluminum alloy                         | Anodize, blue color                                                                               |
| Junction Shells<br>(Not available for four gang) |                                        | Same as shell                                                                                     |
| Float Mounts                                     | Stainless steel                        | N/A                                                                                               |
| Clinch Nuts                                      |                                        | Cadmium Plating                                                                                   |
| Polarizing Posts                                 | Zinc (die cast)                        |                                                                                                   |
| Polarizing Keys & Retaining Plate                | Nickel Silver                          | N/A                                                                                               |
| Screws                                           | Brass                                  | Cadmium Plating                                                                                   |
| Lockwashers                                      | Phosphor Bronze                        |                                                                                                   |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXNA/DPXNE

## How to Order

### DPXB Single Gang ARINC B Shell

| Product                      | DPXNA/NE (AS81659)                                                                                    | DPX | B | R | NE | A106 | 33 | P | 00 | 01 | F0 |
|------------------------------|-------------------------------------------------------------------------------------------------------|-----|---|---|----|------|----|---|----|----|----|
| Shell:                       | B - ARINC 'B' Shell                                                                                   |     |   |   |    |      |    |   |    |    |    |
| RoHS Version: (Optional)     | R - RoHS Compliant<br>Finish: Electroless Nickel                                                      |     |   |   |    |      |    |   |    |    |    |
| Class:                       | NA - Non-Environmental (SAE-AS81659B, Type IV)<br>NE - Environmental (SAE-AS81659B, Types II and III) |     |   |   |    |      |    |   |    |    |    |
| Contact Arrangement:         | See Page 48 for contact arrangements                                                                  |     |   |   |    |      |    |   |    |    |    |
| Shell Type:                  | 33 - Plug<br>34 - Receptacle                                                                          |     |   |   |    |      |    |   |    |    |    |
| Contact Type:                | P - Pin *<br>S - Socket **                                                                            |     |   |   |    |      |    |   |    |    |    |
| Connector Modification Code: | See Page 47 for Connector Modification Code                                                           |     |   |   |    |      |    |   |    |    |    |
| Polarization Position:       | See Polarization Position Chart on Page 60                                                            |     |   |   |    |      |    |   |    |    |    |
| Contact Modification Code:   | F0 - Contacts not supplied with connector (F0 not stamped on connector)                               |     |   |   |    |      |    |   |    |    |    |

### DPX2 Two Gang

| Product                           | DPXNA/NE (AS81659)                                                                                    | DPX | 2 | R | NE | 67M | P | AW8 | P | 34 | B | 00 | 01 | F0 |
|-----------------------------------|-------------------------------------------------------------------------------------------------------|-----|---|---|----|-----|---|-----|---|----|---|----|----|----|
| Shell:                            | 2 - Two Gang Shell                                                                                    |     |   |   |    |     |   |     |   |    |   |    |    |    |
| RoHS Version: (Optional)          | R - RoHS Compliant<br>Finish: Electroless Nickel                                                      |     |   |   |    |     |   |     |   |    |   |    |    |    |
| Class:                            | NA - Non-Environmental (SAE-AS81659B, Type IV)<br>NE - Environmental (SAE-AS81659B, Types II and III) |     |   |   |    |     |   |     |   |    |   |    |    |    |
| Contact Arrangement (Side A / B): | See Page 48 for contact arrangements                                                                  |     |   |   |    |     |   |     |   |    |   |    |    |    |
| Contact Type:                     | P - Pin *<br>S - Socket **                                                                            |     |   |   |    |     |   |     |   |    |   |    |    |    |
| Shell Type:                       | 33 - Plug<br>34 - Receptacle                                                                          |     |   |   |    |     |   |     |   |    |   |    |    |    |
| Shell Style:                      | B - ARINC B Shell                                                                                     |     |   |   |    |     |   |     |   |    |   |    |    |    |
| Connector Modification Code:      | See Page 47 for Connector Modification Code                                                           |     |   |   |    |     |   |     |   |    |   |    |    |    |
| Polarization Position:            | See Polarization Position Chart on Page 60                                                            |     |   |   |    |     |   |     |   |    |   |    |    |    |
| Contact Modification Code:        | F0 - Contacts not supplied with connector (F0 not stamped on connector)                               |     |   |   |    |     |   |     |   |    |   |    |    |    |

\* Pin is standard on '34' receptacle except A106 layout which has reversed contact sex

\*\* Socket is standard on '33' plug except A106 layout which has reversed contact sex

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPXNA/DPXNE

## How to Order (continued)

### DPX3 Three Gang

| Product                         | DPXNA/NE (AS81659)                                                                                    | DPX | 3 | R | NE | - | 240M | - | 33 | PS | - | 00 | 01 | - | F0 |
|---------------------------------|-------------------------------------------------------------------------------------------------------|-----|---|---|----|---|------|---|----|----|---|----|----|---|----|
| Shell:                          | 3 - Three Gang Shell                                                                                  |     |   |   |    |   |      |   |    |    |   |    |    |   |    |
| RoHS Version:<br>(Optional)     | R - RoHS Compliant<br>Finish: Electroless Nickel                                                      |     |   |   |    |   |      |   |    |    |   |    |    |   |    |
| Class:                          | NA - Non-Environmental (SAE-AS81659B, Type IV)<br>NE - Environmental (SAE-AS81659B, Types II and III) |     |   |   |    |   |      |   |    |    |   |    |    |   |    |
| Insert Designator:              | See Page 49 for insert designator numbers                                                             |     |   |   |    |   |      |   |    |    |   |    |    |   |    |
| Shell Type:                     | 33 - Plug<br>34 - Receptacle                                                                          |     |   |   |    |   |      |   |    |    |   |    |    |   |    |
| Contact Type:                   | P - Pin *<br>S - Socket **                                                                            |     |   |   |    |   |      |   |    |    |   |    |    |   |    |
| Connector<br>Modification Code: | See Page 47 for Connector Modification Code                                                           |     |   |   |    |   |      |   |    |    |   |    |    |   |    |
| Polarization Position:          | See Polarization Position Chart on Page 60                                                            |     |   |   |    |   |      |   |    |    |   |    |    |   |    |
| Contact Modification Code:      | F0 - Contacts not supplied with connector (F0 not stamped on connector)                               |     |   |   |    |   |      |   |    |    |   |    |    |   |    |

### DPX4 Four Gang

| Product                         | DPXNA/NE (AS81659)                                                                                    | DPX | 4 | R | NE | - | 104M | - | 34 | P | - | 00 | 01 | - | F0 |
|---------------------------------|-------------------------------------------------------------------------------------------------------|-----|---|---|----|---|------|---|----|---|---|----|----|---|----|
| Shell:                          | 4 - Four Gang Shell                                                                                   |     |   |   |    |   |      |   |    |   |   |    |    |   |    |
| RoHS Version:<br>(Optional)     | R - RoHS Compliant<br>Finish: Electroless Nickel                                                      |     |   |   |    |   |      |   |    |   |   |    |    |   |    |
| Class:                          | NA - Non-Environmental (SAE-AS81659B, Type IV)<br>NE - Environmental (SAE-AS81659B, Types II and III) |     |   |   |    |   |      |   |    |   |   |    |    |   |    |
| Insert Designator:              | See Page 49 for insert designator numbers                                                             |     |   |   |    |   |      |   |    |   |   |    |    |   |    |
| Shell Type:                     | 33 - Plug<br>34 - Receptacle                                                                          |     |   |   |    |   |      |   |    |   |   |    |    |   |    |
| Contact Type:                   | P - Pin *<br>S - Socket **                                                                            |     |   |   |    |   |      |   |    |   |   |    |    |   |    |
| Connector<br>Modification Code: | See Page 47 for Connector Modification Code                                                           |     |   |   |    |   |      |   |    |   |   |    |    |   |    |
| Polarization Position:          | See Polarization Position Chart on Page 60                                                            |     |   |   |    |   |      |   |    |   |   |    |    |   |    |
| Contact Modification Code:      | F0 - Contacts not supplied with connector (F0 not stamped on connector)                               |     |   |   |    |   |      |   |    |   |   |    |    |   |    |

NOTE: On 3 & 4 gang assemblies, combination layouts, the contact type designator of the A106 layout. If applicable, precedes the 67 MS designator for standard contact sex layouts. See three (3) gang nomenclature breakdown above for 240M example (67MS ROHS Finish Zinc Plate per ASTM-B-C33 with Trivalent Chromate A106P)

\* Pin is standard on '34' receptacle except A106 layout which has reversed contact sex

\*\* Socket is standard on '33' plug except A106 layout which has reversed contact sex

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPXNA/DPXNE

## How to Order (continued)

### Connector Modification Code

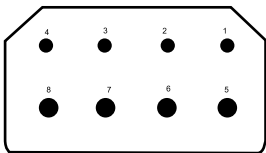
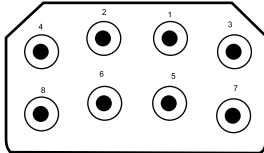
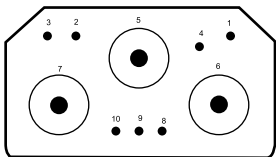
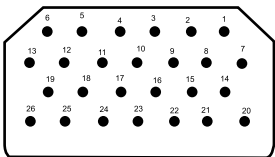
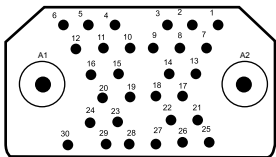
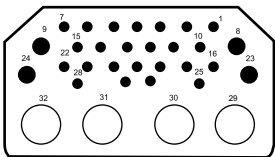
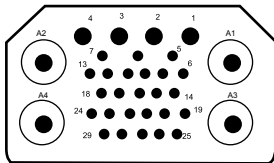
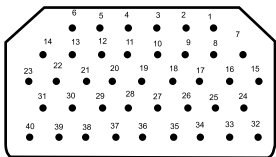
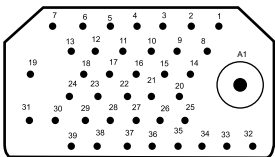
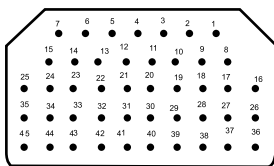
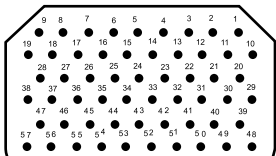
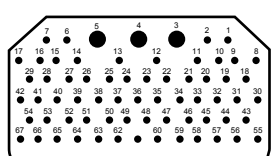
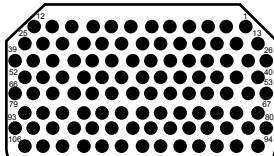
|      |                                                                                                                |      |                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------|
| 00 - | Standard                                                                                                       | 23 - | Standard with standard floating eyelets.                                        |
| 01 - | Standard with clinch nuts in the mounting holes.                                                               | 29 - | Standard except less grommet (NE, pin only).                                    |
| 02 - | Standard with tabs for attaching junction shells.                                                              | 30 - | Same as - 29** except with tabs for attaching junction shells.                  |
| 03 - | Standard with mounting holes .120 dia. countersunk 100° to .230 dia.                                           | 33 - | Same as - 29** except with clinch nuts.                                         |
| 17 - | Combination of 01** and 02** (clinch nuts in mounting holes - 34 only and tabs for attaching junction shells). | 37 - | Same as - 29** except with clinch nuts and tabs for attaching junction shells.  |
| 22 - | Standard with clinch nuts (.33 only).                                                                          | 39 - | Standard with standard floating eyelets and tabs for attaching junction shells. |

NOTE: For additional modification codes please consult Customer Service.

# DPXNA/DPXNE

## Contact Arrangements

### DPXNA/NE Layouts

|    |    | <table><tr><th colspan="2">CROSS REFERENCE</th></tr><tr><th>AS31571</th><th>ITT Cannon</th></tr><tr><td>C8</td><td>W8M</td></tr><tr><td>E8</td><td>D8M</td></tr><tr><td>10C3</td><td>10W3M</td></tr><tr><td>26</td><td>26M</td></tr><tr><td>32C2</td><td>32W2M</td></tr><tr><td>32C4</td><td>32W4M</td></tr><tr><td></td><td>33C4M</td></tr><tr><td>40</td><td>40M</td></tr><tr><td>40C1</td><td>40W1M</td></tr><tr><td>45</td><td>45M</td></tr><tr><td>57</td><td>57M</td></tr><tr><td>67</td><td>67M</td></tr><tr><td>106</td><td>A106</td></tr></table> | CROSS REFERENCE |  | AS31571 | ITT Cannon | C8 | W8M | E8 | D8M | 10C3 | 10W3M | 26 | 26M | 32C2 | 32W2M | 32C4 | 32W4M |  | 33C4M | 40 | 40M | 40C1 | 40W1M | 45 | 45M | 57 | 57M | 67 | 67M | 106 | A106 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|---------|------------|----|-----|----|-----|------|-------|----|-----|------|-------|------|-------|--|-------|----|-----|------|-------|----|-----|----|-----|----|-----|-----|------|
| CROSS REFERENCE                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| AS31571                                                                             | ITT Cannon                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| C8                                                                                  | W8M                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| E8                                                                                  | D8M                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 10C3                                                                                | 10W3M                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 26                                                                                  | 26M                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 32C2                                                                                | 32W2M                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 32C4                                                                                | 32W4M                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
|                                                                                     | 33C4M                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 40                                                                                  | 40M                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 40C1                                                                                | 40W1M                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 45                                                                                  | 45M                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 57                                                                                  | 57M                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 67                                                                                  | 67M                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| 106                                                                                 | A106                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| <b>D8M</b><br>4 #16, 4 #12<br>Test Voltage: 1500                                    | <b>W8M</b><br>8 Coaxial*<br>Test Voltage: 1000                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
|    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| <b>10W3M</b><br>7 #20HD, 3 Coaxial**<br>Test Voltage: 1500 (Coax 1000)              | <b>26M</b><br>26 #16<br>Test Voltage: 1500                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
|   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| <b>32W2M</b><br>30 #20HD, 2 Coaxial†<br>Test Voltage: 1500 (Coax 1000)              | <b>32W4M</b><br>24 #20HD, 4 #16, 4 Coaxial*<br>Test Voltage: 1500 (Coax 1000)       | <b>33C4M</b><br>25 #20HD, 4 Coaxial†, 4 #16<br>Test Voltage: 1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| <b>40M</b><br>40 #20HD<br>Test Voltage: 1500                                        | <b>40W1M</b><br>39 #20HD, 1 Coaxial†<br>Test Voltage: 1500 (Coax 1000)              | <b>45M</b><br>45 #20HD<br>Test Voltage: 1500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |
| <b>57M</b><br>57 #20HD<br>Test Voltage: 1500                                        | <b>67M</b><br>64 #20HD, 3 #16<br>Test Voltage: 1000                                 | <b>A106</b><br>106 #22<br>Test Voltage: 1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |  |         |            |    |     |    |     |      |       |    |     |      |       |      |       |  |       |    |     |      |       |    |     |    |     |    |     |     |      |

\*SIZE 9 COAXIAL \*\*SIZE 1 COAXIAL † SIZE 5 COAXIAL NOTE:  
All coaxial layouts supplied less coaxial contacts (i.e. W8M, 10W3M, 32W2M, 32W4M, 33C4M, 36W7, 40W1M)

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXNA/DPXNE

## Shell Cavity Identification

### Insert Designator Number - DPX3NA/NE

| AS31571 | ITT Cannon | Cavity A | Cavity B | Cavity C | AS31571 | ITT Cannon | Cavity A | Cavity B | Cavity C |
|---------|------------|----------|----------|----------|---------|------------|----------|----------|----------|
| 0005    | 78M        | 26MP     | 26MP     | 26MP     | 0066    | 24M        | W8MS     | W8MS     | W8MS     |
| 0006    | 78M        | 26MS     | 26MS     | 26MS     | 0067    | 122M       | W8MP     | W8MP     | A106S    |
| 0013    | 120M       | 40MP     | 40MP     | 40MP     | 0068    | 122M       | W8MS     | W8MS     | A106P    |
| 0014    | 120M       | 40MS     | 40MS     | 40MS     | 0073    | 142M       | 67MP     | 67MP     | W8MP     |
| 0021    | 135M       | 45MP     | 45MP     | 45MP     | 0074    | 142M       | 67MS     | 67MS     | W8MS     |
| 0022    | 135M       | 45MS     | 45MS     | 45MS     | 0075    | 240M       | 67MP     | 67MP     | A106S    |
| 0029    | 171M       | 57MP     | 57MP     | 57MP     | 0076    | 240M       | 67MS     | 67MS     | A106P    |
| 0030    | 171M       | 57MS     | 57MS     | 57MS     | 0079    | A240M      | 67MP     | A106S    | 67MP     |
| 0037    | 201M       | 67MP     | 67MP     | 67MP     | 0080    | A240M      | 67MS     | A106P    | 67MS     |
| 0038    | 201M       | 67MS     | 67MS     | 67MS     | 0091    | 279M       | A106S    | A106S    | 67MP     |
| 0045    | A318       | A106P    | A106P    | A106P    | 0092    | 279M       | A106P    | A106P    | 67MS     |
| 0046    | A318       | A106S    | A106S    | A106S    | 0157    | 244M       | A106S    | A106S    | 32W4MP   |
| 0065    | 24M        | W8MP     | W8MP     | W8MP     | 0158    | 244M       | A106P    | A106P    | 32W4MS   |

### Insert Designator Number - DPX4NA/NE

| AS31571 | ITT Cannon | Cavity A | Cavity B | Cavity C | Cavity D |
|---------|------------|----------|----------|----------|----------|
| 0007    | 104M       | 26MP     | 26MP     | 26MP     | 26MP     |
| 0008    | 104M       | 26MS     | 26MS     | 26MS     | 26MS     |
| 0015    | 160M       | 40MP     | 40MP     | 40MP     | 40MP     |
| 0016    | 160M       | 40MS     | 40MS     | 40MS     | 40MS     |
| 0023    | 180M       | 45MP     | 45MP     | 45MP     | 45MP     |
| 0024    | 180M       | 45MS     | 45MS     | 45MS     | 45MS     |
| 0031    | 228M       | 57MP     | 57MP     | 57MP     | 57MP     |
| 0032    | 228M       | 57MS     | 57MS     | 57MS     | 57MS     |
| 0039    | 268M       | 67MP     | 67MP     | 67MP     | 67MP     |
| 0040    | 268M       | 67MS     | 67MS     | 67MS     | 67MS     |
| 0047    | A424       | A106P    | A106P    | A106P    | A106P    |
| 0048    | A424       | A106S    | A106S    | A106S    | A106S    |
| 0063    | 95M        | 10W3MP   | 10W3MP   | W8MP     | 67MP     |
| 0064    | 95M        | 10W3MS   | 10W3MS   | W8MS     | 67MS     |
| 0085    | 150M       | W8MP     | W8MP     | W8MP     | 67MP     |
| 0086    | 150M       | W8MS     | W8MS     | W8MS     | 67MS     |
| 0095    | 326M       | A106S    | W8MP     | A106S    | A106S    |
| 0096    | 326M       | A106P    | W8MS     | A106P    | A106P    |
| 0097    | 287M       | A106S    | 67MP     | A106S    | W8MP     |
| 0098    | 287M       | A106P    | 67MS     | A106P    | W8MS     |
| 0099    | 189M       | A106S    | 67MP     | W8MP     | W8MP     |
| 0100    | 189M       | A106P    | 67MS     | W8MS     | W8MS     |
| 0101    | 346M       | A106S    | A106S    | 67MP     | 67MP     |
| 0102    | 346M       | A106P    | A106P    | 67MS     | 67MS     |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

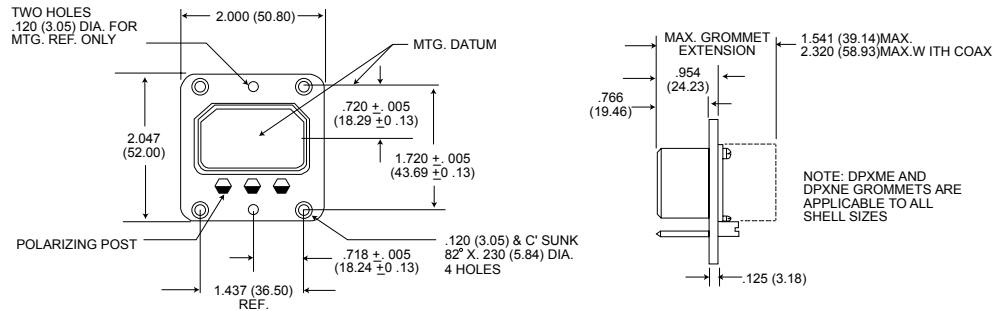
# DPXNA/NE

## Shell Dimensions

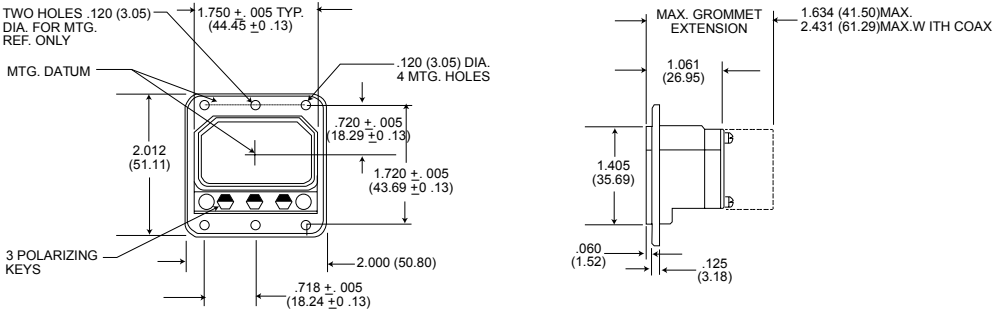
### DPXB Single Gang ARINC Shell

All tolerances  $\pm .015(0.38)$  unless otherwise noted.

DPXB-33



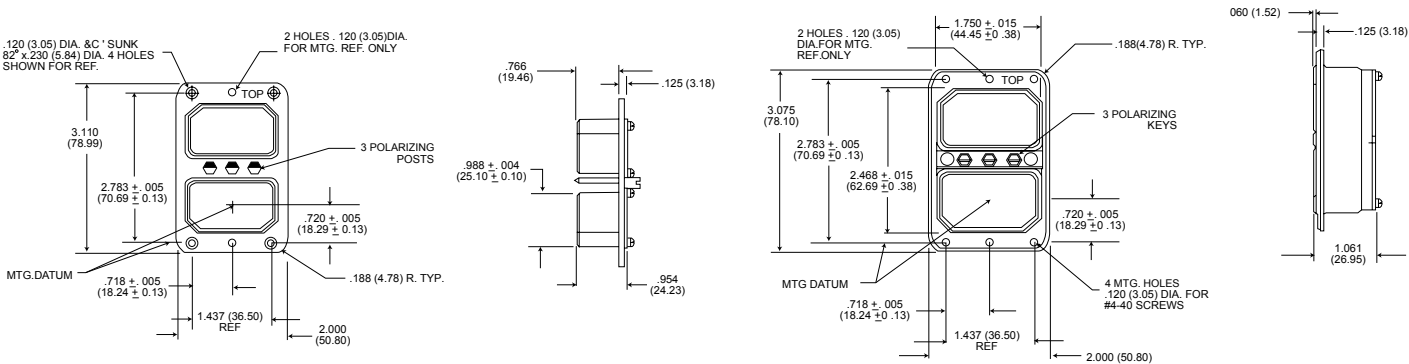
DPXB-34



NOTE: ARINC requires that DPXB shells are mounted with the polarizing posts at the top.. See Pages 59-60

### DPX2 Two Gang ARINC B Shell

All tolerances  $\pm .015(0.38)$  unless otherwise noted.



DPX2-33B

DPX2-34B

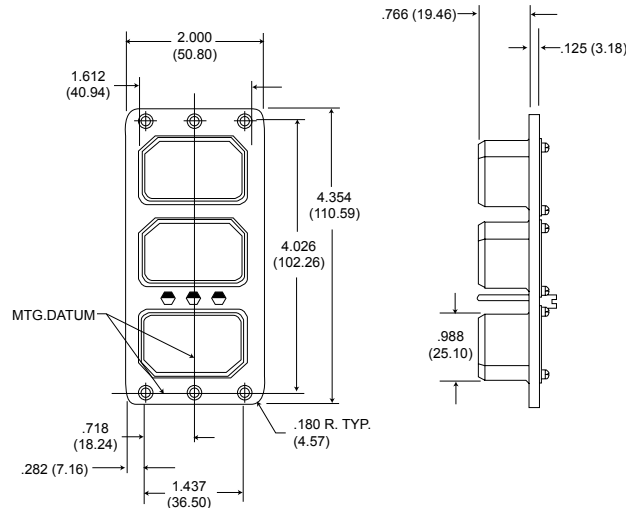
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXNA/NE

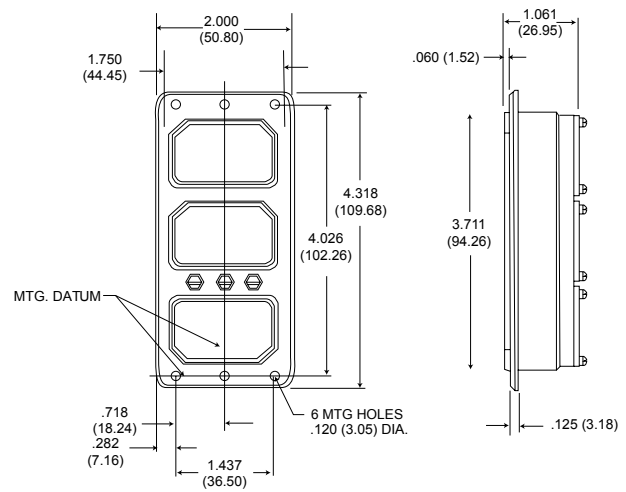
## Shell Dimensions (continued)

### DPX3 - Three Gang

All tolerances  $\pm .015(0.38)$  unless otherwise noted.



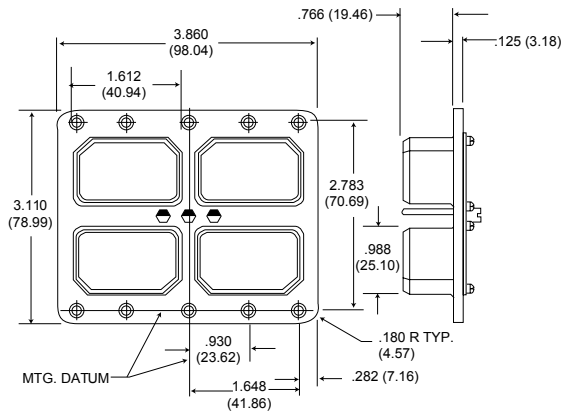
DPX3-33



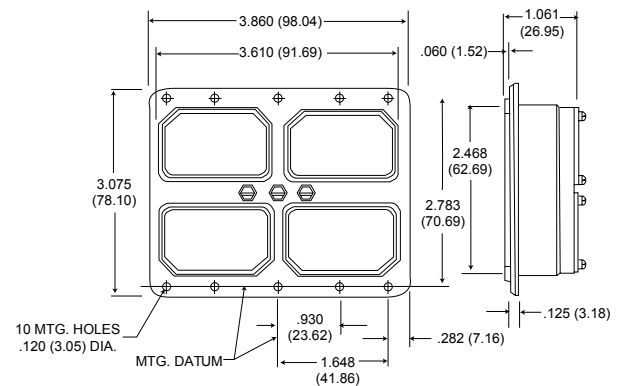
DPX3-34

### DPX4 - Four Gang

All tolerances  $\pm .015(0.38)$  unless otherwise noted.



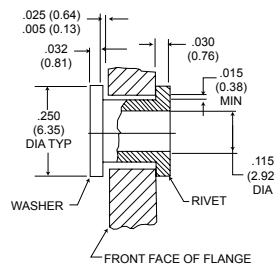
DPX4-33



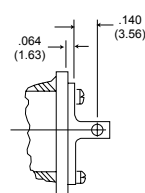
DPX4-34

### Modification Code

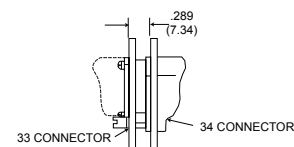
All tolerances  $\pm .015(0.38)$  unless otherwise noted.



-2301 Modification  
Floating Eyelets



-0201 Modification  
Tabs for attaching J/S



Recommended Mated Position

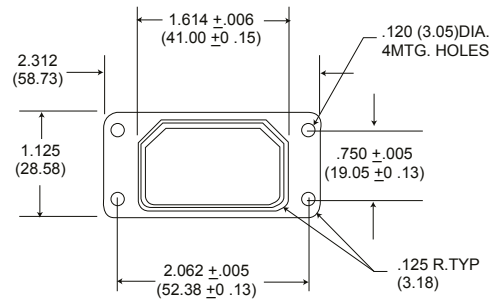
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

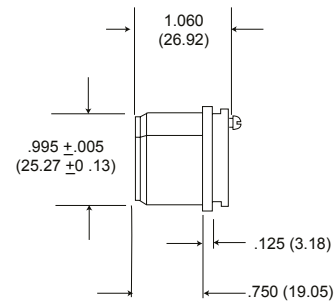
## Shell Dimensions

### DPXA Single Gang

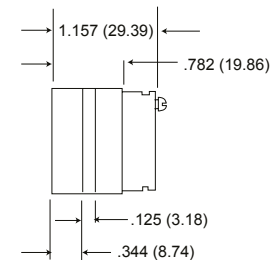
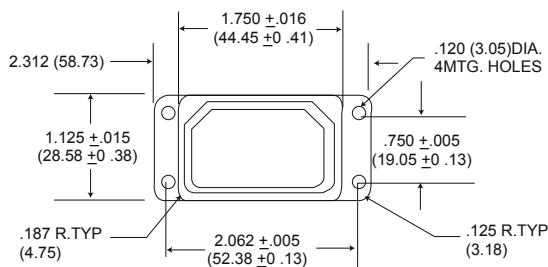
DPXA-33



All tolerances ± .015(0.38) unless otherwise noted.



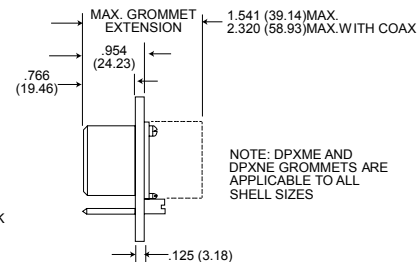
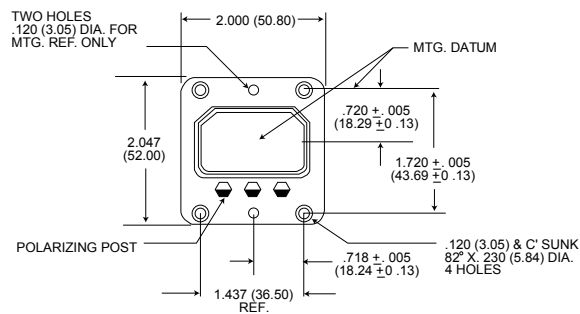
DPXA-34



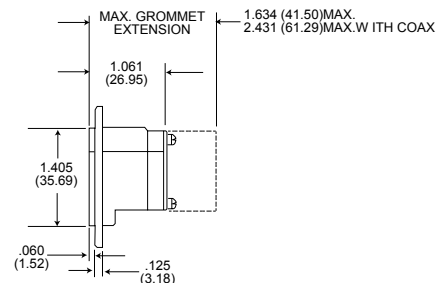
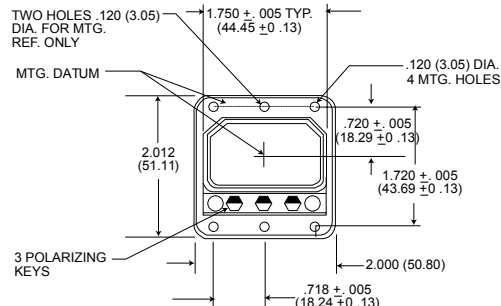
### DPXB Single Gang ARINC Shell

All tolerances ± .015(0.38) unless otherwise noted.

DPXB-33



DPXB-34



NOTE: ARINC requires that DPXB shells are mounted with the polarizing posts at the top. See Pages 49-50

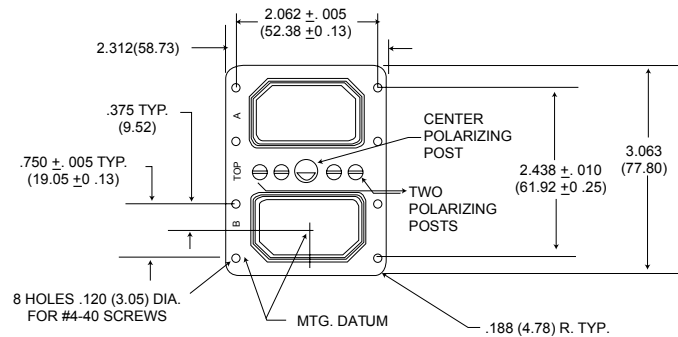
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404)

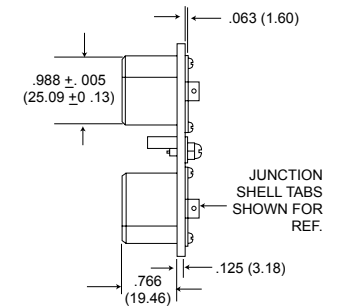
## Shell Dimensions (continued)

### DPX2 Two Gang

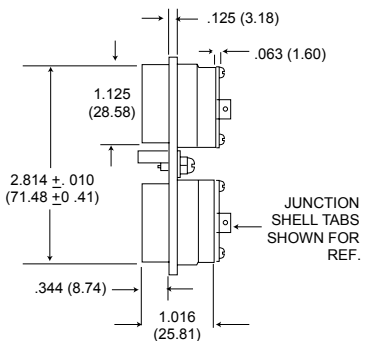
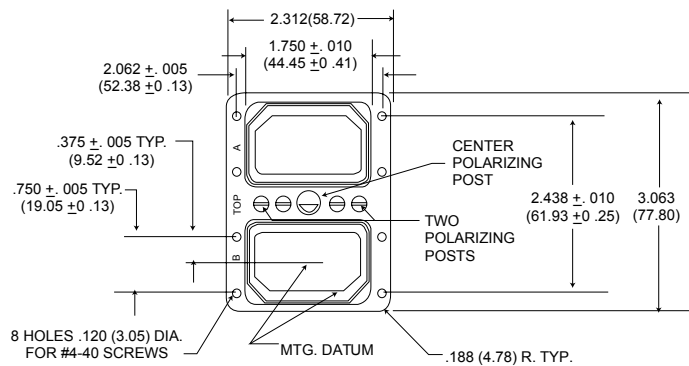
DPX2-33 Shell



All tolerances ± .015(0.38) unless otherwise noted.

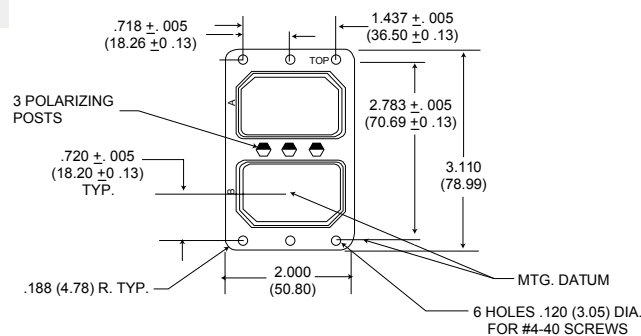


DPX2-34 Shell

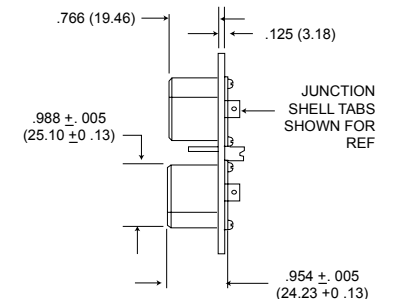


### DPX2 Two Gang ARINC A Shell

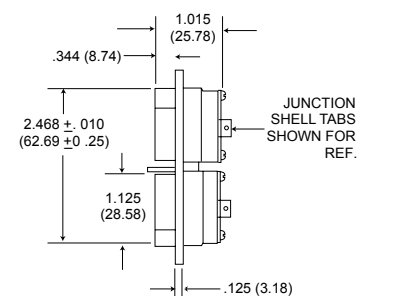
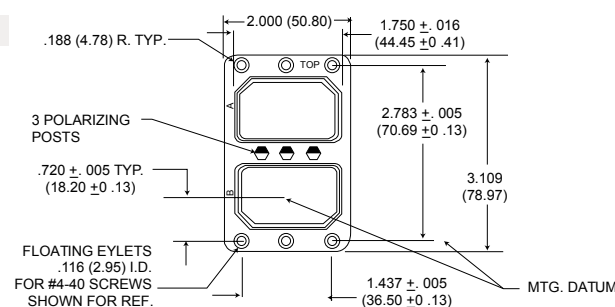
DPX2-33A ARINC A Shell



All tolerances ± .015(0.38) unless otherwise noted.



DPX2-34A ARINC A Shell



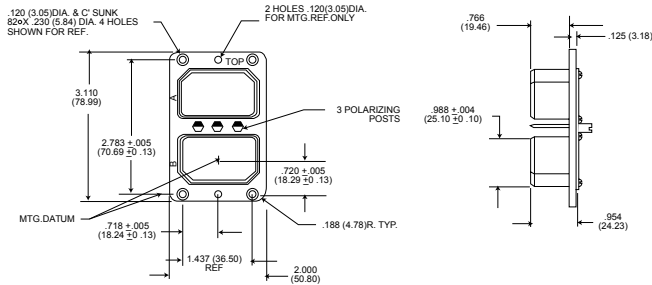
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

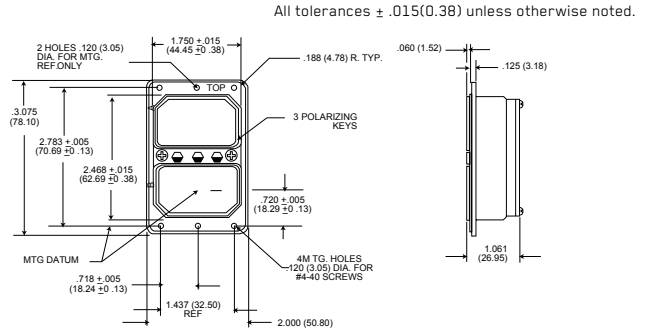
# DPXMA/ME (ARINC 404)

## Shell Dimensions (continued)

### DPX2 Two Gang ARINC B Shell

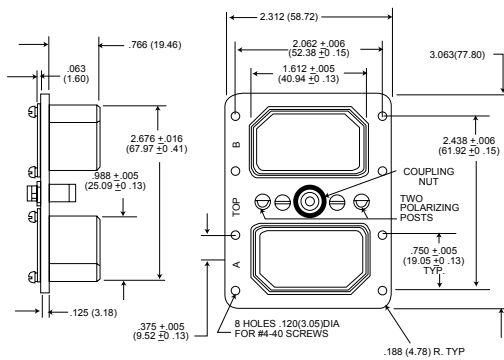


DPX2-33B

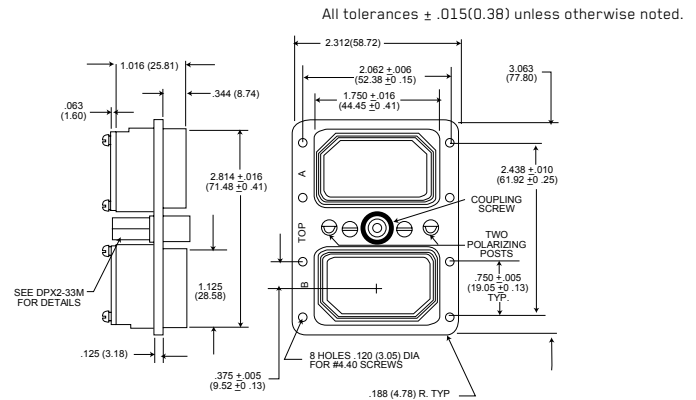


DPX2-34B

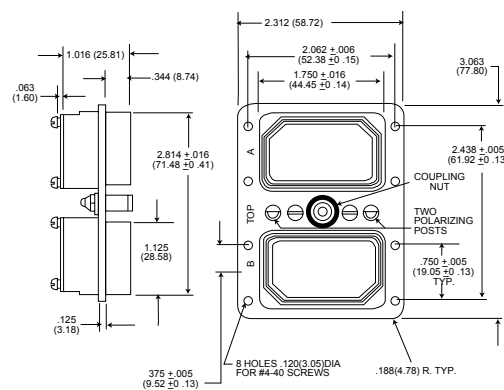
### DPX2 Two Gang Screw Coupling



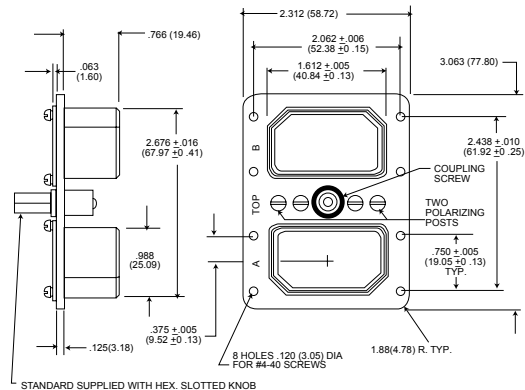
DPX2-33F (Female)



DPX2-34M (Male)



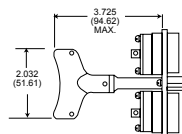
DPX2-34F (Female)



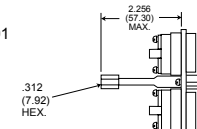
DPX2-33M (Male)

### Engaging Devices

DPX2-34M with wing handle type  
-0901; example, DPX2-34M-0901



DPX2-34M with extended hex,  
knob type -0501; example, DPX2-34M-0501



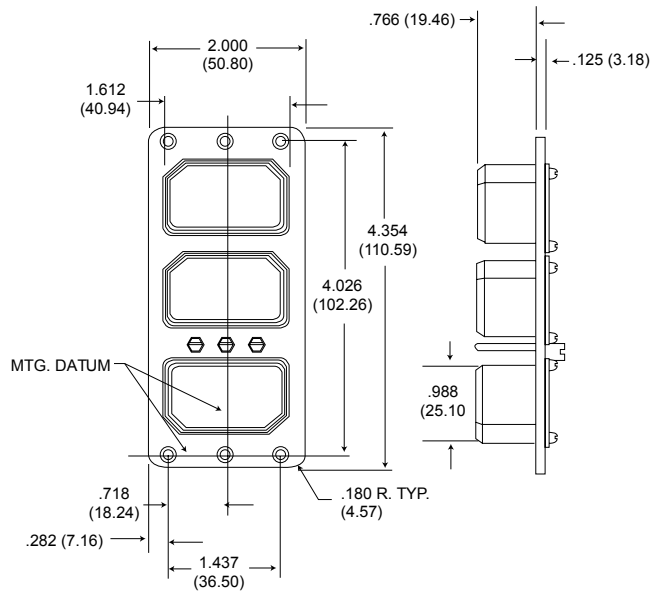
Not available on DPX2-34B Shells

# DPXMA/ME (ARINC 404)

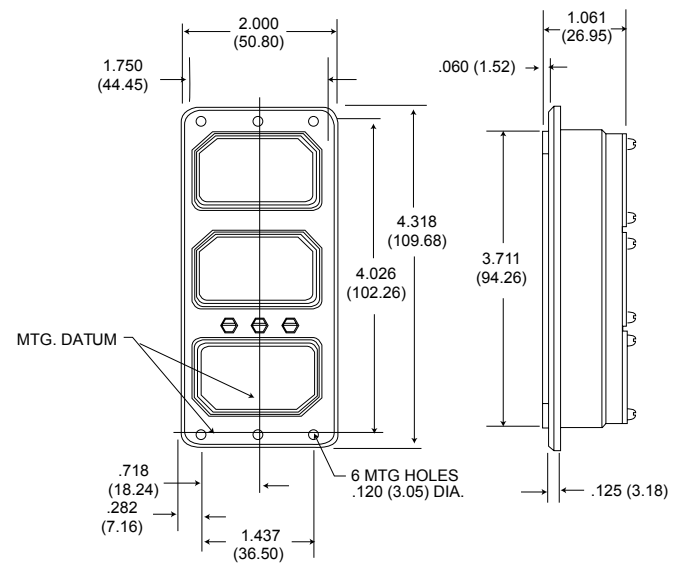
## Shell Dimensions (continued)

### DPX3 - Three Gang

All tolerances  $\pm .015(0.38)$  unless otherwise noted.



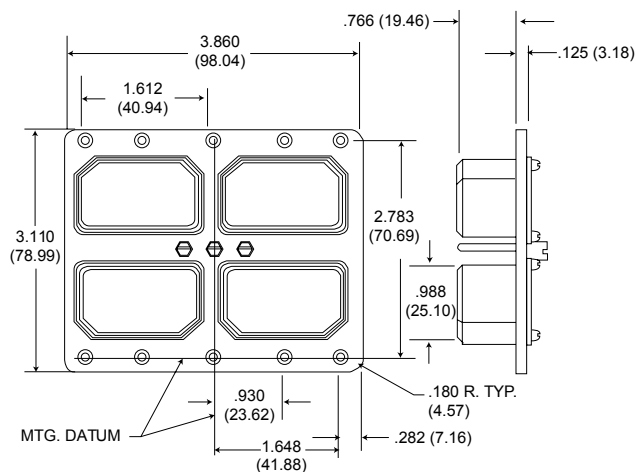
DPX3-33



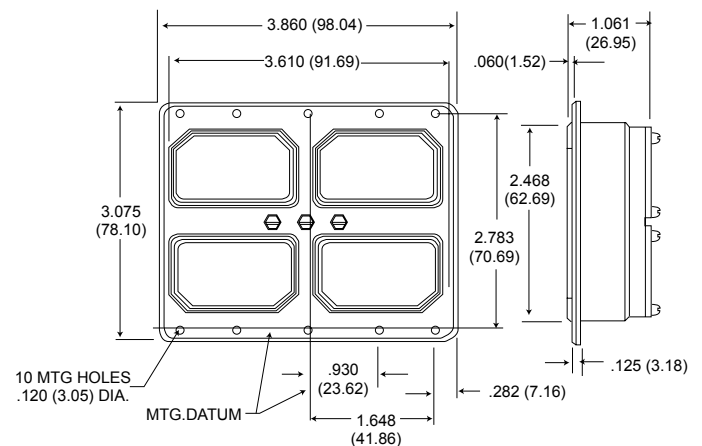
DPX3-34

### DPX4 - Four Gang

All tolerances  $\pm .015(0.38)$  unless otherwise noted.



DPX4-33



DPX4-34

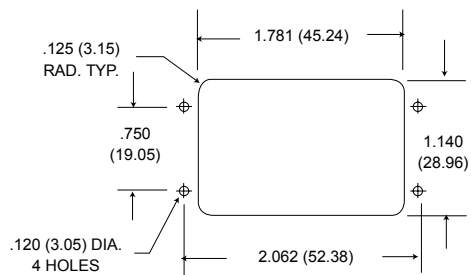
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404) and DPXNA/NE

## Shell Dimensions (continued)

### DPXA Panel Cutouts

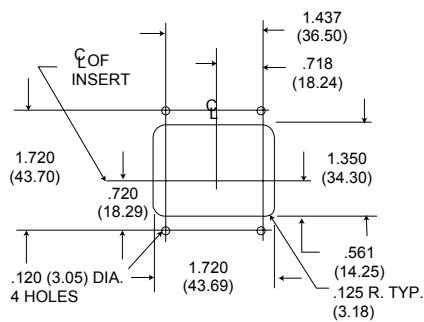
All tolerances  $\pm .015(0.38)$  unless otherwise noted.



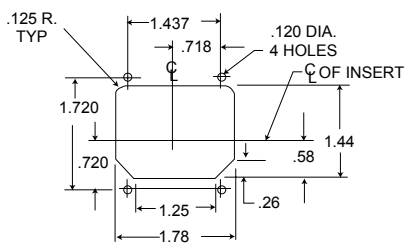
NOTE: When using the -2301 floating eyelet modification, add .050 (1.27) to the cutout size to allow for float (exception -34A)

### DPXB Panel Cutouts

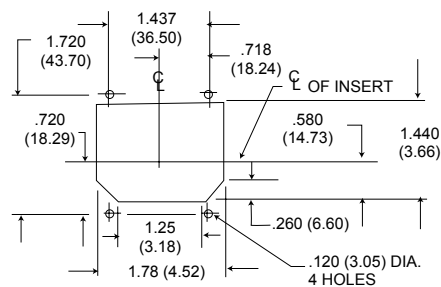
All tolerances  $\pm .015(0.38)$  unless otherwise noted.



-33 Front Mount



-34 Front Mount



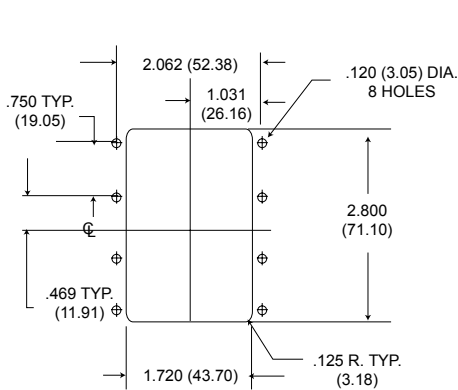
-33 Rear Mount  
-34 Rear Mount

# DPXMA/ME (ARINC 404) and DPXNA/NE

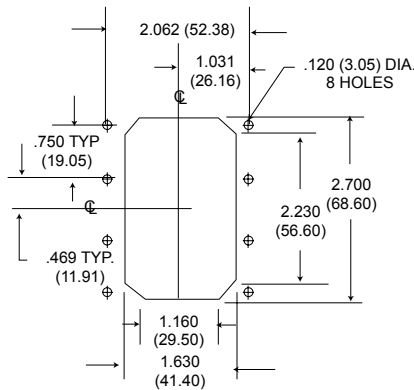
## Shell Dimensions (continued)

### DPX2 Panel Cutouts

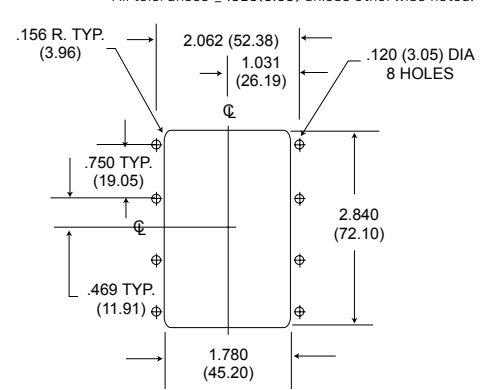
All tolerances  $\pm .015(0.38)$  unless otherwise noted.



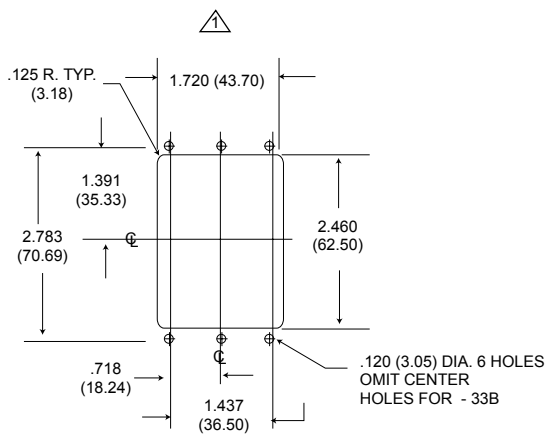
-33 Front Mount



-33 Rear Mount

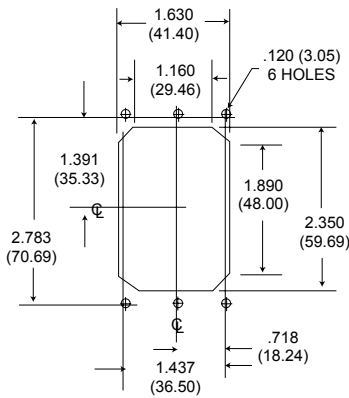


-34 Front or Rear Mount

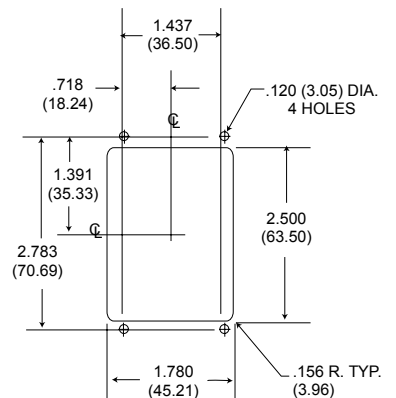


For - 23 float mtg. mod. 1.78 (45.21)

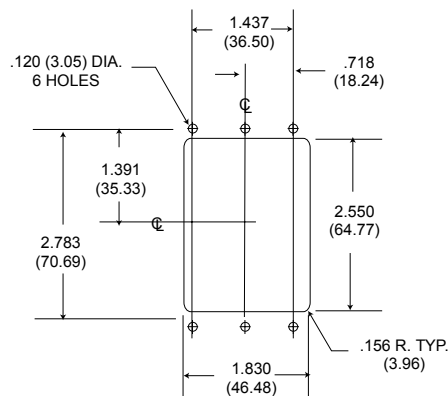
-33A & -33B Front Mount



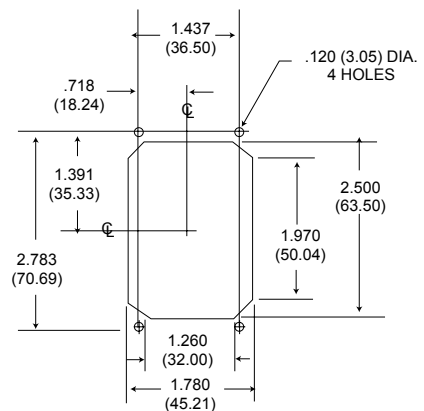
-33A Rear Mount



-34B Front Mount



-34A Rear Mount  
(-34A Front Mount Consult Account Representative)



-33B & -34B Rear Mount

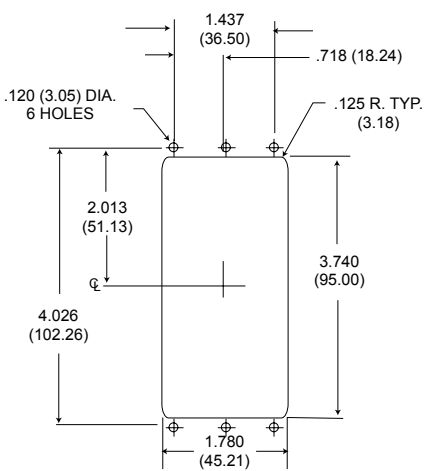
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404) and DPXNA/NE

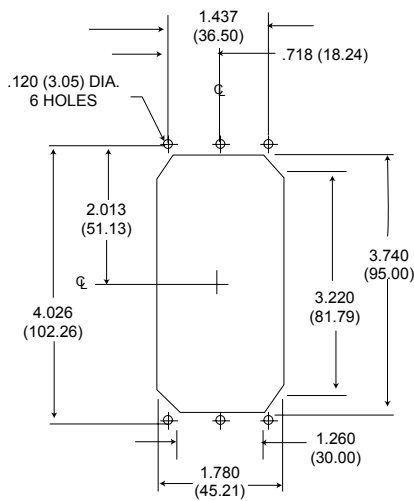
## Shell Dimensions (continued)

### DPX3 Panel Cutouts

All tolerances  $\pm .015(0.38)$  unless otherwise noted.



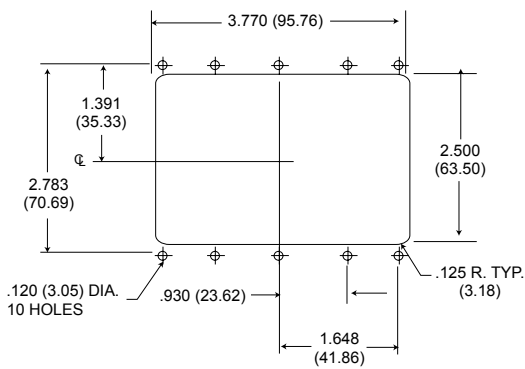
Front Mount



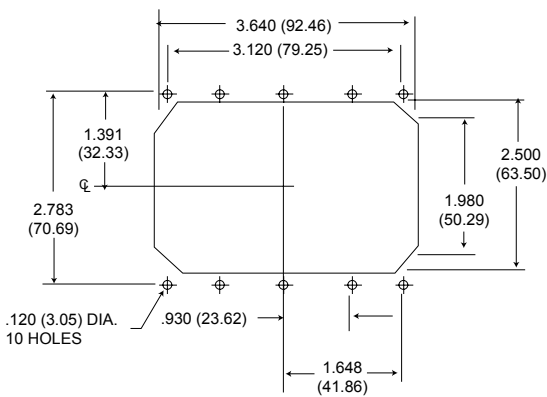
Rear Mount

### DPX4 Panel Cutouts

All tolerances  $\pm .015(0.38)$  unless otherwise noted.



Front Mount



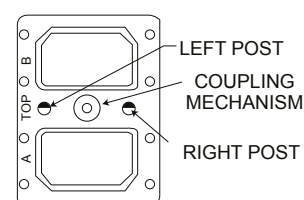
Rear Mount

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

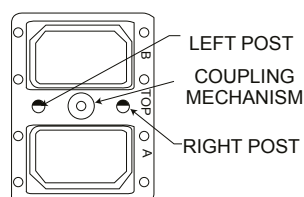
# DPXMA/ME (ARINC 404) and DPXNA/NE

## Polarization

### Two Post Type



DPX2-33F or 33M



DPX2-34F or 34M

Face View of Engaging End

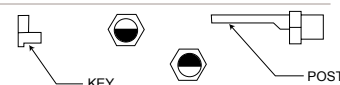
| Connector Plug (Male) |           |            | Connector Receptacle (Female) |           |            |
|-----------------------|-----------|------------|-------------------------------|-----------|------------|
| Position              | Left Post | Right Post | Position                      | Last Post | Right Post |
| 01                    | 4         | 4          | 01                            | 1         | 1          |
| 02                    | 5         | 4          | 02                            | 1         | 6          |
| 03                    | 6         | 4          | 03                            | 1         | 5          |
| 04                    | 2         | 4          | 04                            | 1         | 3          |
| 05                    | 3         | 4          | 05                            | 1         | 2          |
| 06                    | 4         | 3          | 06                            | 2         | 1          |
| 07                    | 5         | 3          | 07                            | 2         | 6          |
| 08                    | 2         | 3          | 08                            | 2         | 3          |
| 09                    | 3         | 3          | 09                            | 2         | 2          |
| 10                    | 4         | 2          | 10                            | 3         | 1          |
| 11                    | 2         | 2          | 11                            | 3         | 3          |
| 12                    | 3         | 2          | 12                            | 3         | 2          |
| 13                    | 2         | 1          | 13                            | 4         | 3          |
| 14                    | 3         | 1          | 14                            | 4         | 2          |
| 15                    | 2         | 6          | 15                            | 5         | 3          |

The last two digits in the DPX nomenclature (ex: DPXB-8-33B-0014) refer to the polarizing post position. When the last two digits are omitted it means the polarizing posts will not be assembled and position number is not stamped on the connector. This allows the customer to position the posts themselves and then stamp the appropriate number on the shell. If the last two digits are made 00 it means the polarizing posts are deleted.

### DPXNA/NE Polarization

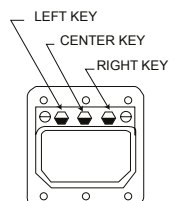


Dark area represents post on a plug, light area represents key opening on a receptacle

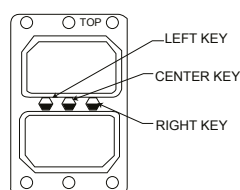


Face View of Engaging End

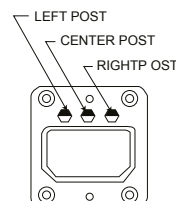
SAE-AS81659 requires that polarizing post be shipped unassembled with the connector. The user then assembles the post in the preferred position and marks the position number on the connector. All DPXNA and DPXNE connectors shall be sold this way. The position number will not be marked.



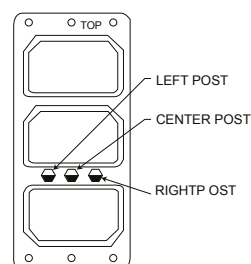
DPXB-34



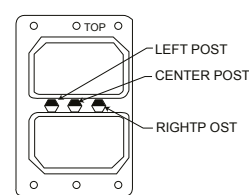
DPX2-34B



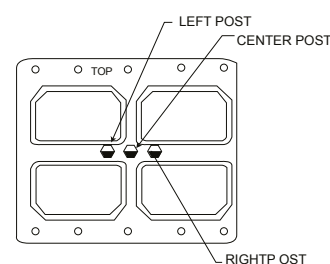
DPXB-33



DPX3-33



DPX2-33B



DPX4-33

The last two digits in the four-digit dash number refer to the polarizing post position. The polarizing posts will be shipped unassembled with the connector assembly. The position number is not stamped on the connector. This allows the customer to position the posts themselves and then stamp the appropriate number on the shell.

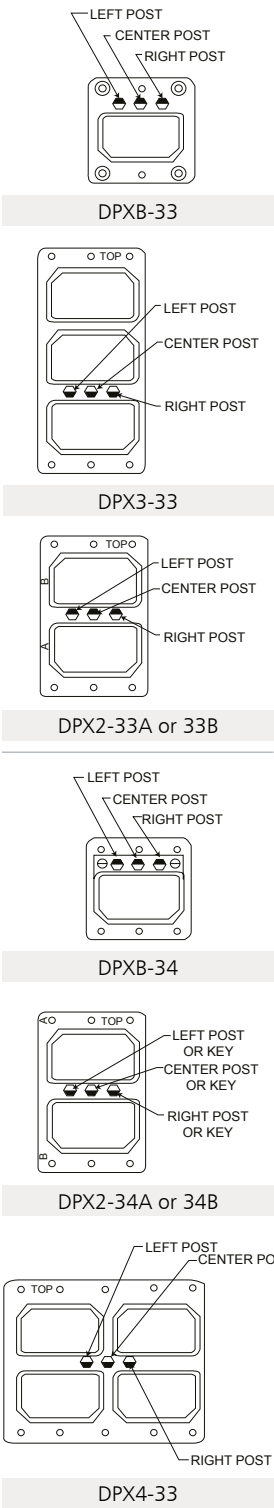
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPXMA/ME (ARINC 404) and DPXNA/NE

## Polarization (continued)

### Three Post Type



| Connector Plug |                          |             |            |          |           |             |            | Connector Receptacle |                          |             |            |          |           |             |            |
|----------------|--------------------------|-------------|------------|----------|-----------|-------------|------------|----------------------|--------------------------|-------------|------------|----------|-----------|-------------|------------|
| Position       | Left Post                | Center Post | Right Post | Position | Left Post | Center Post | Right Post | Position             | Left Post                | Center Post | Right Post | Position | Left Post | Center Post | Right Post |
| 00             | No Polarization Hardware |             |            |          |           |             |            | 00                   | No Polarization Hardware |             |            |          |           |             |            |
| 01             | 1                        | 1           | 1          | 49       | 1         | 2           | 5          | 01                   | 4                        | 4           | 4          | 49       | 6         | 3           | 4          |
| 02             | 2                        | 1           | 1          | 50       | 2         | 2           | 5          | 02                   | 4                        | 4           | 3          | 50       | 6         | 3           | 3          |
| 03             | 3                        | 1           | 1          | 51       | 3         | 2           | 5          | 03                   | 4                        | 4           | 2          | 51       | 6         | 3           | 2          |
| 04             | 4                        | 1           | 1          | 52       | 4         | 2           | 5          | 04                   | 4                        | 4           | 1          | 52       | 6         | 3           | 1          |
| 05             | 5                        | 1           | 1          | 53       | 5         | 2           | 5          | 05                   | 4                        | 4           | 6          | 53       | 6         | 3           | 6          |
| 06             | 6                        | 1           | 1          | 54       | 6         | 2           | 5          | 06                   | 4                        | 4           | 5          | 54       | 6         | 3           | 5          |
| 07             | 1                        | 1           | 6          | 55       | 1         | 2           | 4          | 07                   | 5                        | 4           | 4          | 55       | 1         | 3           | 4          |
| 08             | 2                        | 1           | 6          | 56       | 2         | 2           | 4          | 08                   | 5                        | 4           | 3          | 56       | 1         | 3           | 3          |
| 09             | 3                        | 1           | 6          | 57       | 3         | 2           | 4          | 09                   | 5                        | 4           | 2          | 57       | 1         | 3           | 2          |
| 10             | 4                        | 1           | 6          | 58       | 4         | 2           | 4          | 10                   | 5                        | 4           | 1          | 58       | 1         | 3           | 1          |
| 11             | 5                        | 1           | 6          | 59       | 5         | 2           | 4          | 11                   | 5                        | 4           | 6          | 59       | 1         | 3           | 6          |
| 12             | 6                        | 1           | 6          | 60       | 6         | 2           | 4          | 12                   | 5                        | 4           | 5          | 60       | 1         | 3           | 5          |
| 13             | 1                        | 1           | 5          | 61       | 1         | 2           | 3          | 13                   | 6                        | 4           | 4          | 61       | 2         | 3           | 4          |
| 14             | 2                        | 1           | 5          | 62       | 2         | 2           | 3          | 14                   | 6                        | 4           | 3          | 62       | 2         | 3           | 3          |
| 15             | 3                        | 1           | 5          | 63       | 3         | 2           | 3          | 15                   | 6                        | 4           | 2          | 63       | 2         | 3           | 2          |
| 16             | 4                        | 1           | 5          | 64       | 4         | 2           | 3          | 16                   | 6                        | 4           | 1          | 64       | 2         | 3           | 1          |
| 17             | 5                        | 1           | 5          | 65       | 5         | 2           | 3          | 17                   | 6                        | 4           | 6          | 65       | 2         | 3           | 6          |
| 18             | 6                        | 1           | 5          | 66       | 6         | 2           | 3          | 18                   | 6                        | 4           | 5          | 66       | 2         | 3           | 5          |
| 19             | 1                        | 1           | 4          | 67       | 1         | 2           | 2          | 19                   | 1                        | 4           | 4          | 67       | 3         | 3           | 4          |
| 20             | 2                        | 1           | 4          | 68       | 2         | 2           | 2          | 20                   | 1                        | 4           | 3          | 68       | 3         | 3           | 3          |
| 21             | 3                        | 1           | 4          | 69       | 3         | 2           | 2          | 21                   | 1                        | 4           | 2          | 69       | 3         | 3           | 2          |
| 22             | 4                        | 1           | 4          | 70       | 4         | 2           | 2          | 22                   | 1                        | 4           | 1          | 70       | 3         | 3           | 1          |
| 23             | 5                        | 1           | 4          | 71       | 5         | 2           | 2          | 23                   | 1                        | 4           | 6          | 71       | 3         | 3           | 6          |
| 24             | 6                        | 1           | 4          | 72       | 6         | 2           | 2          | 24                   | 1                        | 4           | 5          | 72       | 3         | 3           | 5          |
| 25             | 1                        | 1           | 3          | 73       | 1         | 3           | 1          | 25                   | 2                        | 4           | 4          | 73       | 4         | 2           | 4          |
| 26             | 2                        | 1           | 3          | 74       | 2         | 3           | 1          | 26                   | 2                        | 4           | 3          | 74       | 4         | 2           | 3          |
| 27             | 3                        | 1           | 3          | 75       | 3         | 3           | 1          | 27                   | 2                        | 4           | 2          | 75       | 4         | 2           | 2          |
| 28             | 4                        | 1           | 3          | 76       | 4         | 3           | 1          | 28                   | 2                        | 4           | 1          | 76       | 4         | 2           | 1          |
| 29             | 5                        | 1           | 3          | 77       | 5         | 3           | 1          | 29                   | 2                        | 4           | 6          | 77       | 4         | 2           | 6          |
| 30             | 6                        | 1           | 3          | 78       | 6         | 3           | 1          | 30                   | 2                        | 4           | 5          | 78       | 4         | 2           | 5          |
| 31             | 1                        | 1           | 2          | 79       | 1         | 3           | 6          | 31                   | 3                        | 4           | 4          | 79       | 5         | 2           | 4          |
| 32             | 2                        | 1           | 2          | 80       | 2         | 3           | 6          | 32                   | 3                        | 4           | 3          | 80       | 5         | 2           | 3          |
| 33             | 3                        | 1           | 2          | 81       | 3         | 3           | 6          | 33                   | 3                        | 4           | 2          | 81       | 5         | 2           | 2          |
| 34             | 4                        | 1           | 2          | 82       | 4         | 3           | 6          | 34                   | 3                        | 4           | 1          | 82       | 5         | 2           | 1          |
| 35             | 5                        | 1           | 2          | 83       | 5         | 3           | 6          | 35                   | 3                        | 4           | 6          | 83       | 5         | 2           | 6          |
| 36             | 6                        | 1           | 2          | 84       | 6         | 3           | 6          | 36                   | 3                        | 4           | 5          | 84       | 5         | 2           | 5          |
| 37             | 1                        | 2           | 1          | 85       | 1         | 3           | 5          | 37                   | 4                        | 3           | 4          | 85       | 6         | 2           | 4          |
| 38             | 2                        | 2           | 1          | 86       | 2         | 3           | 5          | 38                   | 4                        | 3           | 3          | 86       | 6         | 2           | 3          |
| 39             | 3                        | 2           | 1          | 87       | 3         | 3           | 5          | 39                   | 4                        | 3           | 2          | 87       | 6         | 2           | 2          |
| 40             | 4                        | 2           | 1          | 88       | 4         | 3           | 5          | 40                   | 4                        | 3           | 1          | 88       | 6         | 2           | 1          |
| 41             | 5                        | 2           | 1          | 89       | 5         | 3           | 5          | 41                   | 4                        | 3           | 6          | 89       | 6         | 2           | 6          |
| 42             | 6                        | 2           | 1          | 90       | 6         | 3           | 5          | 42                   | 4                        | 3           | 5          | 90       | 6         | 2           | 5          |
| 43             | 1                        | 2           | 6          | 91       | 1         | 3           | 4          | 43                   | 5                        | 3           | 4          | 91       | 1         | 2           | 4          |
| 44             | 2                        | 2           | 6          | 92       | 2         | 3           | 4          | 44                   | 5                        | 3           | 3          | 92       | 1         | 2           | 3          |
| 45             | 3                        | 2           | 6          | 93       | 3         | 3           | 4          | 45                   | 5                        | 3           | 2          | 93       | 1         | 2           | 2          |
| 46             | 4                        | 2           | 6          | 94       | 4         | 3           | 4          | 46                   | 5                        | 3           | 1          | 94       | 1         | 2           | 1          |
| 47             | 5                        | 2           | 6          | 95       | 5         | 3           | 4          | 47                   | 5                        | 3           | 6          | 95       | 1         | 2           | 6          |
| 48             | 6                        | 2           | 6          | 96       | 6         | 3           | 4          | 48                   | 5                        | 3           | 5          | 96       | 1         | 2           | 5          |
|                |                          |             |            | 97       | 1         | 3           | 3          |                      |                          |             |            | 97       | 2         | 2           | 4          |
|                |                          |             |            | 98       | 2         | 3           | 3          |                      |                          |             |            | 98       | 2         | 2           | 3          |
|                |                          |             |            | 99       | 3         | 3           | 3          |                      |                          |             |            | 99       | 2         | 2           | 2          |

The last two digits in the DPX nomenclature (ex: DPXB-8-33B-0014) refer to the polarizing post position. When the last two digits are omitted it means the polarizing posts will not be assembled and position number is not stamped on the connector. This allows the customer to position the posts themselves and then stamp the appropriate number on the shell. If the last two digits are made 00 it means the polarizing posts are deleted.

Face View of Engaging End

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Termination Tooling Data

### BKA & DPX (LIF) Crimp Contacts

| Size   | Pin          | Socket       | Tool Part Number |                  | Selector | Locator Part Number |                  | MIL Spec        | Insertion/Extraction Tooling      |                                  | A<br>W<br>G | Wire Size          |                          |
|--------|--------------|--------------|------------------|------------------|----------|---------------------|------------------|-----------------|-----------------------------------|----------------------------------|-------------|--------------------|--------------------------|
|        |              |              | MIL Spec         | ITT Cannon       |          | MIL Spec            | ITT Cannon       |                 | Insertion/<br>Extraction Tool     | Ins./Ext                         |             | Insul Dia.<br>Max. | Strip<br>Length          |
| 2222*  | 030-2259-000 | 031-1287-000 | M22520<br>/2-01  | 995-0001<br>-584 | 3        | M22520<br>/2-23     | 995-0002<br>-015 | M81969<br>/1-01 | (ITT Part Number)<br>274-7048-000 | (980-0004-804)<br>Metal Tip      | 26          | .054<br>(1.37)     | .130/.110<br>(3.30/2.54) |
|        |              |              |                  |                  | 3        |                     |                  |                 |                                   |                                  | 24          |                    |                          |
|        |              |              |                  |                  | 4        |                     |                  |                 |                                   |                                  | 22          |                    |                          |
| 2020HD | 030-2273-000 | 031-1302-000 | M22520<br>/2-01  | 995-0001<br>-584 | 6        | M22520<br>/2-08     | 995-0001<br>-604 | M81969<br>/1-02 | CIET-20<br>(980-0004-805)         | (980-0004-805)<br>Metal Tip      | 22          | .071<br>(1.8)      | .167/.147<br>(4.24/3.73) |
|        |              |              |                  |                  | 7        |                     |                  |                 |                                   |                                  | 20          |                    |                          |
| 1616   | 030-2280-000 | 031-1303-000 | M22520<br>/1-01  | 995-0001<br>-585 | 4        | M22520<br>/1-02     | 995-0001<br>-736 | M81969<br>/1-03 | CIET-16<br>(274-7002-000)         | (980-0004-806)<br>Metal Tip      | 20          | .103<br>(2.62)     | .270/.230<br>(6.86/5.84) |
|        |              |              |                  |                  | 5        |                     |                  |                 |                                   |                                  | 18          |                    |                          |
| 1212   | 030-2286-000 | 031-1308-000 | M22520<br>/1-01  | 995-0001<br>-585 | 6        |                     |                  |                 |                                   |                                  | 16          |                    |                          |
|        |              |              |                  |                  | 7        | M22520<br>/1-11     | 995-0002<br>-027 | M81969<br>/1-04 | CIET-12<br>(274-7003-000)         | CET-12 Plastic<br>(274-7003-000) | 14          | .135<br>(3.43)     | .270/.230<br>(6.86/5.84) |
|        |              |              |                  |                  | 8        |                     |                  |                 |                                   |                                  | 12          |                    |                          |

\*Contacts used in BKA connectors are as follows, Size 22 Pin contacts are used in the Plug, Socket in the receptacle. All other sizes the Pin is used in the receptacle and socket is used in the Plug.

### DPX Crimp Contacts

| Contact Size | Type   | Part Number  |              | Wire Accom. | Crimp Tool<br>Part Number             | Locator<br>Part Number                     | Insertion/<br>Extraction Tool     |
|--------------|--------|--------------|--------------|-------------|---------------------------------------|--------------------------------------------|-----------------------------------|
|              |        | DPXMA/ME     | DPXNE/NA*    |             |                                       |                                            |                                   |
| 2222         | Pin    | 030-1975-007 | 030-1975-008 | 22, 24, 26  | M22520/2-01                           | M22520/2-23                                | (ITT Part Number)<br>274-7048-000 |
|              | Socket | 031-1113-008 | 031-1113-008 |             |                                       |                                            |                                   |
| 2020         | Pin    | 030-9081-000 |              | 20, 22, 24  | M22520/2-01<br>MS-3191-1<br>MS-3191-3 | M22520/2-02<br>Std. Locator<br>M22520/2-01 | CIET-20<br>(274-7001-000)         |
|              | Socket | 031-9134-001 |              |             |                                       |                                            |                                   |
| 2020HD       | Pin    | 030-9081-003 | 030-1892-004 | 20, 22, 24  | M22520/2-08                           | Standard                                   | CIET-20<br>(980-0004-805)         |
|              | Socket | 031-9134-004 | 031-1047-003 |             |                                       |                                            |                                   |
| 1616         | Pin    | 030-9083-001 | 030-9083-012 | 16, 18, 20  | M22520/1-01<br>MS-3191-1              | M22520/1-02<br>Std. Locator                | CIET-16<br>(274-7002-000)         |
|              | Socket | 031-9206-004 | 031-1271-000 |             |                                       |                                            |                                   |
| 1212         | Pin    | 030-1909-001 | 030-1909-002 | 12, 14      | M22520/1-01                           | M22520/1-11                                | CIET-12<br>(274-7003-000)         |
|              | Socket | 031-1059-001 | 031-1059-003 |             |                                       |                                            |                                   |
| 0808         | Pin    | 030-1908-001 |              | 8           | CBT-600*<br>CBT600B*                  | CCH8-1 Head<br>CCHP-8-6                    | CET-8-2<br>(323-7004-000)         |
|              | Socket | 031-1154-000 |              |             |                                       |                                            |                                   |
| 0406         | Pin    | 030-2049-000 |              | 6           | CBT-600*<br>CBT600B*                  | CCH4-1 Head<br>CCHP-4-8                    | CET-4-8<br>(323-7008-000)         |
|              | Socket | 031-1151-000 |              |             |                                       |                                            |                                   |

\*Contacts used in DPXNE/NA connectors are tested to and meet AS39029 requirements.

The crimp contacts are shipped with the connector, not installed. Additional contacts may be ordered using the part numbers listed below. All tools must be purchased separately. The insertion/extraction tools listed are plastic type. Consult your account representative for more durable metal tools.

### BKA & DPX Thermocouple Contacts

| Size | Alloy   | Type   | Part Number  | Crimp Tooling   |              | Selector | Locator Part Number |              | MIL Spec        | Insertion/Extraction Tooling             |                                        |                             | A<br>W<br>G | Wire Size          |                          |
|------|---------|--------|--------------|-----------------|--------------|----------|---------------------|--------------|-----------------|------------------------------------------|----------------------------------------|-----------------------------|-------------|--------------------|--------------------------|
|      |         |        |              | MIL Spec        | ITT Cannon   |          | MIL Spec            | ITT Cannon   |                 | Insertion                                | Extraction                             | Ins./Ext                    |             | Insul Dia.<br>Max. | Strip<br>Length          |
| 2222 | Alumel  | Pin    | 030-1975-009 | M22520<br>/2-01 | 995-0001-584 | 3        | M22520<br>/2-23     | 995-0002-015 | M81969<br>/1-01 | CIT-DPXMA-22-1<br>Metal<br>(070256-0000) | CET-DPXMA-22<br>Metal<br>(070317-0000) | (980-0004-804)<br>Metal Tip | 26          | .054<br>(1.37)     | .130/110<br>(3.30/2.54)  |
|      |         | Socket | 031-1113-009 |                 |              | 3        |                     |              |                 |                                          |                                        |                             | 24          |                    |                          |
|      | Chromel | Pin    | 030-1975-010 |                 |              | 4        |                     |              |                 |                                          |                                        |                             | 22          |                    |                          |
|      |         | Socket | 031-1113-010 |                 |              |          |                     |              |                 |                                          |                                        |                             |             |                    |                          |
| 1616 | Alumel  | Pin    | 030-1897-000 | M22520<br>/1-01 | 995-0001-585 | 4        | M22520<br>/1-02     | 995-0001-736 | M81969<br>/1-03 | -                                        | CET-16-9<br>Plastic<br>(323-7001-000)  | (980-0004-806)<br>Metal Tip | 20          | .103<br>(2.62)     | .270/.230<br>(6.86/5.84) |
|      |         | Socket | 031-1034-000 |                 |              | 5        |                     |              |                 |                                          |                                        |                             | 18          |                    |                          |
|      | Chromel | Pin    | 030-1898-000 |                 |              | 5        |                     |              |                 |                                          |                                        |                             | 16          |                    |                          |
|      |         | Socket | 031-1035-000 |                 |              | 6        |                     |              |                 |                                          |                                        |                             |             |                    |                          |

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Termination Tooling Data (continued)

### Printed Circuit Contacts

#### BKAF and DPX Printed Circuit Solder Post Socket Contacts Size 22 with .025(6.35) Dia. Printed Circuit Tails-Receptacle Only

The new low insertion force, front-insertable, front-removable #22 socket contacts with .025(6.35) dia., PC tails are now available for use in the BKAF non-environmental receptacle version only. These contacts can be sold separately or they can be supplied with a connector (see How to Order). Use part numbers shown in the table on the right when ordering separately. Also Applies to DPX F106 layout

| Contact Supplied Installed Mod. | Part Number  | Min. Post Extension | Extraction Tool             |
|---------------------------------|--------------|---------------------|-----------------------------|
| SE                              | 031-1352-000 | .150 (3.81)         | CET-BKAF 22S<br>070343-0000 |
| SF                              | 031-1352-001 | .250 (6.35)         |                             |
| SG                              | 031-1352-002 | .375 (9.52)         |                             |
| SH                              | 031-1352-003 | .500 (12.70)        |                             |

#### BKAD/F Solder Post, Power Pin Contacts (Captive)-Receptacle Only.

Contacts are captivated between two unbonded insulator halves.

| Contact Supplied Installed Mod. | Contact Size | Part Number  | Post Dia.   | Min. Post Extension* |
|---------------------------------|--------------|--------------|-------------|----------------------|
| SE                              | 20HD         | 030-2358-000 | .032 (0.81) | .150 (3.81)          |
|                                 | 16           | 030-2357-000 | .050 (1.27) |                      |
|                                 | 12           | 030-2356-000 | .081 (2.06) |                      |

\*Consult your account representative for other available lengths.

#### BKAF Solder Post and BKAX PCB Pin Contact Front Release Installed

Applies for BKAX 13W2 and 5W2 insert only.

| Contact Supplied Installed Mod. | Contact Size | Part Number  | Post Dia.   | Min. Post Extension | Extraction Tool |
|---------------------------------|--------------|--------------|-------------|---------------------|-----------------|
| SF                              | 20HD         | 030-3287-000 | .030 (0.76) | .300 (7.62)         | 317-1798-000    |
|                                 | 16HD         | 030-3287-001 | .050 (1.27) |                     | 317-1798-002    |
|                                 | 12HD         | 030-3287-002 | .081 (2.06) |                     |                 |
|                                 | 5 Coax       | 349-1052-002 | .020 (0.51) | .250 (6.35)         |                 |

#### Front Release Pin Contacts Size 20 and 16

BKAX PCB pin contacts front release applies for all inserts except 13W2 and 5W2.

| Contact Supplied Installed Mod. | Contact Size | Part Number  | PC Tail Dia. | Min. Post Extension | Extraction Tool |
|---------------------------------|--------------|--------------|--------------|---------------------|-----------------|
| SF                              | 20HD         | 030-3296-001 | .034 (0.86)/ | .260 (6.60)         | 317-1788-000    |
| SG                              |              | 030-3296-002 | .030 (0.76)  | .385 (9.78)         |                 |
| SF                              | 16           | 030-3297-001 | .052 (1.32)/ | .260 (6.60)         | 317-1798-002    |
| SG                              |              | 030-3297-002 | .048 (1.22)  | .385 (9.78)         |                 |

#### BKAF-ARINC 600 Size 22 Wrap Post Socket Contacts With .025(6.35) Square Wire-Wrappable Tails-Receptacle Only.

The new low insertion force, front-insertable, front-removable #22 socket contacts with .025(6.35) square wire wrappable tails are now available for use in the BKAF non-environmental receptacle version only.

These contacts can be sold separately or they can be supplied with a connector (see How to Order). Use part numbers shown in the table on the right when ordering separately.

| Contact Supplied Installed Mod. | Contact Supplied Installed Mod. | Part Number  | Number of Wraps | Min. Post Extension | Extraction Tool        |
|---------------------------------|---------------------------------|--------------|-----------------|---------------------|------------------------|
| WB                              | 20HD                            | 031-1351-001 | 2               | .375 (9.52)         | CET-22F<br>070343-0000 |
| WC                              |                                 | 031-1351-002 | 3               | .500 (12.70)        |                        |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Coaxial Contact Data

### High Speed Coax Contacts

| Contact Size | Receptacle Part Number | Plug Part Number | RF Cable P/N | Rated Performance (GHz) |
|--------------|------------------------|------------------|--------------|-------------------------|
| 8            | 980-9501-015           | 980-9501-021     | RG-405       | 32                      |
| 8            | 980-9501-016           | 980-9501-022     | RG-402       | 32                      |
| 8            | 980-9501-017           | 980-9501-023     | RG-142       | 12.4                    |
| 8            | 349-1149-000           | 349-1087-007     | RG-316       | 3                       |
| 12           | 980-9501-018           | 980-9501-024     | RG-405       | 40                      |
| 16           | 980-9501-019           | 980-9501-025     | LMR-100      | 6                       |
| 16           | 980-9501-020           | 980-9501-026     | RG-405       | 40                      |

### BKA Size 8 Coaxial Contacts

| Rear Release/ Rear Removable Crimp Contact Type Socket Part Number |                      | RF Cable Number                                                                  |
|--------------------------------------------------------------------|----------------------|----------------------------------------------------------------------------------|
| Plug Connector                                                     | Receptacle Connector |                                                                                  |
| 349-1087-002                                                       | 349-1086-002         | RG142, RG400<br>RG58, RG141<br>RG223, RG55U<br>ASNE0293XF                        |
| 349-1087-007                                                       | 349-1149-000         | RD316, RG316<br>RG174/U, RG179, RG187<br>RG188, KX22<br>S280W503-1<br>ASNE0639XY |
| 349-1087-011                                                       | 349-1086-007         | RG180, RG195<br>S280W503-2                                                       |
| 349-1087-012                                                       | 349-1086-008         | RG178, KX21<br>RG196<br>ASNE0633WG                                               |
| 349-1087-013                                                       | 349-1084-011         | RG405 Semi Rigid                                                                 |

| Receptacle Connector - PCB        |             |      |                    |                   |
|-----------------------------------|-------------|------|--------------------|-------------------|
| Contact Type Pin/Plug Part Number | Engagement* |      | Termination**      |                   |
|                                   | Short       | Long | Solder .250 (6.35) | FR-FR .375 (9.52) |
| 349-1084-000                      | -           | X    | X                  |                   |
| 349-1084-001                      | X           | -    | X                  |                   |
| 349-1084-002                      | -           | X    |                    | X                 |
| 349-1084-003                      | X           | -    |                    | X                 |

### BKA Size 8 Ground Contacts

| Plug Connector                  |             |      |               |             |                    |                   |
|---------------------------------|-------------|------|---------------|-------------|--------------------|-------------------|
| Contact Type Socket Part Number | Engagement* |      | Termination** |             |                    |                   |
|                                 | Short       | Long | Crimp RR-RR   | Crimp FR-RR | Solder .250 (6.35) | FR-FR .375 (9.52) |
| 031-3300-000                    | -           | -    | X             |             |                    |                   |

### BKA Size 8 Twinax Contacts

| Plug Connector                  |             |      |               |             |                    |                   |
|---------------------------------|-------------|------|---------------|-------------|--------------------|-------------------|
| Contact Type Socket Part Number | Engagement* |      | Termination** |             |                    |                   |
|                                 | Short       | Long | Crimp RR-RR   | Crimp FR-RR | Solder .250 (6.35) | FR-FR .375 (9.52) |
| 349-1006-000                    | -           | -    | X             |             |                    |                   |
| 349-1081-001                    | -           | -    | X             |             |                    |                   |

| Receptacle Connector              |             |      |               |             |                    |                   |
|-----------------------------------|-------------|------|---------------|-------------|--------------------|-------------------|
| Contact Type Pin/Plug Part Number | Engagement* |      | Termination** |             |                    |                   |
|                                   | Short       | Long | Crimp RR-RR   | Crimp FR-RR | Solder .250 (6.35) | FR-FR .375 (9.52) |
| 349-1007-000                      | -           | -    | X             |             |                    |                   |
| 349-1080-000                      | X           | -    |               |             | X                  |                   |
| 349-1080-001                      | -           | X    |               |             | X                  |                   |
| 349-1080-002                      | X           | -    |               |             |                    | X                 |
| 349-1080-003                      | -           | X    |               |             |                    | X                 |
| 349-1082-000                      | X           | -    |               | X           |                    |                   |
| 349-1082-001                      | -           | X    |               | X           |                    |                   |
| 349-1088-001                      | -           | X    | X             |             |                    |                   |

\*The electrical engagement of "Long" contacts is .150 (3.81) greater than the electrical engagement of "Short" contact.

\*\* RR-RR indicates rear release, rear removal.

FR-RR indicates front release, rear removal.

FR-FR indicates front release, front removal.

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Coaxial Contact Data (continued)

### BKA Size 5 Coax Contact (Rear insertable/removable)

| Cable Accommodation         | Part Number                |                               | Crimp Tooling  |              |         |              |                  |              |               | Extraction Tool        |
|-----------------------------|----------------------------|-------------------------------|----------------|--------------|---------|--------------|------------------|--------------|---------------|------------------------|
|                             |                            |                               | Center Contact |              |         |              | Outer Shell Tool |              |               |                        |
|                             |                            |                               | Tool           |              | Locator |              | MIL STD          |              | ITT Cannon    |                        |
|                             | Pin (Receptacle Connector) | Socket (Plug Connector)       | MIL Spec       | ITT Cannon   | Daniels | ITT Cannon   | Frame            | Jaw          | Complete Tool |                        |
| RG-58C/U<br>BA-5903<br>(BG) | 349-0014-000               | 349-0013-000                  | M22520/2-01    | 995-0001-584 | K-345   | 995-0002-049 | M22520/5-01      | M22520/5-45B | CCT-HX3-156   | CET-C8<br>323-7011-000 |
| 5021K1011<br>(Raychem)      | 349-0016-000               | 349-0015-000                  |                |              |         |              |                  |              |               |                        |
| RG-223                      | 349-1060-000               | 349-1059-000                  |                |              |         |              |                  |              |               |                        |
| RG-400                      | 349-1060-000               | 349-1003-000                  |                |              |         |              |                  |              |               |                        |
| RG-316                      | 349-1004-001               | 349-1150-000                  |                |              |         |              |                  |              |               |                        |
| RD-316                      | 349-1004-002               | 349-1004-000                  |                |              |         |              |                  |              |               |                        |
| PCB                         | 349-1052-002               | 0.300", 7,62mm, PCB extension |                |              |         |              |                  |              |               |                        |

Crimp Center Contact-Conforming to ARINC 600

### BKA Size 12 Shielded Contact (Rear insertable/removable)

| Cable Accommodation                            | Part Number                |                         | Crimp Tooling  |              |         |              |                  |               |               | Extraction Tool |                                     |
|------------------------------------------------|----------------------------|-------------------------|----------------|--------------|---------|--------------|------------------|---------------|---------------|-----------------|-------------------------------------|
|                                                |                            |                         | Center Contact |              |         |              | Outer Shell Tool |               |               |                 |                                     |
|                                                |                            |                         | Tool           |              | Locator |              | MIL STD          |               | ITT Cannon    |                 |                                     |
|                                                | Pin (Receptacle Connector) | Socket (Plug Connector) | MIL Spec       | ITT Cannon   | Daniels | ITT Cannon   | Frame            | Jaw           | Complete Tool | MIL Spec        | ITT Cannon                          |
| RG-196A/U                                      | 249-1767-000               | 249-2203-001            | M22520/2-01    | 995-0001-584 | K-182   | 995-0002-051 | M22520/1-01      | M22520/10-05A | 995-0001-071  | M81969/28-02    | CET-12-4<br>Plastic<br>323-7002-000 |
| 5071 (HW)                                      | 249-1767-001               | 249-1768-001            |                |              |         |              |                  |               |               |                 |                                     |
| RG-174/U<br>RG316/U<br>RG179<br>RG187<br>RG188 | 249-1767-005               | 249-1768-000            |                |              |         |              |                  |               |               |                 |                                     |
| BMS-1348 (BG)                                  | 249-1767-008               | 249-2203-000            |                |              | K-644   | 995-0002-050 |                  |               |               |                 |                                     |

### BKA Size 1 Modified Coaxial Contacts (4W4 Layout Only) Captive No Tool Required

| Plug Connector      |              |             |                              |              |
|---------------------|--------------|-------------|------------------------------|--------------|
| Cable Accommodation | Coax         |             | Replacement Termination Kits |              |
|                     | Part Number  | Style       | Solder Type                  | Crimp Type   |
| RG214               | 349-1043-001 | Straight    | 320-1066-000                 | 320-1066-016 |
| AA-5886             | 349-1048-000 |             | 320-1066-002                 | 320-1066-018 |
| RG393               | 349-1051-001 |             | 320-1066-003                 | 320-1066-019 |
| ECS 311201          | 349-1046-000 |             | 320-1066-001                 | 320-1066-017 |
| AA-5887             | 349-1049-000 |             | 320-1066-004                 | 320-1066-013 |
| AA-5888             | 349-1050-000 |             | 320-1066-005                 | 320-1066-014 |
| RG142               | 349-1047-000 |             | 320-1066-006                 | 320-1066-015 |
| Various             | 349-1047-001 | TNC Adapter | -                            | -            |

| Receptacle Connector |              |             |                              |            |
|----------------------|--------------|-------------|------------------------------|------------|
| Cable Accommodation  | Coax         |             | Replacement Termination Kits |            |
|                      | Part Number  | Style       | Solder Type                  | Crimp Type |
| RG316 DS             | 349-1051-002 | Straight    | 320-1066-008                 | N/A        |
| RG142                | 349-1044-000 |             | 320-1066-007                 |            |
| Various              | 349-1042-000 | SMA Adapter | -                            | -          |

Customer Use Drawings:  
 Coax contacts 349-1051-002 and 349-1044-000 are located on customer use drawing #349-0000-304  
 Coax contacts 349-1042-000 is located on customer use drawing #320-1042-000

Customer Use Drawings:  
 All Coax contacts (except 349-1047-001) customer use drawing #349-0000-305 Crimp termination kits: Customer use drawing #320-0000-305 Solder termination kits: Customer use drawing #320-0000-304

Dimensions shown in inches (mm)  
 Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Coaxial Contact Data (continued)

### BKA Size 1 Coax Contacts (71W1 Layout Only) Captive No Tool Required

| Plug Connector           |              |          |                                  |                                |
|--------------------------|--------------|----------|----------------------------------|--------------------------------|
| Cable Accommodation      | Coax         |          | Replacement Coax Termination Kit | Replacement Coax Body Assembly |
|                          | Part Number  | Style    |                                  |                                |
| RG-9/U                   | 249-1522-000 | Straight | 249-1522-010                     | 021-0144-004                   |
| NSA 935354<br>NSA 935355 | -            |          | 249-2202-000                     |                                |
| RG-58/U<br>RG-142/U      | 249-1882-000 |          | 249-1882-001                     |                                |
| RG-402/U                 | 249-1882-002 |          | 320-0051-000                     | 021-0144-011                   |
| RG-214/U                 | 249-5123-000 |          | 249-5027-013                     | 021-0144-008                   |
| RG-115/U                 | 249-5123-001 |          | 249-5027-015                     |                                |

Same standard coax contacts as used in DPX (ARINC 404) connector series.

| Receptacle Connector                       |              |          |                                  |                                |
|--------------------------------------------|--------------|----------|----------------------------------|--------------------------------|
| Cable Accommodation                        | Coax         |          | Replacement Coax Termination Kit | Replacement Coax Body Assembly |
|                                            | Part Number  | Style    |                                  |                                |
| RG-9/U<br>RG-214/U                         | 249-1521-000 | Straight | 249-1521-002                     | 021-0144-000                   |
| NSA 935354<br>NSA 935355                   | -            |          | 249-2201-000                     |                                |
| RG-55/U<br>RG-58/U<br>RG-142/U<br>RG-400/U | 249-1554-000 |          | 249-1554-002                     | 021-0144-003                   |
| RG-58/U<br>RG-142/U<br>RG-225/U            | 249-1604-001 | 90°      | 249-1604-003                     | 021-0144-006                   |
| RG-402/U<br>UT-141                         | 249-1604-002 |          |                                  |                                |
| RG-402/U<br>UT-141                         | 249-5027-008 | Straight | 249-5027-016                     | 021-0144-001                   |
| SMA Jack Termination                       | 249-5027-017 |          | -                                | -                              |

### BKA Size 1 Coax Contacts (71W1A/B and 2W2 insert modifier - "M")

#### Captive No Tool Required

| Plug Connector        |                             |                            |                                         |          |
|-----------------------|-----------------------------|----------------------------|-----------------------------------------|----------|
| Cable Accommodation   | Standard Size 1 Part Number | Modular Size 1 Part Number | Termination Kit for Modular Size 1 Coax | Style    |
|                       |                             |                            |                                         |          |
| RG-214/U              | 349-0017-000                | 349-1053-003               | 320-1066-000                            | Straight |
| RG-393/U              |                             | -                          | -                                       |          |
| BA-6903               |                             | 349-1053-007               | 320-1066-003                            |          |
| 5012H3012 (Raychem)   | 349-0018-000                | -                          | -                                       |          |
| RG-142B/U             | 349-0005-000                | 349-1053-006               | 320-1066-006                            |          |
| RG-402/U<br>UT-141    | 349-0007-000                | -                          | -                                       |          |
| AA-5888               | -                           | 349-1053-008               | 320-1066-005                            |          |
| ECS-310801            |                             | 349-1053-005               | -                                       |          |
| AA-5886               |                             | 349-1053-004               | 320-1066-002                            |          |
| BSX-7004-502          |                             | 349-1053-003               | -                                       |          |
| ECS-311201            |                             | 349-1053-002               | 320-1066-001                            |          |
| AA-5887               |                             | 349-1053-001               | 320-1066-004                            |          |
| Adam Russell<br>PC-38 |                             | 349-1053-000               | -                                       |          |

Designed to be interchangeable with contacts made by other manufacturers.

| Receptacle Connector                 |              |             |
|--------------------------------------|--------------|-------------|
| Cable Accommodation                  | Part Number  | Style       |
| RG-142B/U                            | 349-0021-000 | Right Angle |
| RG-402/U<br>UT-141                   | 349-0022-000 |             |
| SMA Jack Termination                 | 349-0023-000 | Straight    |
| RG-214/U<br>RG-393/U<br>BA-6903 (BG) | 349-0002-000 |             |
| 5012H3012 (Raychem)                  | 349-0004-000 |             |
| RG-142B/U                            | 349-0006-000 |             |
| RG-402/U<br>UT-141                   | 349-0008-000 |             |

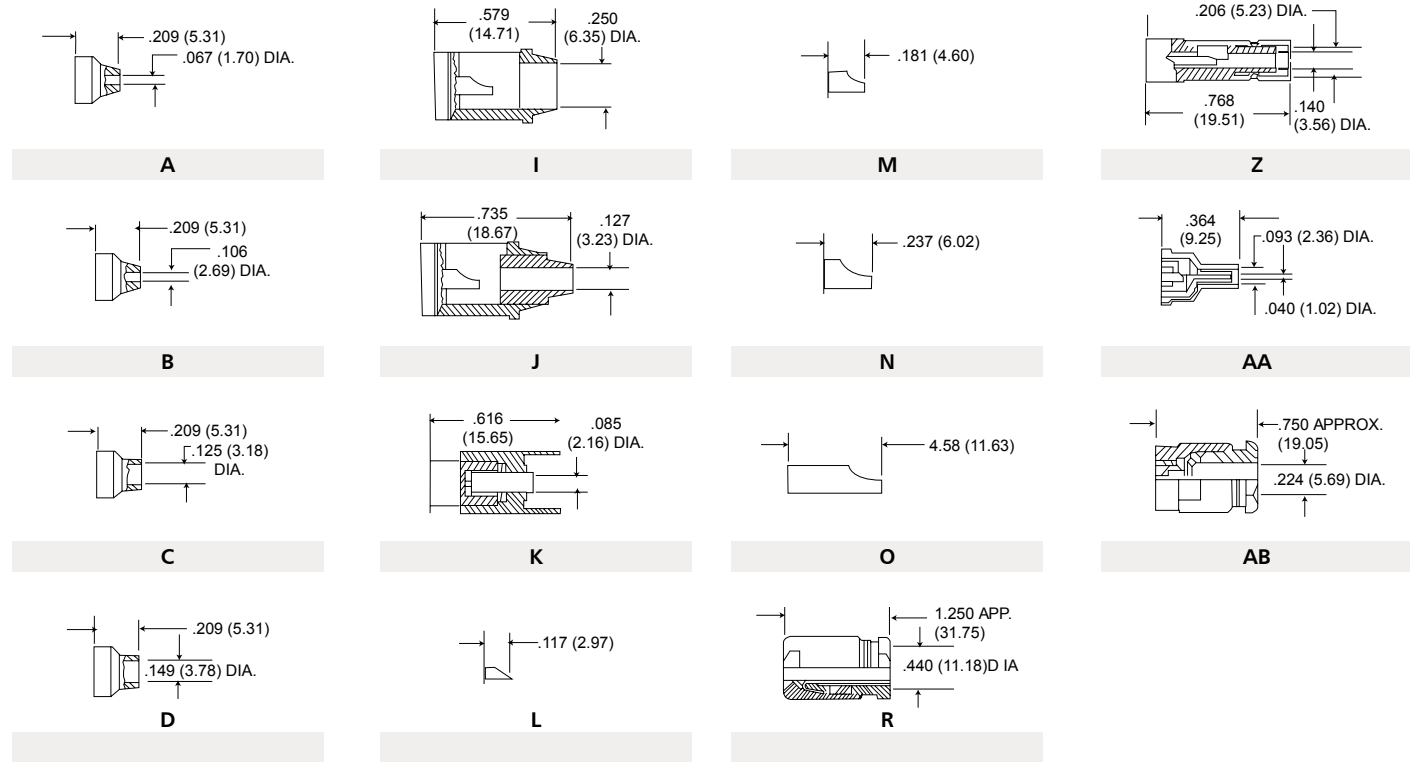
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BA and DPX Contacts

## Coaxial Contact Data (continued)

DPX Solder Coaxial/Power Contact Data (Retained by Captive Insulator Assembly)  
Coaxial contacts are supplied with the connector

Contact Type Code/Rear Extension from Insulator



| Contact Type Code | Part Number                                  |                                              | Cable Accommodation           | Layout Accommodation                                                      |
|-------------------|----------------------------------------------|----------------------------------------------|-------------------------------|---------------------------------------------------------------------------|
|                   | Pin                                          | Socket                                       |                               |                                                                           |
| A                 | 249-1522-000                                 | 249-0671-000                                 | RG-187/U, RG-188/U            | C7A, B16C3, G25C3, C30C4, A32C2, L40C1                                    |
| B                 | -                                            | 249-0703-000                                 | RG-180/U, RG-195/U            | C7B, J25C3, C16C3, C32C2, 40C1                                            |
| C                 | 249-1882-000                                 | 249-0750-000                                 | RG-55/U, RG-58/U, RG-223/U    | C7H, G16C3, F25C3, D32C2, F40C1                                           |
| D                 | 249-1885-002                                 | 249-0518-000                                 | RG-59/U                       | C7J, H16C3, H25C3, F32C2, E30C4, E40C1                                    |
| I                 | 249-5123-000                                 | 249-0353-000                                 | RG-7/U                        | 10C3                                                                      |
| J                 | 249-5123-001                                 | 249-0268-000                                 | RG-55/U, RG-58/U, RG-223/U    | A10C3                                                                     |
| K                 | 249-0583-000<br>024-0015-000<br>253-0120-000 | 249-0591-000<br>024-0015-000<br>253-0120-000 | RG-187/U, RG-188/U            | 25C3, 32C2, J16C3, A40C1, C7, C7D<br>A40C1 pin only, use C40C1 for socket |
| L                 | 330-0144-000                                 | 330-0145-000                                 | 7.5 amp #20 wire              | See Note 1                                                                |
| M                 | 030-0056-010                                 | 031-0016-008                                 | 13 amp #16 wire               | See Note 2                                                                |
| N                 | 030-0017-015                                 | -                                            | 23 amp #12 wire               | 8                                                                         |
| O                 | -                                            | 031-0059-008                                 | 23 amp #12 wire               | 8                                                                         |
| R                 | 249-1521-000                                 | 249-1522-000                                 | RG-9/U, RG-214/U              | C2                                                                        |
| Z                 | 249-1624-000                                 | 249-1598-000                                 | RG-58/U with Captive Contact  | C7AA, ZE16C3, Q25C3, A30C4, M32C2, J40C1                                  |
| AA                | 249-1599-000                                 | 249-1622-000                                 | RG-196/U with Captive Contact | C7X, ZF16C3, R25C3, B30C4, N32C2, K40C1                                   |
| AB                | 249-1554-000                                 | 249-1822-000                                 | RG-58/U                       | C2C                                                                       |

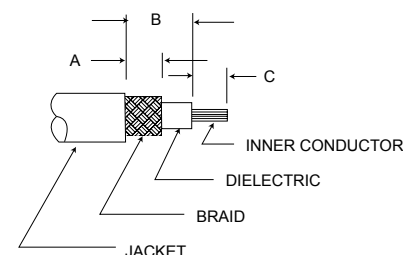
NOTES:  
1 Code L-10C3, A10C3, 17, 23, 25C3, E25C3, F25C3, G25C3, H25C3, J25C3, Q25C3, R125C3, 30C4, A30C4, C30C4, D30C4, E30C4, 32, 32C2, A32C2, C32C2, D32C2, F32C2, M32C2, N32C2, Q32C2, 40, 40C1, B40C1, D40C1, E40C1, F40C1, H40C1, J40C1, K40C1, L40C1, 45, 57, 67, Dimensions shown in inches (mm)  
2. Code M-B16C3, C16C3, G16C3, H16C3, M16C3, ZE16C3, ZF16C3, 26, 30C4, 32, 67 Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Coaxial Contact Data (continued)

### DPX Solder Cable Trim Dimensions

| Code Letter | Inches    |           |           | Millimeters |             |             |
|-------------|-----------|-----------|-----------|-------------|-------------|-------------|
|             | A         | B         | C         | A           | B           | C           |
| A           | .166/.146 | .358/.318 | .14       | 4.22/3.71   | 9.08/8.08   | 3.55        |
| B           | .166/.146 | .358/.318 | .14       | 4.22/3.71   | 9.08/8.08   | 3.55        |
| C           | .166/.146 | .358/.318 | .14       | 4.22/3.71   | 9.08/8.08   | 3.55        |
| D           | .166/.146 | .358/.318 | .14       | 4.22/3.71   | 9.08/8.08   | 3.55        |
| E           | .166/.146 | .358/.318 | .14       | 4.22/3.71   | 9.08/8.08   | 3.55        |
| I           | .166/.146 | .39       | .166/.146 | 4.22/3.71   | 9.91        | 4.21/3.71   |
| J           | .166/.146 | .55       | .166/.146 | 4.22/3.71   | 13.97       | 4.21/3.71   |
| K           | .198/.178 | .488/.428 | .25       | 5.03/4.52   | 11.38/10.87 | 6.35        |
| Z           | .08       | .41       | .23       | 2.03        | 10.41       | 5.84        |
| AA          | .11       | .23       | .195/.175 | 2.79        | 5.84        | 4.95/4.45   |
| AB          | .238/.198 | .233/.193 | .447/.427 | 6.04/5.03   | 5.92/4.90   | 11.35/10.89 |
| R           | .238/.198 | .233/.193 | .582/.542 | 6.05/5.03   | 5.92/4.90   | 14.8/13.8   |

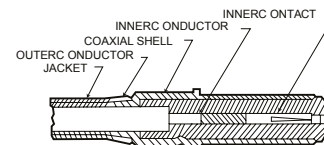


### DPX 404 Coaxial Cable Assembly

ITT Cannon recommends resistance soldering for all solder contacts, particularly for RF cable where excessive heat will damage the dielectric. Wires should be pre-tinned. Bushing, endbells, and junction shells (where applicable) must be slipped over wire bundles before soldering is started. Consult factory for types not shown. The mechanical steps in wiring coaxials described below.

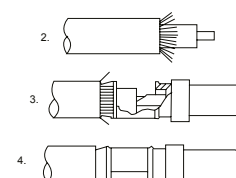
#### For Codes A, B, C, D, and E

- Step 1** - Cut cable evenly. Trim to dimensions as shown in the table above. Care should be taken not to injure the conductor or dielectric.
- Step 2** - Remove inner contact from coaxial assembly and solder it to inner conductor of cable.
- Step 3** - Push inner contact back into coaxial assembly.
- Step 4** - Pull outer conductor over coaxial shell, and solder.
- Step 5** - Apply shrink sleeving after assembly.



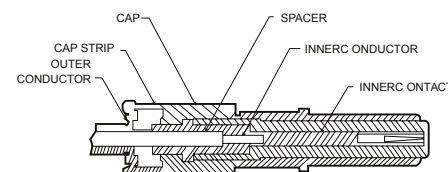
#### For Codes I and J

- Step 1** - Cut cable evenly. Trim to dimensions as shown in the table above.. Care should be taken not to injure the conductor or dielectric.
- Step 2** - Comb braid, tin conductor and remove flux.
- Step 3** - Remove solder pot cover. Insert cable and solder conductor to contact. The dielectric should butt against contact solder pot.
- Step 4** - Replace solder pot cover and solder braid to ferrule.
- Step 5** - Apply shrink sleeving after assembly.



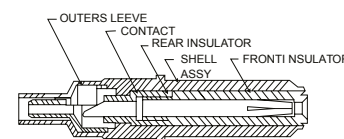
#### For Codes K

- Step 1** - Cut cable evenly. Trim to dimensions as shown in the table above. Care should be taken not to injure the conductor or dielectric.
- Step 2** - Unscrew cap and remove spacer and inner contact from coaxial assembly.
- Step 3** - Push cable through center of cap and spacer.
- Step 4** - Solder inner. contact to inner conductor of cable.
- Step 5** - Push inner contact back into coaxial shell assembly and attach cap.
- Step 6** - Separate outer conductor of cables into two pigtails 180° apart.
- Step 7** - Attach on pigtail to each end of cap strip and solder.
- Step 8** - Apply shrink sleeving after assembly.



#### For Codes Z and AA

- Step 1** - Cut cable evenly. Trim to dimensions as shown in the table above. Care should be taken not to injure the conductor or dielectric.
- Step 2** - Solder inner conductor to coaxial contact through side slot in coaxial with outer sleeve pushed back on cable.
- Step 3** - Pull sleeve forward over braid and solder through holes in sleeve.
- Step 4** - Solder sleeve to coaxial body.



Dimensions shown in inches (mm)

Specifications and dimensions subject to change

# BKA and DPX Contacts

## Coaxial Contact Data (continued)

### DPXNA/NE LITTLE CAESAR Coax Contact Retention Assembly



Wire Strip Dimensions

| Arr. Used In                                    | Part Number without Seal (NA) | Part Number Sealed (NE) | Cable Accommodation |                     | Ins. Dia. Size/Max. | A' Trim Dim. |
|-------------------------------------------------|-------------------------------|-------------------------|---------------------|---------------------|---------------------|--------------|
|                                                 |                               |                         | Seal 1              | Seal 2              |                     |              |
| (Size 5 Coax)<br>32W2M<br>40W1M<br>36W7<br>33W4 | P-249-2071-000                | 249-2101-000            | RG180               | RG195U              | .158 (4.01)         | .260(6.60)   |
|                                                 | S-249-2076-000                | 249-2106-000            |                     |                     |                     | .250(6.35)   |
|                                                 | P-249-2072-000                | 249-2102-000            | RG58                | X                   | .196 (4.98)         | .260(6.60)   |
|                                                 | S-249-2077-000                | 249-2107-000            |                     |                     |                     | .250(6.35)   |
|                                                 | P-249-2073-000                | 249-2103-000            | RG142               | X                   | .196 (4.98)         | .260(6.60)   |
|                                                 | S-249-2078-000                | 249-2108-000            |                     |                     |                     | .250(6.35)   |
|                                                 | P-249-2074-000                | 249-2104-000            | RG179               | RG174, RG179, RG316 | .111 (2.82)         | .350(8.89)   |
|                                                 | S-249-2079-000                | 249-2109-000            |                     |                     |                     | .330(8.38)   |
|                                                 | P-249-2075-000                | 249-2105-000            | RG178<br>RG196      | X                   | .075 (1.90)         | .260(6.60)   |
|                                                 | S-249-2080-000                | 249-2110-000            |                     |                     |                     | .250(6.35)   |
| (Size 9 Coax)<br>W8M<br>32W4M                   | P-249-2081-000                | 249-2111-000            | RG180               | RG195U              | .158 (4.01)         | .260(6.60)   |
|                                                 | S-249-2086-000                | 249-2116-000            |                     |                     |                     | .250(6.35)   |
|                                                 | P-249-2082-000                | 249-2112-000            | RG58                | X                   | .196 (4.98)         | .260(6.60)   |
|                                                 | S-249-2087-000                | 249-2117-000            |                     |                     |                     | .250(6.35)   |
|                                                 | P-249-2083-000                | 249-2113-000            | RG142               | X                   | .196 (4.98)         | .260(6.60)   |
|                                                 | S-249-2088-000                | 249-2118-000            |                     |                     |                     | .250(6.35)   |
|                                                 | P-249-2084-000                | 249-2114-000            | RG179               | RG174, RG179, RG316 | .111 (2.82)         | .350(8.89)   |
|                                                 | S-249-2089-000                | 249-2119-000            |                     |                     |                     | .330(8.38)   |
|                                                 | P-249-2085-000                | 249-2115-000            | RG178U<br>RG196U    | X                   | .075 (1.90)         | .260(6.60)   |
|                                                 | S-249-2090-000                | 249-2120-000            |                     |                     |                     | .250(6.35)   |

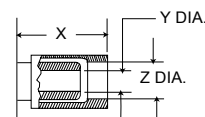
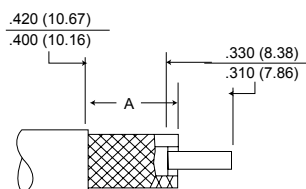
Coaxials without the seal accommodates both Seal 1 and Seal 2 cables.  
 Coaxials without the seal are utilized in DPXNE connectors supplied less the grommet (modification code: - 29\*\*) and DPXNA connectors.  
 Standard for the DPXNE/NA series is the A152 modification code indicates .00005 (0.0010) gold plating on coaxial contacts.

For assembly instructions, please consult the bottom of page 71 for size 5 contacts and the top of page 73 for size 9 contacts.

# BKA and DPX Contacts

## Coaxial Contact Data (continued)

### DPXMA/ME (Crimp) Coaxial Contacts Codes: B, C, D, H, P



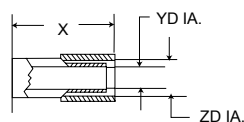
**Cable Trim Dimensions**

The "X" dimensions is from the rear of the shell.

| Arr. Used In                  | Code Letter | Cable Accommodation                            | Part Number without Seal (MA)* | Part Number Sealed (ME) | Contact Retention | Cable Accommodation |                            | Ins. Dia. Size/ Max. | A' Trim Dim.    | X Max.          | Y Dia.         | Z Dia.         | Crimp Tool              | Extraction Tool          |
|-------------------------------|-------------|------------------------------------------------|--------------------------------|-------------------------|-------------------|---------------------|----------------------------|----------------------|-----------------|-----------------|----------------|----------------|-------------------------|--------------------------|
|                               |             |                                                |                                |                         |                   | Seal 1              | Seal 2                     |                      |                 |                 |                |                |                         |                          |
| B16W3<br>25W3<br>32W2<br>40W1 | B           | *RG-58/U                                       | P-249-1399-000                 | P-249-1399-002          | Ring Loc          | RG58B               | X                          | .200<br>(5.08)       | .460<br>(11.68) | .760<br>(19.30) | .128<br>(3.25) | .211<br>(5.36) | CA58073                 | CET-C4<br>(038869-0004)  |
|                               |             |                                                | S-249-1400-000                 | S-249-1400-002          |                   |                     |                            |                      |                 |                 | .118<br>(3.00) | .201<br>(5.10) |                         |                          |
|                               | C           | *RG-180/U<br>RG-195/U                          | P-249-1401-000                 | P-249-1401-002          | Ring Loc          | RG195               | RG180B                     | .158<br>(4.01)]      | .460<br>(11.68) | .760<br>(19.30) | .128<br>(3.25) | .166<br>(4.22) |                         |                          |
|                               |             |                                                | S-249-1402-000                 | S-249-1402-002          |                   |                     |                            |                      |                 |                 | .118<br>(3.00) | .156<br>(3.96) |                         |                          |
|                               | D           | RG-174/U,<br>RG-187/U<br>RG-179/U,<br>RG-188/U | P-249-1403-000                 | P-249-1403-002          | Ring Loc          | RG179B              | RG174,<br>RG179B,<br>RG316 | .113<br>(2.87)       | .460<br>(11.68) | .760<br>(19.30) | .072<br>(1.83) | .121<br>(3.07) | CCT-HX4-524<br>CCT-408M |                          |
|                               |             |                                                | S-249-1404-000                 | S-249-1404-002          |                   |                     |                            |                      |                 |                 | .062<br>(1.57) | .111<br>(2.82) |                         |                          |
| W8<br>32W4                    | H           | RG-174/U,<br>RG-187/U                          | P-249-1633-000                 | LITTLE<br>CAESAR        |                   |                     |                            |                      |                 | .592<br>(15.04) | .072<br>(1.83) | .121<br>(3.07) | CCT-HX4-524<br>CCT-408M | CET-C8<br>(323-7011-000) |
|                               |             | RG-179/U,<br>RG-188/U                          | S-249-1634-000                 |                         |                   |                     |                            |                      | .062<br>(1.57)  | .111<br>(2.82)  |                |                |                         |                          |
| B16W3<br>25W3<br>32W2<br>40W1 | P           | *RG-58/U<br>with nylon<br>braid over<br>jacket | S-249-1608-000                 |                         | Ring Loc          |                     |                            |                      |                 | .760<br>(19.30) | .128<br>(3.25) | .235<br>(5.97) | Crimp<br>CA58073        | CET-C4<br>(038869-0004)  |
|                               |             |                                                |                                |                         |                   |                     |                            |                      |                 |                 | .118<br>(3.00) | .215<br>(5.46) |                         |                          |

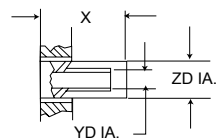
IMPORTANT: These coaxials can only be used in the DPX\*MAS or DPX\*MB Connector Series. Please refer to assembly instructions on Page 71.

### DPXMA/ME (Crimp) Coaxial Contacts Code: S



| Arr. Used In | Code Letter | Cable Accommodation | Part Number    | Contact Retention | X Max.       | Y Dia.      | Z Dia.      | Crimp Tool             | Extraction Tool       |
|--------------|-------------|---------------------|----------------|-------------------|--------------|-------------|-------------|------------------------|-----------------------|
| W8<br>32W4   | S           | RG-55/U<br>RG-142/U | P-249-1958-000 | Little Caesar     | .592 (15.04) | .130 (3.30) | .238 (6.04) | CA58073<br>CCT-HX3-156 | CET-C8 (323-7011-000) |
|              |             |                     | S-249-1959-000 |                   |              |             | .120 (3.05) |                        |                       |

### DPXMA/ME (Crimp) Coaxial Contacts Code: G



| Arr. Used In | Code Letter | Cable Accommodation | Part Number    | Contact Retention | X Max.       | Y Dia.      | Z Dia.      | Crimp Tool              | Extraction Tool       |
|--------------|-------------|---------------------|----------------|-------------------|--------------|-------------|-------------|-------------------------|-----------------------|
| W8<br>32W4   | G           | RG-58/U             | P-249-1631-000 | Little Caesar     | .500 (12.70) | .130 (3.30) | .211 (5.36) | CCT-HX4-524<br>CCT-408M | CET-C8 (323-7011-000) |
|              |             |                     | S-249-1632-000 |                   |              |             | .120 (3.05) |                         |                       |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BA and DPX Contacts

## Coaxial Contact Data (continued)

### DPXMA/ME (Crimp) Coaxial Contacts Code: J

| Arr. Used In                  | Code Letter | Cable Accommodation | Part Number    | Contact Retention | X Max.       | Y Dia.      | Z Dia.      | Crimp Tool | Extraction Tool         |
|-------------------------------|-------------|---------------------|----------------|-------------------|--------------|-------------|-------------|------------|-------------------------|
| W16W3<br>25W3<br>32W2<br>40W1 | J           | RG-58/U             | P-249-1388-000 | Ring Loc          | .798 (20.27) | .130 (3.30) | .273 (6.93) | Solder     | CET-C4<br>(038869-0004) |
|                               |             |                     | S-249-1390-000 |                   |              | .120 (3.05) | .263 (6.68) |            |                         |
|                               |             |                     |                |                   |              |             |             |            |                         |

### DPXMA/ME (Crimp) Coaxial Contacts Codes: V, AC

| Arr. Used In | Code Letter | Cable Accommodation | Part Number    | Contact Retention | X Max.       | Y Dia.      | Z Dia.      | Crimp Tool         | Extraction Tool           |
|--------------|-------------|---------------------|----------------|-------------------|--------------|-------------|-------------|--------------------|---------------------------|
| 10W3         | V           | RG-115/U            | P-249-1956-000 | Little Caesar     | .800 (20.32) | .260 (6.60) | .356 (9.04) | Buchanan<br>612991 | CET 4-8<br>(323-7008-000) |
|              |             |                     | S-249-1957-000 |                   |              | .254 (6.45) | .349 (8.86) |                    |                           |
|              | AC          | RG-58/U             | S-249-1977-000 | Little Caesar     | .800 (20.32) | .205 (5.21) | .356 (9.04) |                    |                           |
|              |             |                     |                |                   |              | .199 (5.05) | .349 (8.86) |                    |                           |

### DPXMA/ME (Crimp) Coaxial Contacts Codes: AB, AD, AE, AF, AG (Little Caesar Contact Retention)

| Arr. Used In | Code Letter | Cable Accommodation                            | Part Number without Seal (MA) | Part Number Sealed (ME) | Contact Retention | Cable Accommodation |                            | Ins. Dia. Size/Max. | A' Trim Dim. | X Max.       | Y Dia.      | Z Dia.      | Crimp Tool         | Extraction Tool          |
|--------------|-------------|------------------------------------------------|-------------------------------|-------------------------|-------------------|---------------------|----------------------------|---------------------|--------------|--------------|-------------|-------------|--------------------|--------------------------|
|              |             |                                                |                               |                         |                   | Seal 1              | Seal 2                     |                     |              |              |             |             |                    |                          |
| W8<br>32W4   | AB          | RG-180/U<br>RG-195/U                           | P-249-1982-000                | P-249-1982-001          | Little Caesar     | RG180B              | RG195                      | .158 (8.89)         | .260 (6.60)  | .575 (14.60) | .114 (2.90) | .168 (4.27) | Daniels<br>HX4-210 | CET-C8<br>(323-7011-000) |
|              |             |                                                | S-249-1983-000                | S-249-1983-001          |                   |                     |                            | .158 (8.89)         | .250 (6.35)  |              | .104 (2.64) | .158 (4.01) |                    |                          |
|              | AD          | RG-58/U                                        | P-249-2017-001                | P-249-2017-000          |                   | RG58C               | X                          | .196 (4.98)         | .260 (6.60)  |              | .114 (2.90) | .168 (4.27) |                    |                          |
|              |             |                                                | S-249-2018-001                | S-249-2018-000          |                   |                     |                            | .196 (4.98)         | .250 (6.35)  |              | .104 (2.64) | .158 (4.01) |                    |                          |
|              | AE          | RG-142/U                                       | P-249-2019-001                | P-249-2019-000          |                   | RG142B              | X                          | .196 (4.98)         | .260 (6.60)  |              | .114 (2.90) | .168 (4.27) |                    |                          |
|              |             |                                                | S-249-2020-001                | S-249-2020-000          |                   |                     |                            | .196 (4.98)         | .250 (6.35)  |              | .104 (2.64) | .158 (4.01) |                    |                          |
|              | AF          | RG-174/U,<br>RG-187/U<br>RG-179/U,<br>RG-188/U | P-249-1633-004                | P-249-1633-003          |                   | RG179               | RG174,<br>RG316,<br>RG179B | .111 (2.82)         | .350 (8.89)  |              | .114 (2.90) | .168 (4.27) |                    |                          |
|              |             |                                                | S-249-1634-003                | S-249-1634-002          |                   |                     |                            | .111 (2.82)         | .330 (8.38)  |              | .104 (2.64) | .158 (4.01) |                    |                          |
|              | AG          | RG-178/U<br>RG-196/U                           | P-249-2061-001                | P-249-2061-000          |                   | RG178B              | X                          | .075 (1.90)         | .260 (6.60)  |              | .114 (2.90) | .168 (4.27) |                    |                          |
|              |             |                                                | S-249-2062-001                | S-249-2062-000          |                   |                     |                            | .075 (1.90)         | .250 (6.35)  |              | .104 (2.64) | .158 (4.01) |                    |                          |

NOTE:

- The A32W2 & A40W1 (Ring Type Retention); AW8 & A32W4 (LITTLE CAESAR Retention) Coaxial Contact arrangements have been redesigned to provide ease of insertion/ removal of the coaxial contacts. Sealing is accomplished with the addition of sealing sleeves provided with the coaxial contact assembly.
- The "X" dimension is taken from the rear of the shell.
- Codes G and S are inactive for new design. Use codes AD and AE.

Dimensions shown in inches (mm)

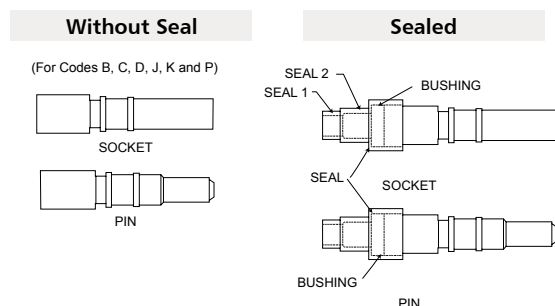
Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Coaxial Contact Data (continued)

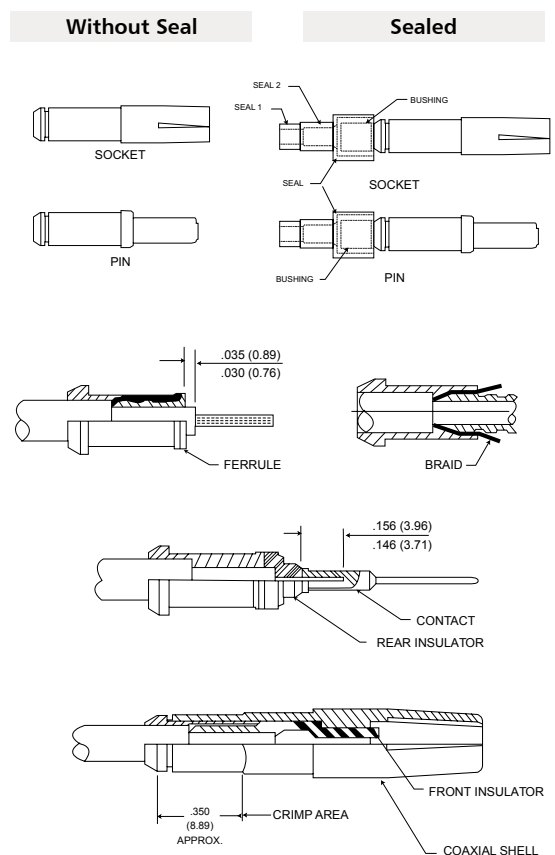
### DPX Coaxial Contact Assembly Recommendations (For Codes B, C, D, J, K, P)

- Center contact, rear insulator, crimp ring, support bushing and seal sleeve are packaged separately and shipped with the coaxial assembly.
- Use impact extraction tool no. CET-C4 (038869-0004). An insertion tool is not required. (See Item 4).
- Cable Assembly Instructions
  - If applicable, determine which portion of seal sleeve should be used.  
If seal 2 is used, cut off seal 1 portion
  - In sequence, place seal sleeve, support bushing and crimp ring over cable jacket.
  - Trim cable per illustration.
  - Place rear insulator over dielectric.
  - Solder innerconductor to center contact.
  - Insert soldered cable firmly into coaxial with shielding over coaxial shell.
  - Pull crimp ring forward until stopped and crimped.
  - Insert coaxial assembly into connector until engaged. Push support bushing into grommet until shoulder rest on tubular extension. Then pull seal sleeve forward until it is snug against grommet.
- To extract coaxial, push back seal sleeve and support bushing. Then push out coaxial from engaging end with CET-C4 (038869-0004) impact tool.
- When crimping with CA58073 crimp tool, care should be taken to avoid flaring the front end of the crimp ring. Place Crimp jaw so that the second tooth of the indentors is over the end of the crimp ring.
- To facilitate extraction of contacts and avoid splaying the length of free cable adjacent to the rear surface of the connector should not be less than 2.000 (50.80).



### DPX Coaxial Contact Assembly and Extraction Recommendations

- Use Crimp Tool No. DIE Y211 (995-0002-249), Tool M22520 / 5-01 (995-0001-761).
- Use extraction tool No. CET-C8. An insertion tool is not required. (See Note 5).
- Center contact, rear insulator, crimp ring, support bushing (not applicable to RG58/RG142 coaxials), seal sleeve, front insulator, shell and ferrule are shipped unassembled in a common container.
- Cable Assembly Instructions:
  - If applicable, determine which portion of seal sleeve should be used.  
If seal 2 is used, cut off seal 1 portion
  - In sequence, place seal sleeve, support bushing and crimp ring over cable jacket.
  - Trim cable per illustration on Page 68.
  - Comb out braid and flare out ends to permit entry of ferrule.
  - Complete termination per illustration.
    - Push ferrule under braid as far as it will go. Trim off braid extending beyond shoulder of ferrule, if necessary.
    - While holding ferrule in place pull crimp sleeve forward over braid until it is tight against shoulder an ferrule. Pull firmly against face of ferrule to make sure it is up tight.
    - Trim dielectric to the .035 (0.89)/.030 (0.76) dimension.
    - Carefully push inner conductor through rear insulator.
    - While holding rear insulator firmly against ferrule, trim conductor to .156 (3.96)/.146 (3.71) dimension.
    - Place contact over conductor and solder.
    - Place front insulator over contact and then push assembly into coaxial shell.
    - Place parts in jaw of crimp tool. Locate jaws at start of chamfer on crimp sleeve. Press sleeve firmly into coaxial shell and crimp.
    - After assembled coaxial is inserted into connector, push support bushing into grommet until shoulder rests on tubular extension. Then pull sealing sleeve forward until it is snug against grommet.
- To extract: coaxial, push back seal sleeve and support bushing. Slip cable into extraction tool. Push tool into insert until it contacts coaxial retaining shoulder. Grip both cable and tool with one hand and pull coaxial rearward out of insert cavity.
- To facilitate extraction of contacts and avoid splaying, the length of free cable adjacent to the rear surface of the connector should not be less than 2.000 (50.80).



Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# BJA and DPX Contacts

## Coaxial Contact Data (continued)

### DPX 404 Coax Contacts – DPXMA Crimp Coaxial Cable Assembly Recommendations

#### LITTLE CAESAR Contact Assembly Data

##### For Code S

**Step 1** - Trim cable to dimensions shown on Page 69.

**Step 2** - Complete termination per instructions as shown below.

- Solder inner conductor to coaxial contact with crimp ring over braid and rear insulator over inner conductor.
- Insert cable into coaxial with shell under braid. Crimp ring with Cannon crimp tool CA58073.

##### For Codes G, H

**Step 1** - Trim cable to dimensions shown on Page 69.

**Step 2** - Complete termination per instructions as shown below.

- Solder inner connector to coaxial contact with crimp ring pushed back on cable.
- Insert cable into coaxial and pull ring forward over braid. Crimp ring with Cannon crimp tool CA58073-0001 or CCT-408M. After crimping, crimp ring must not exceed .252 (6.40) diameter.

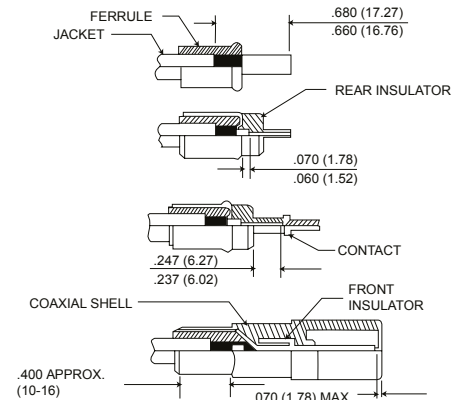
##### For Code AC

**Step 1** - Trim cable to dimensions shown below.

- Trim jacket to .680 (17.27)/.660 (16.76) dimension. Then slide ferrule over braid until it stops against jacket, and comb out exposed portion of braid.
- Fold combed braid over ferrule as shown. Then trim dielectric to .070 (1.78)/.060 (1.52) dimension and slide rear insulator over dielectric until it presses against braid.
- Press insulator against braid and trim inner conductor to .247 (6.27)/.237 (6.02) dimension. Then place contact over conductor and crimp with MS3191-3 (do not use MS3191-1). Press parts firmly against locator during crimping operation.

**Step 2** - Complete termination per instructions as shown below.

- Place front insulator over contact. Push parts into coaxial shell. While holding parts firmly against stop shoulder in coaxial shell, place jaw of crimp tool at back end of shell and crimp. Use Buchanan crimp tool #612991 (.343 (8.71) across hex).



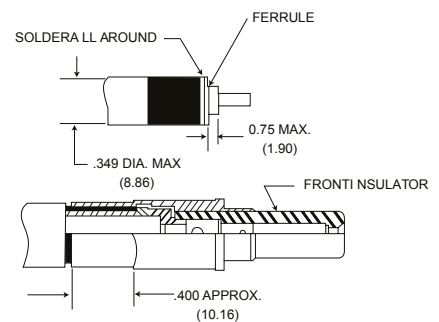
##### For Code V

**Step 1** - Trim cable to dimensions shown below.

- Push ferrule under braid as far as it will go and press braid down tightly around ferrule.
- Solder ends of braid to ferrule by applying a small amount of solder. Avoid excess solder as it would cause braid to swell up.
- Remove any solder exceeding the .349 (8.86) max. diameter.
- Check the .075 (1.90) max. dielectric extension, retrim if necessary.

**Step 2** - Complete termination per instructions as shown below.

- Place rear insulator over dielectric and conductor into contact.
- Solder contact to conductor through access hole.
- Remove excess solder from outside of contact.
- Place front insulator over contact.
- Push parts into coaxial shell.
- While holding parts firmly against stop shoulder in coaxial shell, place jaw of crimp tool at back end of shell and crimp, use Buchanan crimp tool #612991 (.343 (8.71) across hex).



Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Coaxial Contact Data (continued)

### DPX 404 Coax Contacts – DPXMA Crimp Coaxial Cable Assembly Recommendations (continued)

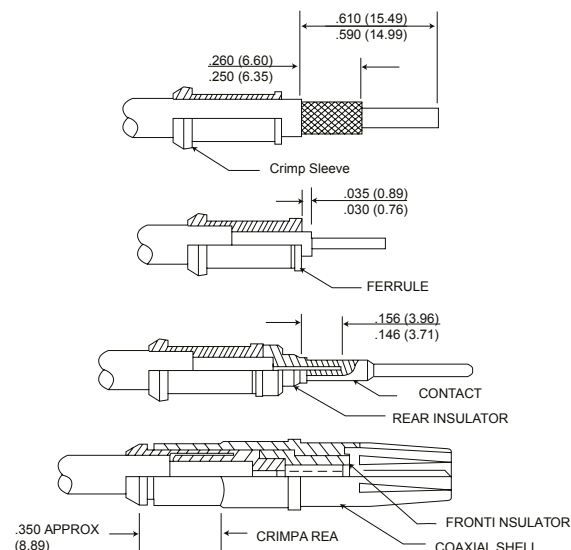
For Codes AB, AD, AE, AF and AG

**Step 1** - Trim cable as shown.

**Step 2** - Flare out ends of braid to permit entry of ferrule.

**Step 3** - Complete termination per instructions as shown below.

- a. Push ferrule under braid as far as it will go. Trim off braid extending beyond shoulder of ferrule, if necessary.
- b. While holding ferrule in place pull crimp sleeve forward over braid until it is tight against shoulder on ferrule. Push firmly against face of ferrule to make sure it is up tight.
- c. Trim dielectric to the .035 (0.89)/.030 (0.76) dimension.
- d. Carefully push inner conductor through rear insulator.
- e. While holding rear insulator firmly against ferrule, trim conductor to .156 (3.96)/.146 (3.71) dimension.
- f. Place contact over conductor and solder.
- g. Place front insulator over contact and then push assembly into coaxial shell.
- h. Place parts in jaw of crimp tool. Locate jaws at start of chamfer on crimp sleeve. Press Sleeve firmly into coaxial shell and crimp. Use Daniels crimp tool HX4-210.

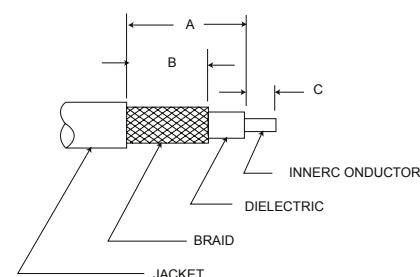


### DPX Crimp Cable Trim Dimensions

| Code Letter | Inches    |           |           | Millimeters |             |           |
|-------------|-----------|-----------|-----------|-------------|-------------|-----------|
|             | A         | B         | C         | A           | B           | C         |
| B, C, D & P | .420/.400 | .460/.440 | .330/.310 | 10.67/10.16 | 11.68/11.18 | 8.38/7.87 |
| G           | .490/.470 | .275/.255 | .156/.136 | 12.45/11.94 | 6.98/6.48   | 3.96/3.45 |
| H           | .581/.561 | .345/.325 | .156/.136 | 14.76/14.25 | 8.76/8.26   | 3.96/3.45 |
| J           | .326/.306 | .250/.230 | .088/.068 | 8.28/7.77   | 6.35/5.84   | 2.24/1.73 |
| S           | .678/.658 | .275/.255 | .156/.136 | 17.22/16.71 | 6.98/6.48   | 3.96/3.45 |
| V           | .550/.540 | .415/.405 | .250/.240 | 13.97/13.72 | 10.54/10.29 | 6.35/6.10 |

AB, AC, AD, AE, AF, AG

See Page 70 for Dimensions



# BKA and DPX Contacts

## Coaxial Contact Data (continued)

### BKA & DPX Coaxial Cable Reference Guide

| RG/U Type | Inner Conductor | Dielectric Material | DOD (Inch) | Jacket Material | O.D (Inch) | Weight (lbs/ft) | Max Oper. Temp. Range (°C) | Max Oper. Voltage (Volts RMS) | Suggested Alt Cable | Code Crimp Type Coax | Code Solder Type Coax      | DPX NE/NA Military     | BKA* ARINC Type Coax       |                     |            |
|-----------|-----------------|---------------------|------------|-----------------|------------|-----------------|----------------------------|-------------------------------|---------------------|----------------------|----------------------------|------------------------|----------------------------|---------------------|------------|
| 7         | .0359           | Air-space PE        | .250       | PVC             | .370       | .080            | -40 + 80                   | 1,000                         | Use RG63B           | -                    | I                          | -                      | -                          |                     |            |
| 9         | .0855           | PE                  | .280       |                 |            | .420            |                            | .140                          | 4,000               |                      | Use RG214                  |                        |                            | R,AC                |            |
| 55        | .0320           |                     | .116       | PE              | .206 Max.  | .032            | -55 + 80                   | 1,900                         | Use RG55B           | S                    | C, J                       | Size 1(71W1)           |                            |                     |            |
| 58        | .03208C         |                     |            |                 | 0.195      | .029            |                            |                               | Use RG58B           | J,AC,AD              | C, J, Z AB                 |                        | Size 5/9 Seal 1            | Size 1(71W1) Size 5 |            |
| 59        | .0253           |                     | PVC        | 0.242           | .032       | -40 + 80        | 2,300                      | Use RG59B                     | AF, T               | D                    | -                          | -                      |                            |                     |            |
| 59B       | .0230           |                     |            |                 |            |                 |                            | Use up to 1000 MHz            | -                   | -                    |                            |                        |                            |                     |            |
| 62        | .0253           |                     |            |                 |            |                 | .146                       | .038                          | 750                 | Use RG62A            |                            |                        | AF,T                       | E                   | -          |
| 62A       |                 | -                   |            |                 |            |                 |                            |                               |                     | -                    |                            |                        | -                          |                     |            |
| 71        |                 | Use RG71B           |            |                 |            |                 |                            |                               |                     | -                    |                            |                        | E                          |                     |            |
| 115       | .0840           | PTFE                |            |                 |            |                 | .250                       | FG Braid                      | .375                | .148                 |                            |                        | -55 + 250                  | 5,000               | Use RG115A |
| 142       | .0359           |                     | .116       | .206 Max.       | .047       | 1,900           | Use RG142A                 |                               | S,AE                | Size 5/9 Seal 1      | Size 1(71W1) Size 1(71W1A) |                        |                            |                     |            |
| 142B      | .0390           |                     | .116       | FEP             | .195       |                 | .050                       | -55 + 200                     | -                   | -                    | -                          | Size 1(71W1A) Size 5   |                            |                     |            |
| 174       | .0189           | PE                  | .060       | PVC             | .100       | .008            | -40 + 80                   | 1,500                         |                     | D,H,U, AF            | -                          | Size 5/9 Seal 2        | Size 5 Size 12             |                     |            |
| 178       | .0120           | PTFE                | .036       | KEL-F           | .079 Max.  | .0054           | -40 + 150                  | 1,000                         | Use RG178B          | E,R,K,AG,            | -                          | Size 5/9 Seal 1        | Size 5                     |                     |            |
| 179       |                 |                     | 0,057      |                 | .094 Max.  | .010            | -55 + 150                  | 1,200                         | Use RG179B          | D,H,U, AF            |                            | Size 5/9 Seal 1 Seal 2 |                            |                     |            |
| 179B      |                 |                     | .063       | FEP             | .100       |                 | -55 + 200                  |                               | -                   | -                    |                            | -                      |                            |                     |            |
| 180       |                 |                     | .103       | KEL-F           | .141 Max.  | .019            | -40 + 150                  | 1,500                         | Use RG180B          | C,AB                 |                            | B                      |                            | Size 5/9 Seal 1     |            |
| 180B      |                 |                     | 0.102      | FEP             | .145 Max.  |                 | -55 + 200                  |                               | -                   | AB                   |                            | -                      |                            |                     |            |
| 187       |                 |                     | .060       | PTFE            | .110 Max . | .010            | -55 + 250                  | 1,200                         | Use RG179B          | D,H,U, AF            |                            | A,K                    |                            | -                   |            |
| 188       |                 |                     |            |                 |            | .0201           |                            |                               | .011                |                      |                            |                        |                            | Use RG316           | -          |
| 195       |                 |                     | .0120      |                 | .102       | .155 Max.       |                            | .020                          | 1,500               | Use RG180B           | CAB                        | B                      |                            | -                   |            |
| 196       | .034            |                     |            |                 | .080 Max.  | .006            |                            | 1,000                         | Use RG178B          | E,R,K, L,AA,AG       | AA                         | Size 5/9 Seal 1        |                            |                     |            |
| 214       | .0888           | PE                  | .285       | PVC             | .425       | .126            | -40 + 80                   | 5,000                         | -                   |                      | R,AC                       | -                      | Size 1(71W1) Size 1(71W1A) |                     |            |
| 223       | .035            |                     | .116       |                 | .216 Max.  | .034            |                            | 1,900                         |                     |                      | C,J                        | -                      | -                          |                     |            |
| 225       | .0936           | PTFE                | .285       | FG Braid        | .430       | .180            | -55 + 250                  | 5,000                         | -                   |                      |                            | Size 5/9 Seal 2        | Size 1(71W1)               |                     |            |
| 316       | .0201           |                     | .060       | FEP             | .102       | .012            | -55 + 200                  | 1,200                         |                     |                      |                            | Use RG188A             | -                          |                     |            |
| 393       | .0936           |                     | .285       |                 | .390       | .165            |                            | 5,000                         |                     |                      |                            | Use RG225              |                            | -                   |            |
| 400       | .0385           |                     | .116       |                 | .195       | .05             |                            | 1,900                         |                     |                      |                            | -                      |                            |                     |            |
| 402       | .0360           |                     | .119       | None            | .141       | .032            |                            | 2,500                         |                     |                      |                            | Use RG142B             |                            |                     | -          |

For BKA\* DPX Series (Crimp, & Solder) Reference MIL-C-17D & DPX NE/NA AS81659 Series

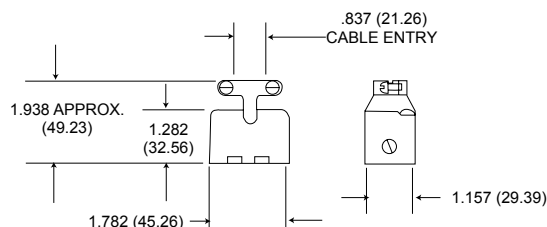
NOTE: This table is shown for reference only. ITT Cannon recommends that the above information be used as a guideline and may be subject to variation between various cable manufacturers. For specific information concerning the actual physical characteristics of a specific cable, contact the manufacturer.

Dimensions shown in inches (mm)  
 Specifications and dimensions subject to change. Product images are reference only.

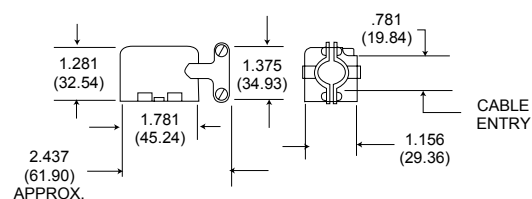
# BKA and DPX Contacts

## Accessories

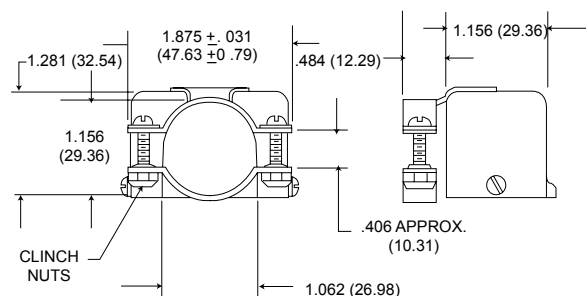
### Junction Shells - DPX



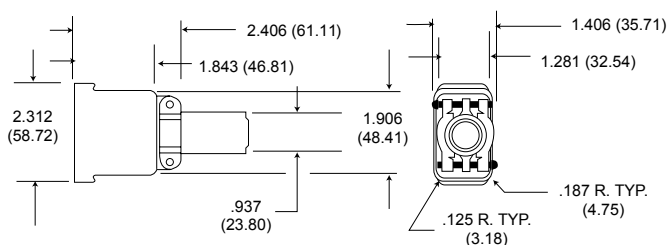
Straight Junction Shell



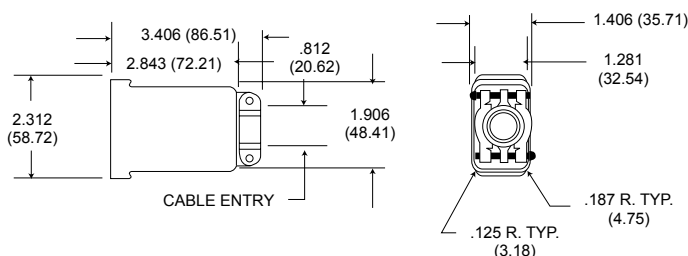
90° Angle Junction Shell



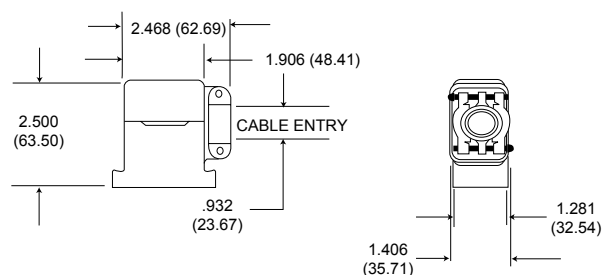
90° Angle DPX2 Junction Shell (Side Outlet)



Diecast Straight Junction Shell (DPXA Only)



Diecast Straight Junction Shell - Long (DPXA Only)



Diecast 90° Angle Junction Shell (DPXA Only)

| Junction Shell                                     | Style        | Part Number |
|----------------------------------------------------|--------------|-------------|
| Straight Junction Shell*                           | DPXA         | 20745-21    |
|                                                    | DPX2/DPXB    | 20745-8     |
| 90° Angle                                          | DPXA (Right) | 20745-22    |
|                                                    | DPXA (Left)  | 20745-23    |
|                                                    | DPX2 (Right) | 20745-10    |
|                                                    | DPX2 (Left)  | 20745-11    |
| 90° Angle DPX2 Junction Shell (Side Outlet)        | DPX2         | 20745-12    |
| Diecast Straight Junction Shell (DPXA Only)        | DPXA         | 22017       |
| Diecast Straight Junction Shell - Long (DPXA Only) | DPXA         | 22017-2     |
| Diecast 90° Angle Junction Shell (DPXA Only)       | DPXA         | 22017-1     |

\* DPX2 Junction Shells are also used on DPXB connectors.

Diecast junction shells may be used on DPXA connectors. They have 4-40 NC-2B tapped mounting holes for attaching to the shell mounting hardware.

Dimensions shown in inches (mm)

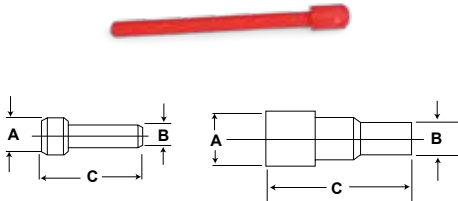
Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Accessories (continued)

### Sealing Plugs – DPX and BKAE Environmental Connectors Only

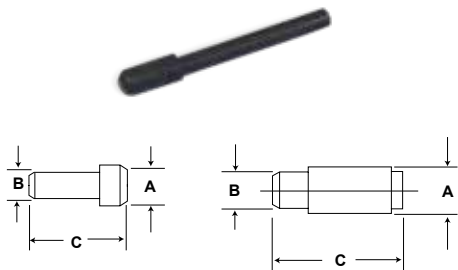
Material: Teflon  
 (All others thermoplastic)



| Contact Size   | Part Number  | Color  | A             | B          | C            |
|----------------|--------------|--------|---------------|------------|--------------|
| 22             | 225-1013-000 | Black  | .063 (1.6)    | .040 (1.1) | .469 (12)    |
| 20             | 225-0070-000 | Red    | .085 (2.2)    | .053 (1.3) | .800 (20.4)  |
| 16             | 225-0071-000 | Blue   | .125 (3.2)    | .074 (1.8) | 1.447 (36.8) |
| 12             | 225-0072-000 | Yellow | .365" (9,3mm) | .120 (3.1) | 1.416 (36)   |
| #5 and #9 Coax | 225-0090-000 | White  | .365" (9,3mm) | .287 (7.3) | .835 (21.3)  |
| 8              | 225-1059-000 | White  | .359 (9.2)    | .269 (6.9) | .528 (13.5)  |

### Filler Plugs – DPX and BKAD Non-Environmental Connectors Only

Material: Teflon  
 (All others thermoplastic)



| Contact Size     | Part Number  | Color  | A          | B          | C           |
|------------------|--------------|--------|------------|------------|-------------|
| 22               | 225-0094-000 | Black  | .069 (1.7) | .051 (1.3) | .420 (10.7) |
| 20               | 225-0095-000 | Red    | .083 (2.1) | .069 (1.7) | .350 (8.9)  |
| 16               | 225-0096-000 | Blue   | .131 (3.3) | .108 (2.7) | .320 (8.1)  |
| 12               | 225-0097-000 | Yellow | .187 (4.7) | .156 (4.0) | .320 (8.1)  |
| #5 Coax (Pin)    | 225-0090-000 | White  | .165 (4.2) | .287 (7.3) | .835 (21.3) |
| #5 Coax (Socket) | 225-0098-000 | White  | .275 (7.0) | .251 (6.4) | .450 (11.4) |

Size 8 Pin Filler Plug FR-FR 225-1065-000/-001 short (flush with insulator)  
 Size 8 Pin Filler Plug RR-RR 225-1066-000

Size 8 Socket Filler Plug RR-RR 225-1069-000  
 Size 8 Pin & Socket Filler FR-RZ 225-1072-000 (plastic)/-001 nickel/metal

Dimensions shown in inches (mm)  
 Specifications and dimensions subject to change. Product images are reference only.

# BKA and DPX Contacts

## Accessories (continued)

### BKA Cavity Reducers

| Part Number  | Description |
|--------------|-------------|
| 021-8756-000 | Pin         |
| 021-8757-000 | Socket      |

#### #5 Coax to #12 Contact

Cavity reducers are available when additional circuits are required for size 12 power contacts. These reducers, having the internal configuration of size 12 power contact, are inserted into the size 5 coaxial insulator cavity to create size 12 power contact cavity. (Non removable)

### BKA Dust Caps

| Part Number  | Description               |
|--------------|---------------------------|
| 025-1121-001 | BKAD 1-A & B-Plug         |
| 025-1122-001 | BKAD 1-C-Plug             |
| 025-1123-001 | BKAD 2&3-A & B-Plug       |
| 025-1124-001 | BKAD 2&3-C-Plug           |
| 025-1155-001 | BKAD 1-A&B-Receptacle     |
| 025-1156-001 | BKAD 1-C-Receptacle       |
| 025-1157-001 | BKAD 2&3-A & B-Receptacle |
| 025-1158-001 | BKAD 2&3-C-Receptacle     |



Conductive dust caps protect against static electricity

Note: For plug connectors with EMI grounding springs (Mod22) use the following dust cap part numbers:  
BKA Size 1 plug 025-1218-001, BKA Size 2 plug 025-1218-000

### DPX Dust Caps



| Part Number  | Description                 |
|--------------|-----------------------------|
| 025-0767-001 | DPXB-60-1 for shell size 34 |
| 025-0749-001 | DPXA-59-1 for shell size 33 |

Conductive dust caps protect against static electricity

### Polarization Kits

BKA Polarization Kits consist of: 3 Keys or Posts, 2 Screws and a Retaining Plate

DPX Polarization Kits consist of: Keys or Posts, Nuts, and Washers

| Connector Type | Kit  | Kit Part Number | Material/Finish                    |
|----------------|------|-----------------|------------------------------------|
| BKA            | Key  | 320-1067-000    | Zinc Nickel/<br>Electroless Nickel |
|                | Post | 320-1067-003    |                                    |
| DPX            | Key  | 320-0052-002    |                                    |
|                | Post | 320-0052-001    |                                    |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# BA and DPX Contacts

## Accessories (continued)

### BA (ARINC 600) Cross Reference-Part Number/Customer Use Drawings

| Description                                                                   | Component Part Number | Customer Use Drawing Number | Description               | Component Part Number | Customer Use Drawing Number | Description                      | Component Part Number          | Customer Use Drawing Number    | Description         | Component Part Number | Customer Use Drawing Number |
|-------------------------------------------------------------------------------|-----------------------|-----------------------------|---------------------------|-----------------------|-----------------------------|----------------------------------|--------------------------------|--------------------------------|---------------------|-----------------------|-----------------------------|
| Contacts                                                                      | 030-1975-009          | 030-1975-009                | Size #12 Shielded Contact | 249-1767-000          | 249-1767-000                | Replacement Coax Termination Kit | 249-1521-002                   | 249-1521-002                   | Replaceable Inserts | 143-1906-000          | 143-0000-079                |
|                                                                               | 030-1975-010          | 030-1975-010                |                           | 249-1767-001          | 249-1767-001                |                                  | 249-1522-009                   | 249-1522-010                   |                     | 143-1906-001          |                             |
|                                                                               | 030-2259-000          | 030-2259-000                |                           | 249-1768-000          | 249-1768-000                |                                  | 249-1522-010                   | 249-1522-010                   |                     | 143-1907-001          |                             |
|                                                                               | 030-2273-000          | 030-2273-000                |                           | 249-2203-000          | 249-2203-000                |                                  | 249-1554-002                   | 249-1554-002                   |                     | 143-1907-001          |                             |
|                                                                               | 030-2280-000          | 030-2280-000                | Size #1 Coax Contacts     | 249-1521-000          | 249-1521-000                |                                  | 249-1604-003                   | 249-1604-003                   |                     | 143-1908-000          | 143-0000-081                |
|                                                                               | 030-2286-000          | 030-2286-000                |                           | 249-1522-000          | 249-1522-000                |                                  | 249-1604-004                   | 249-1604-004                   |                     | 143-1908-001          |                             |
|                                                                               | 030-2356-000          | 030-2356-000                |                           | 249-1522-002          | 249-1522-002                |                                  | 249-2201-000                   | 249-1521-002                   |                     | 143-1909-000          |                             |
|                                                                               | 030-2357-000          | 030-2357-000                |                           | 249-1554-000          | 249-1554-000                |                                  | 249-2202-000                   | 249-1522-010                   |                     | 143-1909-001          |                             |
|                                                                               | 030-2358-000          | 030-2358-000                |                           | 249-1604-000          | 249-1604-000                |                                  | 249-5027-013                   | 249-5027-013                   |                     | 143-1910-000          | 143-0000-077                |
|                                                                               | 031-1113-009          | 031-1113-009                |                           | 249-1604-001          | 249-1604-001                |                                  | 249-5027-015                   | 249-5027-007                   |                     | 143-1910-001          |                             |
|                                                                               | 031-1113-010          | 031-1113-010                |                           | 249-1604-002          | 249-1604-002                |                                  | 249-5027-016                   | 249-5027-016                   |                     | 143-1911-000          |                             |
|                                                                               | 031-1287-000          | 031-1287-000                |                           | 249-1882-000          | 249-1882-000                |                                  | 320-0051-000                   | 1250Y                          |                     | 143-1911-001          |                             |
|                                                                               | 031-1302-000          | 031-1302-000                |                           | 249-1882-002          | 1250Y                       |                                  | 320-1066-000                   | 320-000-305                    |                     | 143-1912-000          | 143-0000-080                |
|                                                                               | 031-1303-000          | 031-1303-000                |                           | 249-1885-002          |                             |                                  | 320-1066-001                   |                                |                     | 143-1912-001          |                             |
|                                                                               | 031-1308-000          | 031-1308-000                |                           | 249-5027-008          | 249-5027-008                |                                  | 320-1066-002                   |                                |                     | 143-1913-000          |                             |
|                                                                               | 031-1351-000          | 031-0000-343                |                           | 249-5027-017          | 249-5027-017                |                                  | 320-1066-003                   |                                |                     | 143-1913-001          |                             |
|                                                                               | 031-1351-001          |                             |                           | 249-5123-000          | 249-5027-000                |                                  | 320-1066-004                   |                                |                     | 143-1958-000          | 143-0000-079                |
|                                                                               | 031-1351-002          |                             |                           | 249-5123-001          | 249-5027-007                |                                  | 320-1066-005                   |                                |                     | 143-1958-002          |                             |
|                                                                               | 031-1351-003          |                             |                           | 349-1053-000          | 349-0000-306                | 320-1066-006                     | 143-1960-000                   |                                |                     |                       |                             |
|                                                                               | 031-1352-000          | 349-1053-001                |                           | Coax                  |                             | 025-1121-001                     | 025-0000-054 (Conductive Only) | 143-1960-002                   |                     | 143-0000-078          |                             |
|                                                                               | 031-1252-000          | 349-1053-002                |                           |                       |                             | 025-1122-001                     |                                | 143-2015-000                   |                     |                       |                             |
|                                                                               | 031-1252-002          | 349-1053-003                |                           |                       |                             | 025-1123-001                     |                                | 143-2015-001                   |                     |                       |                             |
|                                                                               | 031-1352-003          | 349-1053-004                |                           |                       |                             | 025-1124-001                     | 143-2016-000                   |                                |                     |                       |                             |
| Replacement Coax Body Assembly                                                | 021-0144-000          | 021-0144-000                |                           |                       |                             | 3491053-005                      | 025-1155-001                   | 025-0000-055 (Conductive Only) |                     | 143-2016-001          | 1247Y                       |
|                                                                               | 021-0144-001          | 021-0144-001                |                           |                       |                             | 349-1053-006                     | 025-1156-001                   |                                |                     | 143-2065-000          |                             |
|                                                                               | 021-0144-002          | 021-0144-002                |                           | 349-1053-007          |                             | 025-1157-001                     | 143-2066-000                   |                                |                     |                       |                             |
|                                                                               | 021-0144-003          | 021-0144-003                |                           | 349-1053-008          |                             | 025-1158-001                     | 143-2067-000                   |                                |                     |                       |                             |
|                                                                               | 021-0144-004          | 021-0144-004                |                           | 349-1053-009          |                             | 225-0094-000                     | 225-0000-014                   | 143-2068-000                   | 143-0000-079        |                       |                             |
|                                                                               | 021-0144-006          | 021-0144-006                | Size #8 Coax Contacts     | 349-1081-001          | 225-0095-000                | 143-2085-000                     |                                |                                |                     |                       |                             |
|                                                                               | 021-0144-008          | 021-0144-008                |                           | 349-1081-002          | 225-0096-000                | 143-2085-001                     |                                |                                |                     |                       |                             |
|                                                                               | 021-0144-011          | 021-0144-011                |                           | 349-1086-003          | 225-0097-000                | 143-2086-000                     |                                |                                |                     |                       |                             |
| Size #5 Coax Contacts                                                         | 349-0013-000          | 349-0000-000                |                           | 349-1086-004          | 225-0098-000                | Sealing Plugs                    |                                | 225-0000-006                   |                     |                       |                             |
|                                                                               | 349-0014-000          | 349-0000-001                |                           | 349-1087-001          | 225-0099-000                |                                  |                                | 225-0090-000                   |                     |                       |                             |
|                                                                               | 349-0015-000          | 349-0000-002                |                           | 349-1087-003          | 225-1058-000                |                                  |                                | 225-0000-008                   |                     |                       |                             |
|                                                                               | 349-0016-000          | 349-0000-001                |                           | 349-1087-004          | 225-0072-000                |                                  |                                |                                |                     |                       |                             |
|                                                                               | 349-1003-000          | 349-0000-301                |                           | 349-1087-007          | 225-0090-000                |                                  |                                |                                |                     |                       |                             |
| 349-1009-000                                                                  | 349-1088-001          |                             |                           | 225-1013-000          |                             |                                  |                                |                                |                     |                       |                             |
| For part numbers not listed, consult ITT for applicable customer-use drawing. |                       |                             |                           | 349-1088-002          |                             | 225-1014-000                     |                                |                                |                     |                       |                             |
|                                                                               |                       |                             |                           | 349-1149-000          |                             | 225-1015-000                     |                                |                                |                     |                       |                             |

For part numbers not listed, consult ITT for applicable customer-use drawing.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## Product Overview

High Performance 83733-Style  
Temperature Ranges of -65 °C to +200 °C  
Environmental Resistant



The Cannon DPK series are high-performance environment-resistant, rectangular connectors are designed to be comparable to 83733-style interconnects. They feature crimp snap-in contacts in the dependable LITTLE CAESAR rear-release contact retention assembly. This field-proven assembly allows contacts to be inserted and extracted from the rear of the connector. Contacts are qualified to military specifications and are crimped using MIL-C-22520 crimp tools, using standard locators.

The versatile DPK Connector is suitable for many applications, particularly where environment or thermal protection is mandatory and high reliability is a requirement.

These high-performance connectors are available in two shell sizes with a variety of mounting configurations. Thirteen contact arrangements are available accommodating from 18 to 185 standard contacts. Standard contact sizes include 12, 16, 20, and 22D. Shells are made of die-cast aluminum alloy with an electroless nickel finish. Insulators are manufactured from high-grade, glass-reinforced resin conforming to MIL-M-14, and are engineered to be comparable to 83733-style components. Silicone rubber is used for wire sealing grommets, interfacial, and peripheral seals.

## Performance and Material Specifications

| Description        | Material                                  | Finish                                            |
|--------------------|-------------------------------------------|---------------------------------------------------|
| Shell              | Diecast aluminum alloy A-380 per QQ-A-591 | Electroless nickel plate per MIL-C-26074, Class 3 |
| Insulator          | Thermoplastic or Thermosetting Plastic    | N/A                                               |
| Contacts           | Copper alloy per QQ-C-533                 | Gold over suitable underplate per AS39029         |
| Grommets and Seals | Silicone base elastomer                   | N/A                                               |
| Mounting Hardware  | Stainless steel/Alloy steel               | Passivate/Cadmium plate                           |

## Mechanical Features

| Description          | Material                                                    |
|----------------------|-------------------------------------------------------------|
| Shell Sizes          | A (DPKA); B (DPKB)                                          |
| Coupling             | Friction, spring mount or jackscrew-coupling nut            |
| Contact Arrangements | A-18,32,51,G131<br>B-48,64,78,101,59W7,71,71C15,161<br>G185 |
| Contact Termination  | Crimp                                                       |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## Product Overview (continued)

### Electrical Performance

| Number of contacts: 18 thru 185 |                          | Sealing Range Wire Diameter |            | Contacts Size | Amperage |
|---------------------------------|--------------------------|-----------------------------|------------|---------------|----------|
| Contact Sizes                   | Wire Accommodation (AWG) | Min.                        | Max.       |               |          |
| 22D                             | 22,24,26                 | .030(0.76)                  | .060(1.52) | #12           | 23       |
| 20                              | 20,22,24                 | .040(1.02)                  | .083(2.11) | #16           | 13       |
| 16                              | 16,18                    | .063(1.60)                  | .103(2.62) | #20           | 7.5      |
| 12                              | 12,14                    | .081(2.06)                  | .158(4.01) | #22           | 5        |
| 12 Shielded                     | RG-179/U                 | .081(2.06)                  | .158(4.01) |               |          |

Max. current carrying capacity of contacts

| Altitude (feet) | Equivalent Pressure (Tor) | Service Ratings (M&I) |      |         |      |                         |
|-----------------|---------------------------|-----------------------|------|---------|------|-------------------------|
|                 |                           | Mated                 |      | Unmated |      | Unmated 161 Arrangement |
|                 |                           | M                     | I    | M       | I    |                         |
| Sea level       | -                         | 1300                  | 1800 | 1300    | 1800 | 1000                    |
| 50,000          | 87.5                      | 800                   | 1000 | 550     | 600  | 350                     |
| 70,000          | 35.5                      | 800                   | 1000 | 350     | 400  | 250                     |
| 110,000         | 5.74                      | 800                   | 1000 | 200     | 200  | 150                     |

Test Voltages (AC-RMS)

# DPK (83733-Style)

## How to Order

| Product                                        |              |                                                                                                                                                   | DPK (83733-Style) |   |   |   |   |     |   |   |   |   |    |
|------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---|---|---|---|-----|---|---|---|---|----|
|                                                |              |                                                                                                                                                   | DPK               | R | A | - | G | 131 | P | * | G | - | 7  |
|                                                |              |                                                                                                                                                   | DPK               | R | B | - | G | 185 | S | * | K | - | SE |
| RoHS Version:                                  | R -          | RoHS Compliant<br>Finish: Nickel                                                                                                                  |                   |   |   |   |   |     |   |   |   |   |    |
| Shell Style:                                   | A -          | Small Shell                                                                                                                                       |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | B -          | Large Shell                                                                                                                                       |                   |   |   |   |   |     |   |   |   |   |    |
| Contact Modification:                          | G -          | 38999 Style contacts. Size 22D for DPKA-131 and DPKB-185 contact arrangements only                                                                |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | W -          | 38999 Style contacts. Size 22D wrap posts for DPKA-131 and DPKB-185 layouts. .025 (0.63) square posts for .340(8.64); extension from grommet face |                   |   |   |   |   |     |   |   |   |   |    |
| Contact Arrangement:                           | Shell Size A | 18, 32, 51 and 131 (MIL-STD-1531)                                                                                                                 |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | Shell Size B | 8, 64, 78, 101 59W7, 71, 71C15, 161 and 185 (MIL-STD-1532)                                                                                        |                   |   |   |   |   |     |   |   |   |   |    |
| Contact Type:                                  | P -          | Pin (Receptacle Connectors)                                                                                                                       |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | S -          | Socket (Plug Connectors)                                                                                                                          |                   |   |   |   |   |     |   |   |   |   |    |
| Polarization (applicable to Mounting style A): | * -          | Six-position shell polarization accomplished with Polarizing pins mounted on each end of shell flange. Available on mounting style A only         |                   |   |   |   |   |     |   |   |   |   |    |
| Connector Mounting Style Connector:            | A -          | Two mounting holes .197(5.00) diameter (for either nuts or jackscrews ordered separately) and two polarizing posts. (Replaces Mounting Style B)   |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | C -          | Four MS24700-2 bushings, included for the receptacle                                                                                              |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | F -          | Four (4) clinch nuts (No. 6-32 thread)                                                                                                            |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | G -          | Four .281(7.14) diameter holes (for MS24700-2 bushings or 231-0019-000 spring mounts)                                                             |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | H -          | Two mounting hole flange. Two (231-0019-000) spring mounts on the plug and two MS24700-2 bushing mounts on the receptacle                         |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | K -          | Four captivated, non-rotating spring mounts an the plug                                                                                           |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | M -          | Two mounting hole flange. Two mounting holes .281(7.14) diameter (for MS24700-2 bushings or 231-0019-000 spring mounts)                           |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | X -          | Two guide pins with two (231-0019-000) spring mounts on the plug and two guide sockets with two .197(5.00) diameter holes on the receptacle       |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | Y -          | Two guide sockets with two (231-0019-000) spring mounts on the plug and two guide pins with .197(5.00) diameter holes on the receptacle           |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | Z -          | Two staggered clinch nuts on the receptacle (No. 6-32 thread)                                                                                     |                   |   |   |   |   |     |   |   |   |   |    |
| Connector Modification Code:                   | 7 -          | Standard product line, environment resistant                                                                                                      |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | SE -         | Solder PCB contacts installed .150" min (3.81mm) (Coax, Triax, and Quadrax does not have contacts installed)                                      |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | SF -         | Solder PCB contacts installed .250 min (6.35mm) (Coax, Triax, and Quadrax does not have contacts installed)                                       |                   |   |   |   |   |     |   |   |   |   |    |
|                                                | SG -         | Solder PCB contacts installed .375 min (9.53 mm) (Coax, Triax, and Quadrax does not have contacts installed)                                      |                   |   |   |   |   |     |   |   |   |   |    |

NOTE: DPK Series connectors are only offered with contacts at this time.

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## How to Order (continued)

### Mounting Styles / Applications

DPK connectors for rectangular or staggered mounting are available in both two- and four-spring mount assemblies, or the same shelf style may be ordered to accommodate bushing assemblies. In the spring mount version, the spring-loaded mechanism will compensate for a panel space variation of up to .070(1.78) while ensuring electrical and environmental integrity.

DPK connectors are also available with polarizing posts, accommodations for jackscrews, and coupling nuts for cord-to-card and cord-to-panel applications. Another shelf style has two or four mounting holes fitted with captive clinch nuts. For mounting dimensions of the various mounting styles shown here, please refer to page 88.

|         |                                                                                                                                                                                                                                                                                                                         |         |                                                                                                                                                                                                                                                                                                    |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Style A | Mounting style A is designed for cord-to-panel and cord-to-cord applications. Connectors are supplied with two polarizing posts installed and provisions for installation of two jackscrew assemblies (P/N 305-0007-000) or two coupling nut assemblies (P/N 335-0002-000). Mounting style A replaces Mounting Style B. | Style K | Mounting style K is designed for rack-to-panel applications. Connectors are supplied with four captivated, non-rotating spring mounts on the plug.                                                                                                                                                 |
| Style C | Mounting style C is designed for cord-to-panel or rack-to-panel applications. Connectors are supplied with four MS24700-2 self-locking bushings (P/N 012-0515-000) on the receptacle and four spring mount assemblies (P/N 231-0019-000) on the plug.                                                                   | Style M | Mounting style M is designed for rack-to-panel applications. Connectors are supplied with two .281 (7.14) diameter holes which are staggered and will accommodate two MS24700-2 self-locking bushings (P/N 012-0515-000) or two spring mounts (P/N 231-0019-000).                                  |
| Style F | Mounting Style F is designed for rack-to-panel applications. Connectors are supplied with four captive clinch nuts installed.                                                                                                                                                                                           | Style X | Mounting style X is designed for rack-to-panel applications where positive alignment is required before connectors are mated. Plug has two guide pins (P/N 320-1070-000) and two spring mounts (MIL-STO-1533); receptacle has two guide sockets (P/N 320-1069-000) and two .197 (5.00) dia. holes. |
| Style G | Mounting style G is designed for rack-to-panel applications. Connectors are supplied with four .281(7.14) diameter holes which will accommodate either four MS24700-2 self-locking bushings (P/N 012-0515-000) or four spring mounts (P/N 231-0019-000).                                                                | Style Y | Mounting style Y is identical to mounting style X, except the guide sockets (P/N 320-1069-000) are on the plug and the guide pin (P/N 320-1070-000) and springs are on the receptacle.                                                                                                             |
| Style H | Mounting style H is designed for rack-to-panel applications. Connectors are supplied with two .281(7.14) diameter holes which are staggered. Two spring mounts (P/N 231-0019-000) are on the plug end two MS24700-2 self-locking bushings (P/N 012-0515-000) are on the receptacle.                                     | Style Z | Mounting style Z is designed for use in rack-to-panel applications. Connectors are supplied with two captive clinch nuts which are staggered.                                                                                                                                                      |

| 83733-Style Connector Type | DPK Mtg. Style | Mating 83733-Style Connector | DPK Mtg. Style |
|----------------------------|----------------|------------------------------|----------------|
| 83733-Style RECEPTACLE     | G              | PLUG                         | K              |
| 83733-Style PLUG           | X              | RECEPTACLE                   | X              |
| 83733-Style RECEPTACLE     | X              | PLUG                         | X              |
| 83733-Style PLUG           | K              | RECEPTACLE                   | G<br>C<br>F    |
| 83733-Style RECEPTACLE     | C              | PLUG                         | K              |
| 83733-Style RECEPTACLE     | F              | PLUG                         | K              |
| 83733-Style PLUG           | Y              | RECEPTACLE                   | Y              |
| 83733-Style RECEPTACLE     | Y              | PLUG                         | Y              |
| 83733-Style RECEPTACLE*    | M              | PLUG                         | H              |
| 83733-Style RECEPTACLE*    | H              | PLUG                         | H              |
| 83733-Style RECEPTACLE*    | Z              | PLUG                         | H              |
| 83733-Style RECEPTACLE     | H              | PLUG                         | M<br>H<br>Z    |

\* Not recommended for G131 and G185 layouts.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## Contact Arrangements

### DPKA Arrangements

|                   |                   |                   |                   |
|-------------------|-------------------|-------------------|-------------------|
|                   |                   |                   |                   |
| <b>18</b>         | <b>32</b>         | <b>51</b>         | <b>G131</b>       |
| <b>18 #12</b>     | <b>32 #16</b>     | <b>51 #20</b>     | <b>131 #22D</b>   |
| Service Rating: I | Service Rating: I | Service Rating: I | Service Rating: M |

### DPKB Arrangements

|                                |                                                                         |                                |
|--------------------------------|-------------------------------------------------------------------------|--------------------------------|
|                                |                                                                         |                                |
| <b>48</b>                      | <b>59W7*</b>                                                            | <b>64</b>                      |
| <b>30 #16</b><br><b>18 #12</b> | <b>52 #20</b><br><b>7 Coax</b>                                          | <b>64 #16</b>                  |
| Test Voltage: 1700 (Coax 1000) | Test Voltage: 1500 (Coax 1000)<br>Service Rating: I & 500 VDC (Coax)    | Service Rating: I              |
|                                |                                                                         |                                |
| <b>71</b>                      | <b>71C15</b>                                                            | <b>78</b>                      |
| <b>56 #20</b><br><b>15 #12</b> | <b>56 #20</b><br><b>15 #12 (Shielded)</b>                               | <b>38 #20</b><br><b>40 #16</b> |
| Service Rating: I              | Test Voltage: 1500 (Shielded 500)<br>Service Rating: I & 500 VDC (Coax) | Service Rating: I              |
|                                |                                                                         |                                |
| <b>101</b>                     | <b>161**</b>                                                            | <b>G185</b>                    |
| <b>101 #20</b>                 | <b>161 #22</b>                                                          | <b>185 #22D</b>                |
| Service Rating: I              | 1000 VDC                                                                | Service Rating: M              |

Face view of pin insert shown

\*The 59W7 Layout is sold less coaxial contacts, see page 89 for contact part numbers.

\*\*POS-A LINE DESIGN In the 161 contact arrangement, the entire pin contact is recessed in and individual cavity in the plug connector. The socket contact is exposed and extends from the connector receptacle face. (Pin insulator accepts socket contacts.)

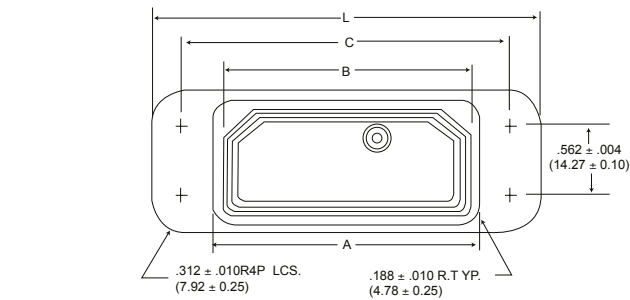
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

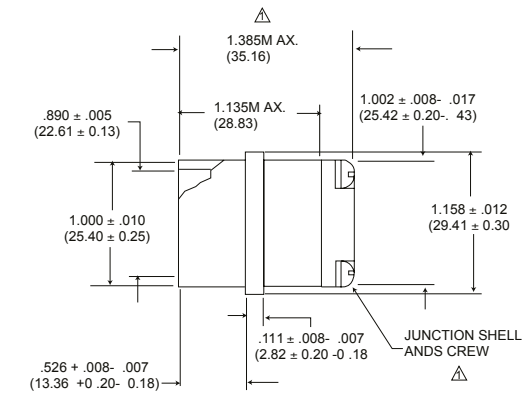
## Shell Dimensions

### Receptacle Configurations (Pin Contacts) - Basic Shell



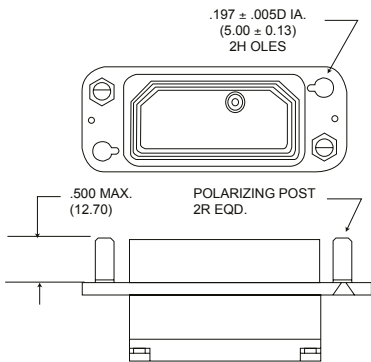
| Shell Size | A                              | B                              | C                              | L                                | N Staggered †                  |
|------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|--------------------------------|
| DPKA*P**   | 2.085 (52.96)<br>2.072 (52.63) | 1.976 (50.19)<br>1.961 (49.81) | 2.580 (65.58)<br>2.570 (65.38) | 3.030 (76.96)<br>3.000 (76.20)   | 2.150 (54.61)<br>2.130 (54.10) |
| DPKB*P**   | 3.385 (85.98)<br>3.372 (85.65) | 3.281 (83.34)<br>3.261 (82.83) | 3.880 (98.53)<br>3.870 (98.32) | 4.330 (109.98)<br>4.300 (109.22) | 3.450 (87.63)<br>3.430 (87.12) |

† See Page 85 Style M and Z

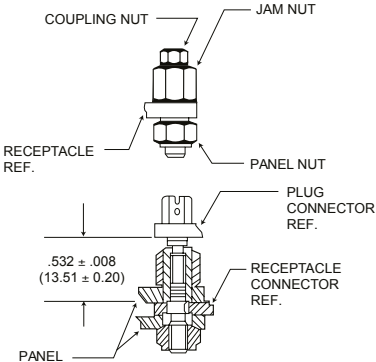


△ Junction shell and screws are not supplied on -G 131 and -G185 layouts.

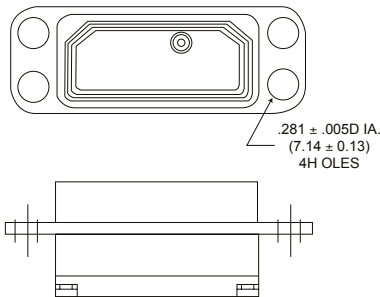
### Receptacle Configurations (Pin Contacts) - DPK Types



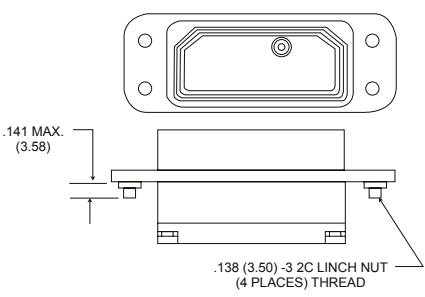
Mounting Style A



Mounting Dimensions for Coupling Nut Assemblies



Mounting Style G Standard Hole Mounting



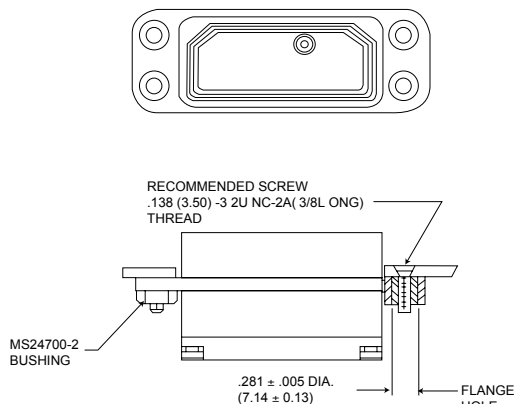
Mounting Style F Clinch Nut Mounting

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

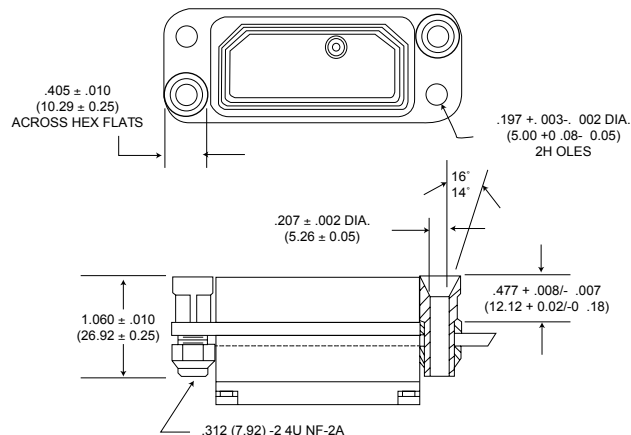
## Shell Dimensions (continued)

### Receptacle Configurations (Pin Contacts) - DPK Types

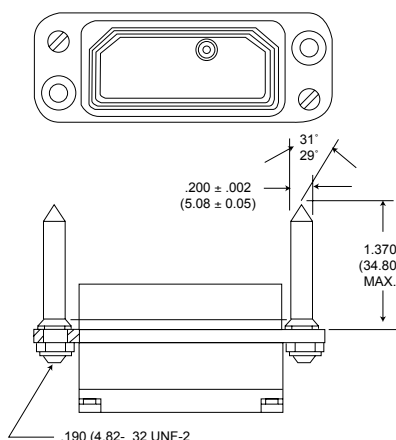


Mounting Style C Bushing Mounting

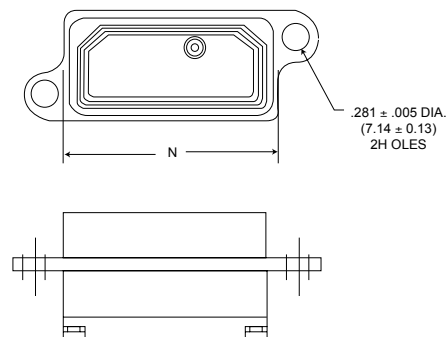
NOTES: Connectors are supplied with four MS24700-2 self-locking bushings (P/N 012-0515-000) on the receptacle and four spring mount assemblies (P/N 231-0019-000) on the plug.



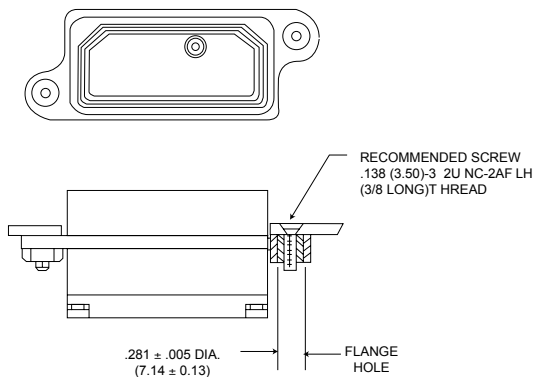
Mounting Style X With Guide Sockets



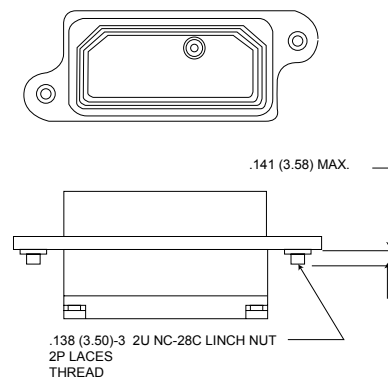
Mounting Style Y With Guide Pins



Mounting Style M Staggered Standard Hole Mounting



Mounting Style H Staggered Bushing Mounting



Mounting Style Z Staggered Clinch Nut Mounting

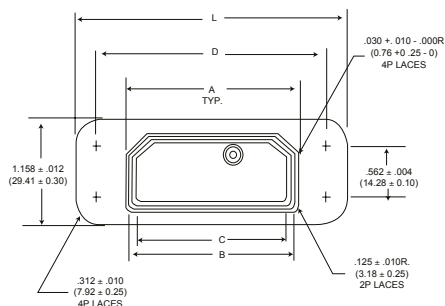
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

NOTES: Connectors are supplied with two captive clinch nuts which are staggered.

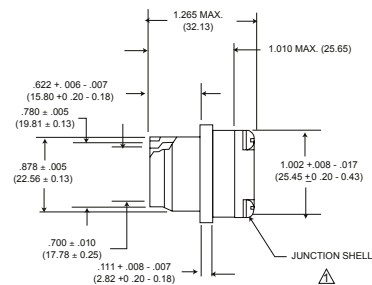
# DPK (83733-Style)

## Shell Dimensions (continued)

### Plug Configurations (Socket Contacts) - Basic Shell



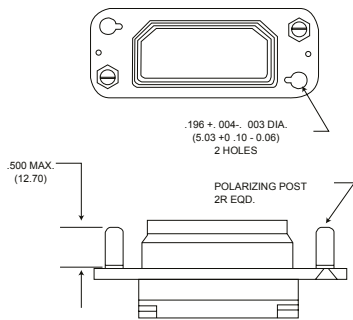
⚠ Junction shell and hardware are not supplied on -G131 and -G185 layouts.



| Shell Size | A             | B             | C             | D             | L              | N Staggered † |
|------------|---------------|---------------|---------------|---------------|----------------|---------------|
| DPKA*S**   | 1.959 (49.76) | 1.864 (47.35) | 1.780 (45.21) | 2.580 (65.53) | 3.030 (76.96)  | 2.150 (54.61) |
|            | 1.946 (49.43) | 1.853 (47.07) | 1.763 (44.78) | 2.570 (65.28) | 3.000 (76.20)  | 2.130 (54.10) |
| DPKB*S**   | 3.259 (82.78) | 3.164 (80.37) | 3.080 (78.23) | 3.880 (96.52) | 4.330 (109.98) | 3.450 (87.63) |
|            | 3.246 (82.45) | 3.153 (80.09) | 3.063 (77.80) | 3.870 (98.30) | 4.300 (109.22) | 3.430 (87.12) |

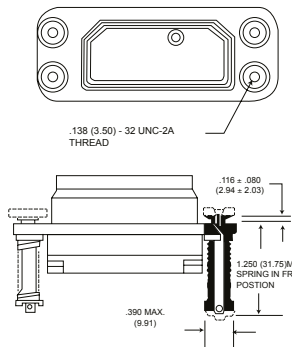
† See Page 87 Style M and H

### Plug Configurations (Socket Contacts) - DPK Types



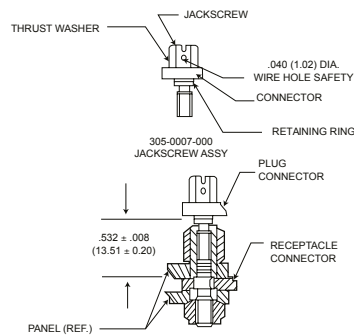
Mounting Style A

NOTES: Connectors are supplied with two polarizing posts installed and provisions for installation of two jackscrew assemblies (P/N 305-0007-000) or two coupling nut assemblies (P/N 335-0002-000). Mounting style A replaces Mounting Style B.



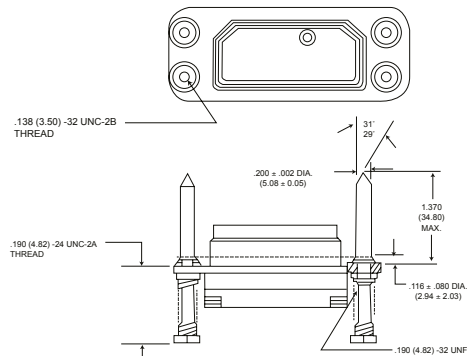
Mounting Style K With Captive Springs

- NOTES:
1. Springs are pre-loaded to 25 pounds each in free position.
  2. Spring forces will be 118 pounds minimum at .500 (12.70) panel spacing and 176 pounds maximum at .390 (9.91) panel spacing
  3. Connectors are supplied with four captivated, non-rotating spring mounts on the plug.



Mounting Spacing Dimensions For Jackscrew Assemblies

NOTES: Two jackscrew assemblies (P/N 305-0007-000) or two coupling nut assemblies (P/N 335-0002-000).



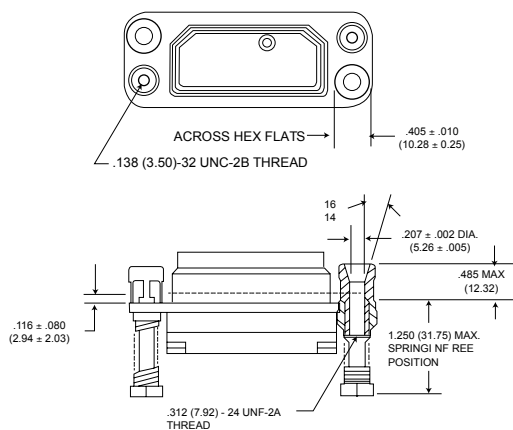
Mounting Style X With Guide Pins and Spring Mounting

- NOTES:
1. Springs are pre-loaded to 25 pounds each in free position.
  2. Spring forces will be 59 pounds minimum at .500 (12.70) panel spacing and 88 pounds maximum at .390 (9.91) panel spacing
  3. Mounting style X is designed for rack-to-panel applications where positive alignment is required before connectors are mated. Plug has two guide pins (P/N 320-1070-000) and two spring mounts (MIL-STO-1533); receptacle has two guide sockets (P/N 320-1069-000) and two .197 (5.00) dia. holes.

# DPK (83733-Style)

## Shell Dimensions (continued)

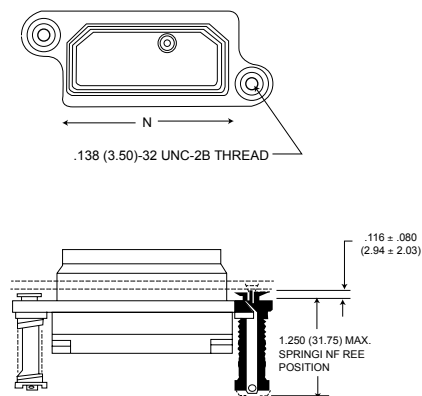
### Plug Configurations (Socket Contacts) - DPK Types



Mounting Style Y  
With Guide Sockets and Spring Mounting

NOTES:

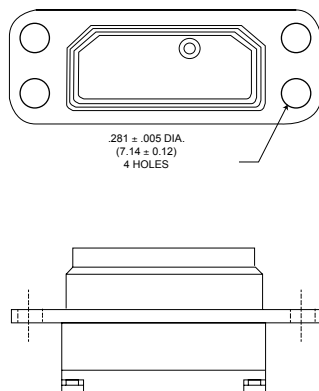
1. Springs are pre-loaded to 25 pounds each in free position.
2. Spring forces will be 59 pounds minimum at .500 (12.70) panel spacing and 88 pounds maximum at .390 (9.91) panel spacing.
3. Mounting style Y is identical to mounting style X, except the guide sockets (P/N 320-1069-000) are on the plug and the guide pin (P/N 320-1070-000) and springs are on the receptacle.



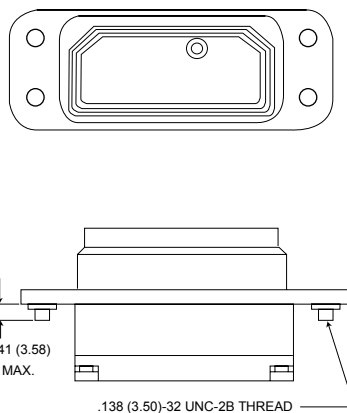
Mounting Style H  
Staggered Spring Mounting

NOTES:

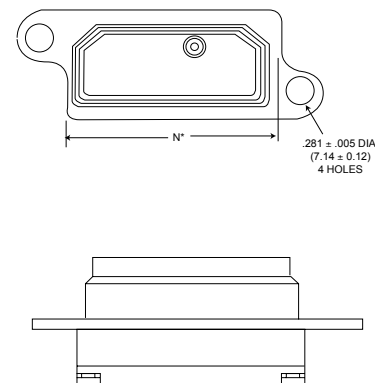
1. Springs are pre-loaded to 25 pounds each in free position.
2. Spring forces will be 59 pounds minimum at .500 (12.70) panel spacing and 88 pounds maximum at .390 (9.91) panel spacing.
3. This configuration must not be used on the 131 or 185 contact layouts. Connectors are supplied with two .281(7.14) diameter holes which are staggered. Two spring mounts (P/N 231-0019-000) are on the plug end two MS24700-2 self-locking bushings (P/N 012-0515-000) are on the receptacle.



Mounting Style G  
Standard Hole Mounting



Mounting Style F  
Standard Hole Mounting



Mounting Style M  
Mounting

NOTES:

Connectors are supplied with two .281 (7.14) diameter holes which are staggered and will accommodate two MS24700-2 self-locking bushings (P/N 012-0515-000) or two spring mounts (P/N 231-0019-000)

NOTES:

Connectors are supplied with four captive clinch nuts installed.

NOTES:

Connectors are supplied with two .281 (7.14) diameter holes which are staggered and will accommodate two MS24700-2 self-locking bushings (P/N 012-0515-000) or two spring mounts (P/N 231-0019-000)

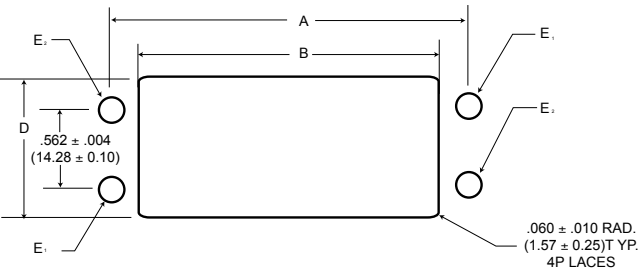
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## Shell Dimensions (continued)

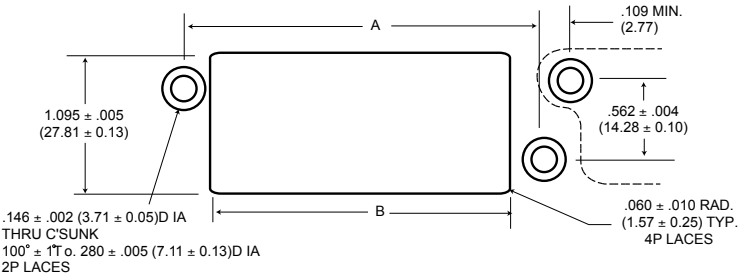
### Panel Cutout Dimensions

Figure 1.



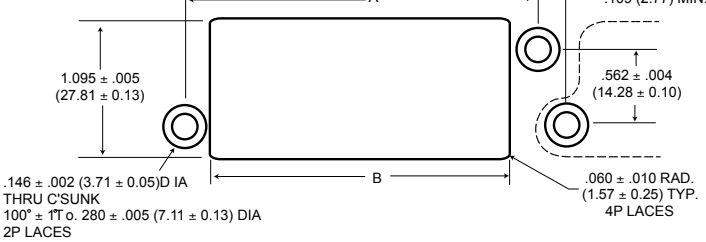
Mounting Styles  
PG, SG, SY, PY, PC, PF, SF, S\*A, S\*B, SX, PX, SK, P\*A, P\*B

Figure 2.



Mounting Styles  
SH, SM

Figure 3.



Mounting Styles  
PM, PH, PZ

| DPK<br>Mounting Styles | Figure<br>Ref. | A<br>± .004(± 0.10) |                  | B<br>± .005(± 0.13) |                  | D<br>± .005(± 0.13) |                  | E <sub>1</sub>               |                              | E <sub>2</sub>               |                              |
|------------------------|----------------|---------------------|------------------|---------------------|------------------|---------------------|------------------|------------------------------|------------------------------|------------------------------|------------------------------|
|                        |                | Shell<br>Size A     | Shell<br>Size B  | Shell<br>Size A     | Shell<br>Size B  | Shell<br>Size A     | Shell<br>Size B  | Shell<br>Size A              | Shell<br>Size B              | Shell<br>Size A              | Shell<br>Size B              |
| PG, SG,<br>PC, PF,SF   | 1              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.103<br>(51.13)    | 3.400<br>(86.36) | 1.022<br>(25.96)    | 1.022<br>(25.96) | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   |
| SX                     | 1              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.103<br>(51.13)    | 3.465<br>(88.01) | 1.022<br>(25.96)    | 1.095<br>(27.81) | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   | .430 (10.92)<br>.420 (10.67) | .430 (10.92)<br>.420 (10.67) |
| PX                     | 1              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.103<br>(51.13)    | 3.465<br>(88.01) | 1.022<br>(25.96)    | 1.095<br>(27.81) | .320 (8.13)<br>.315 (8.00)   | .320 (8.13)<br>.315 (8.00)   | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   |
| SK                     | 1              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.167<br>(55.04)    | 3.465<br>(88.01) | 1.095<br>(27.81)    | 1.095<br>(27.81) | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   |
| SY                     | 1              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.167<br>(55.04)    | 3.465<br>(88.01) | 1.095<br>(27.81)    | 1.095<br>(27.81) | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   | .430 (10.92)<br>.420 (10.67) | .430 (10.92)<br>.420 (10.67) |
| PY                     | 1              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.167<br>(55.04)    | 3.465<br>(88.01) | 1.095<br>(27.81)    | 1.095<br>(27.81) | .430 (10.92)<br>.420 (10.67) | .430 (10.92)<br>.420 (10.67) | .148 (3.76)<br>.144 (3.66)   | .148 (3.76)<br>.144 (3.66)   |
| PM, PH, PZ             | 2              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.167<br>(55.04)    | 3.465<br>(88.01) | 1.095<br>(27.81)    | 1.022<br>(25.96) | -                            | -                            | -                            | -                            |
| SH, SM                 | 3              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.095<br>(53.21)    | 3.400<br>(86.36) | 1.095<br>(27.81)    | 1.095<br>(27.81) | -                            | -                            | -                            | -                            |
| S*A, S*B,<br>P*A, P*B  | 1              | 2.578<br>(65.48)    | 3.875<br>(98.43) | 2.103<br>(51.13)    | 3.465<br>(88.01) | 1.022<br>(25.96)    | 1.095<br>(27.81) | .301 (7.65)<br>.294 (7.45)   | .301 (7.65)<br>.294 (7.45)   | .301 (7.65)<br>.294 (7.45)   | .301 (7.65)<br>.294 (7.45)   |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

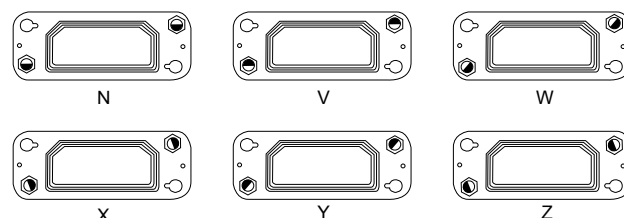
## Polarization

### Polarization (Mounting Style A only)

#### Polarizing Post Alternate Positions

Pin inserts polarizing positions are 180 opposite socket insert polarizing positions. Shaded areas indicate extended portion of the polarizing post. Cord to panel DPK connectors are available in 35 alternate polarizing positions by changing indexing of the polarizing posts. Keystone corners and hexagonal posts provide this wide range of alternate positions.

Face view of socket insert plug connector engaging end.



### Standard Contact Data

| Contact Size | Type   | Cannon Part Number | Crimp Tool Part Number                                                            | Insertion/Extraction Tool | Grommet Sealing Plug Part Number |
|--------------|--------|--------------------|-----------------------------------------------------------------------------------|---------------------------|----------------------------------|
| 22D          | Pin    | 030-2042-000       | M22520/2-01 with<br>M22520/2-06 (Socket)<br>Turret<br>M22520/2-09 (Pin)<br>Turret | MIL-I-81969/14-01         | 225-1013-000                     |
|              | Socket | 031-1147-000       |                                                                                   |                           |                                  |
| 22           | Pin    | 030-1975-008       | M22520/2-01 with<br>M22520/2-23<br>Turret<br>MS-3191-3                            | MIL-I-81969/14-11         | 225-0070-000                     |
|              | Socket | 031-1113-008       |                                                                                   |                           |                                  |
| 20           | Pin    | 030-9173-006       | M22520/2-01 with<br>M22520/2-02<br>Turret                                         | MIL-I-81969/14-03         | 225-0071-000                     |
|              | Socket | 031-9174-004       |                                                                                   |                           |                                  |
| 16           | Pin    | 030-9205-007       | M22520/1-01 with<br>M22520/1-02<br>Turret                                         | MIL-I-81969/14-04         | 225-0072-000                     |
|              | Socket | 031-9206-006       |                                                                                   |                           |                                  |
| 12           | Pin    | 030-9185-003       | M22520/1-01 with<br>M22520/1-02<br>Turret                                         | MIL-I-81969/14-04         | 225-0072-000                     |
|              | Socket | 031-9186-003       |                                                                                   |                           |                                  |

### Coaxial/Shielded Contact Data

| Coaxial                                       | Type            | Prefix | Cannon Part Number           | Cable Accom. | DWV Voltage | Min./Max. O.D. Wire Accom. | Crimp Tool                                | Ins./Ext. Tool | Grommet Sealing Plug Part Number |
|-----------------------------------------------|-----------------|--------|------------------------------|--------------|-------------|----------------------------|-------------------------------------------|----------------|----------------------------------|
| Coaxial Contacts*<br>59W7<br>Arrangement Only | Plug Receptacle | G<br>G | 249-5500-012<br>249-5500-013 | RG-316       | 500 VDC     | .122 (3.10)<br>.250 (6.35) | CCTC8 Outer<br>M22520/2-01<br>M22520/2-30 | CIET-C8        | 225-0085-00                      |
|                                               | Plug Receptacle | F<br>F | 249-5500-010<br>249-5500-011 | RG-180/U     |             | .122/250                   | CCTC9 Outer<br>M22520/2-01<br>M22520/2-30 |                |                                  |

\*Plug coaxials go into plug connectors (59W7S inserts with socket contacts). Receptacle coaxials go into receptacle connectors ("P" inserts) with pin contacts (59W7P inserts with pin contacts).

| Coaxial                                 | Type*  | Cannon Part Number | Cable Accom. | Min./Max Cable Dia. | Crimp Tool                             | Locator                                | Ins./Ext. Tool | Grommet Sealing Plug Part Number |
|-----------------------------------------|--------|--------------------|--------------|---------------------|----------------------------------------|----------------------------------------|----------------|----------------------------------|
| Size 12 Contact<br>71C15<br>Layout Only | Pin    | 249-1825-001       | RG-179U      | .081 (2.06)         | M22520/5-01 Outer<br>M22520/2-01 Inner | M22520/5-08 Outer<br>M22520/2-30 Inner | CIET - 12      | 225-0072-000                     |
|                                         | Socket | 249-1826-000       |              | .158 (4.01)         |                                        |                                        |                |                                  |

\*Pin shielded contacts utilized in receptacle connectors (71C15P inserts). Socket shielded contacts utilized in plug connectors (71C15S inserts).

Dimensions shown in inches (mm)

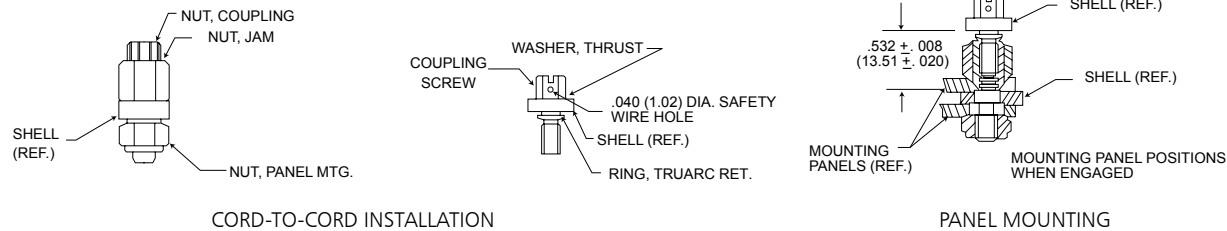
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## Assembly

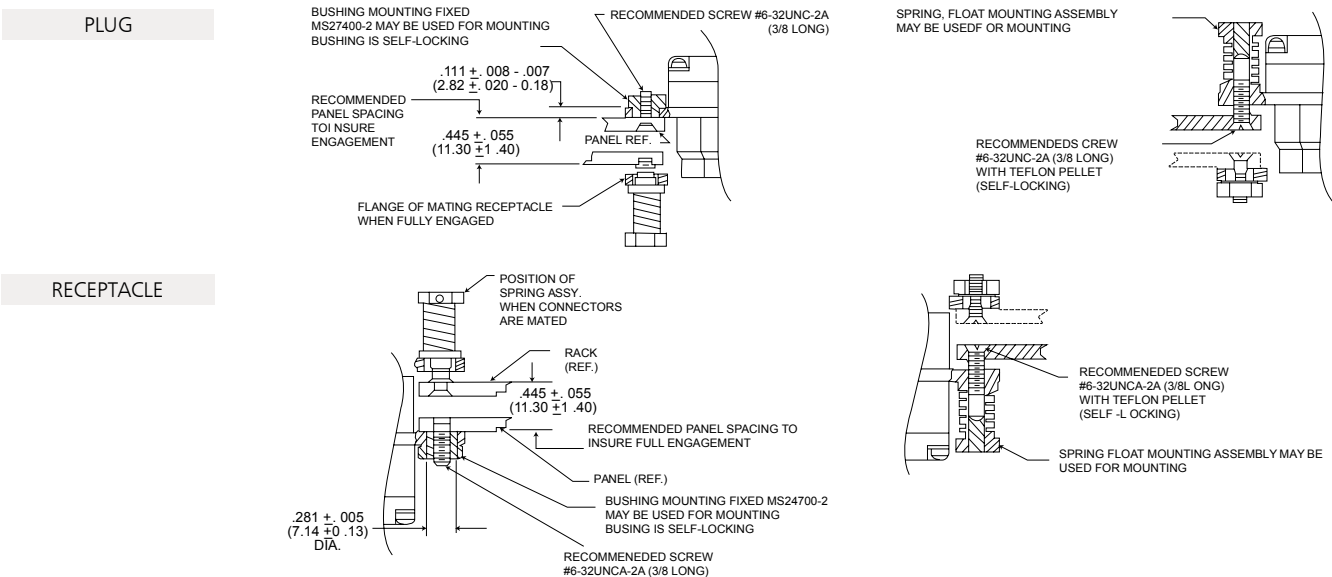
### Mounting Assembly – Jackscrew/Coupling Nut

Installation of jackscrew and coupling nuts in mounting style A and B.



### Mounting Assembly – Bushing/Spring Mount

Installation of mounting styles utilizing bushing and spring mount assemblies.



### Mating Forces

The axial forces required to fully mate or separated the plug and receptacle shall not exceed the values listed.  
Mating force at .390 (9.91) minimum spacing

| Shell Size | Without mounting accessories | Spring Mounting |        |
|------------|------------------------------|-----------------|--------|
|            |                              | Maximum         | Normal |
| A          | 70 max.                      | 176             | 145    |
| B          | 95 max.                      | 176             | 150    |

For connectors using spring mounting, the mating forces become a function of the spring loading. Values listed apply to connectors mounted as specified above at minimum panel spacing.

### Dust Covers

| Series | Style      |         | Standard     | Conductive   |
|--------|------------|---------|--------------|--------------|
| DPKA   | Receptacle | DPKA-60 | 025-0773-000 | 025-0773-001 |
|        | Plug       | DPKA-59 | 025-0772-000 | 025-0772-001 |
| DPKB   | Receptacle | DKPB-60 | 025-0774-000 | 025-0774-001 |
|        | Plug       | DKPB-59 | 025-0758-000 | 025-1195-000 |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

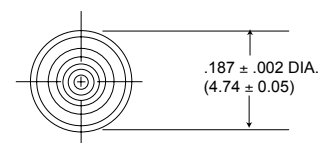
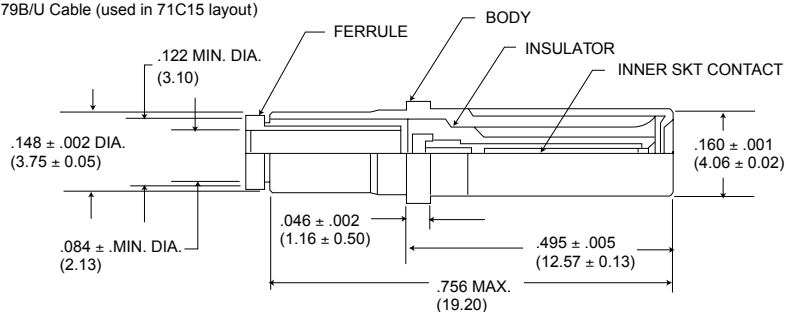
## Assembly (continued)

### Assembly/Shielded Contacts

#### Socket

249-1826-000

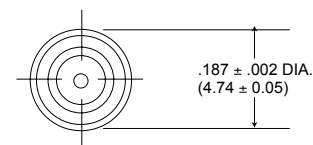
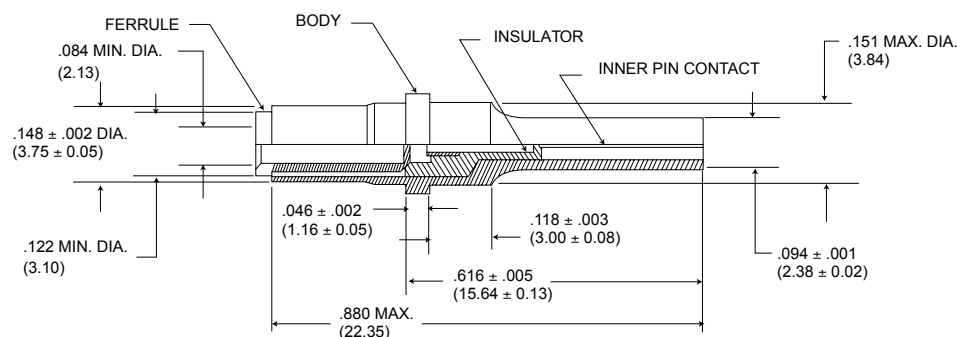
Size 12/RG-179B/U Cable (used in 71C15 layout)



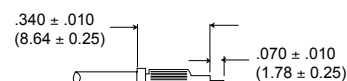
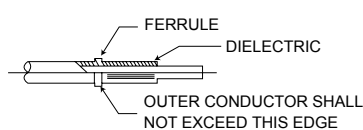
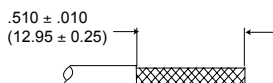
#### Pin

249-1825-001

Size 12/RG-179B/U Cable (used in 71C15 layout)



### Assembly/Shielded Contacts



#### Step 1.

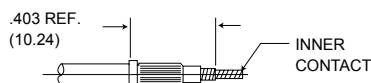
Strip outer jacket to dimensions shown to expose outer conductor.

#### Step 2.

Slip (or install) ferrule over outer conductor against cable jacket. Exposed portion of the outer conductor must be combed out then folded back over ferrule.

#### Step 3.

Trim cable to dimensions, as shown. (Ferrule must butt against cable jacket).



#### Step 4.

Install inner contact against dielectric then crimp contact and center conductor with M22520/2-01 crimp tool using a M22520/2-30 locator.

#### Step 5.

Insert cable, ferrule and inner contact to rear of shell and crimp into place with M22520/5-03 crimp tool.

Dimensions shown in inches (mm)

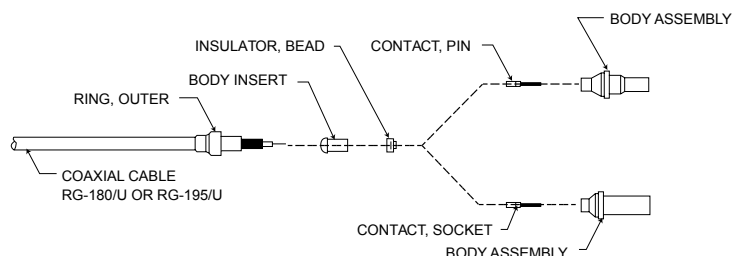
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## Assembly (continued)

### Coaxial Contact/Assembly

249-5500-010 Socket\*  
249-5500-011 PIN\*



#### Step 1.

Slide outer ring over cable as shown (Figure 1).

#### Step 2.

Strip cable as shown (Figure 1).

#### Step 3.

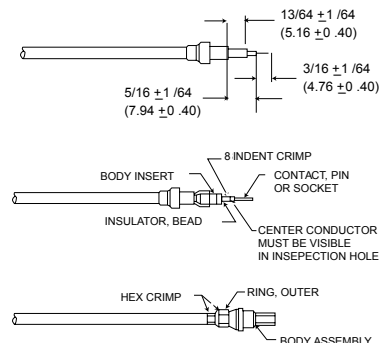
Install body insert, insulator bead, and contact on cable as shown (Figure 2.)

#### Step 4.

With body insert, insulator bead, and contact firmly in place, crimp the contact with tool M22520/2-01 (setting number 3) and locator M22520/2-30 (Figure 2). Caution: The assembled components must be tightly in place after crimping.

#### Step 5.

Slide body assembly over components and under shield until firmly bottomed in place. Locate outer ring over shield and against body as shown (Figure 3).



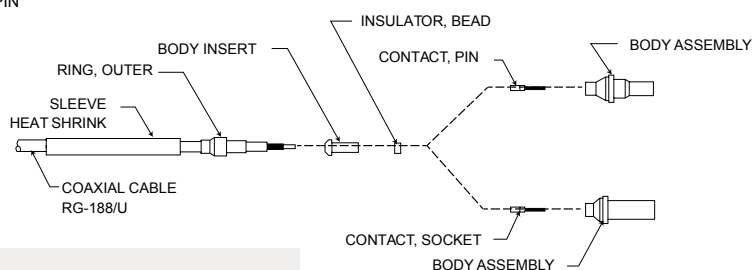
#### Step 6.

With cable and body assembly securely held together, hex crimp the outer ring with tool CCT-C9 (Figure 3). Important: For optimum hex crimp, firmly bottom the outer ring against the shoulder of the hex die before compressing the handles.

#### NOTES:

- These assembly instructions apply to 249-5500-010, and 249-5500-011.
- The following assembly tools are required: a) CCT-C9 hex crimp tool b) MS3198-Q W/L-3198-C1 contact crimp tool and locator c) 149°C(300°F) hot air gun (recommended: Regal heat Gun No. 9A) d) Blades, scissors, and picks.

249-5500-012 Socket\*  
249-5500-013 PIN\*



#### Step 1.

Slide heat-shrink sleeve and outer ring over cable as shown.

#### Step 2.

Strip cable as shown (Figure 1). Caution: Do not nick shield wires.

#### Step 3.

Install body insert, insulator bead, and contact on cable as shown.

#### Step 4.

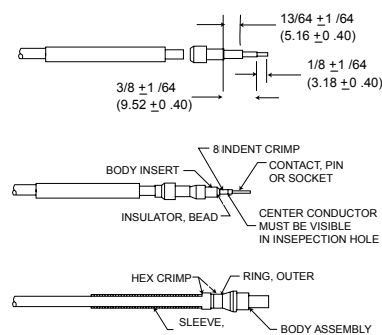
With body insert, insulator bead, and contact firmly in place, crimp the contact with tool M22520/2-01, using setting number 3 and locator M22520/2-30 (Figure 2). Caution: The assembled components must be tightly in place after crimping.

#### Step 5.

Slide body assembly over components and under shield until firmly bottomed in place. Locate outer ring over shield and against body as shown (Figure 3).

#### Step 6.

With cable and body assembly securely held together, hex crimp the outer ring with tool CCT-C9 (Figure 3). Important: For optimum hex crimp, firmly bottom the outer ring against the shoulder of the hex die before compressing the handles.



#### Step 7.

The final step is to shrink the heat sleeve in place with a hot air source of 149°C to 327°C (300°F to 621°F) (Figure 3).

#### NOTES:

- These assembly instructions apply to 249-5500-010, and 249-5500-011.
- The following assembly tools are required: a) CCT-C9 hex crimp tool b) M22520/2-01 contact crimp tool and locator c) 149 C(300 F) hot air gun (recommended: Regal heat Gun No. 9A) d) Blades, scissors, and picks

\*These contacts are used in the G59C7 layout.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

## DPK (83733-Style)

### Additional Product Overview

## DPK Test Data

The following presents the certified capabilities of Cannon's high-performance rectangular DPK Rack and Panel series connectors in relation to the critical performance and design requirements of 83733-style connectors. The data provided is a summary of qualification test results, extracted from the original reports on file at the ITT Cannon Test Laboratory.

The successful completion of these tests clearly demonstrates that the DPK series connectors and contacts meet or exceed the performance requirements of 83733-style connectors.

The DPK connectors listed below represent the description and identification of the test specimens used in the qualification sequence.

|                             |                            |
|-----------------------------|----------------------------|
| DPKA-G-131PC-7 (Receptacle) | DPKB-G185PC-7 (Receptacle) |
| DPKA-G131SK-7 (Plug)        | DPKA-G185SK-7 (Plug)       |

Table I below lists the conducted tests performed in accordance with the applicable test procedures. Table II provides the corresponding test levels, parameter limits, and measured values.

### Table I (Test Performed)

| Test Description                 | Test Description                     | Test Description             | Test Description                   |
|----------------------------------|--------------------------------------|------------------------------|------------------------------------|
| Examination Of Product           | Contact Separating Forces            | Low Level Contact Resistance | Moisture Resistance                |
| visual Examination               | Connector Mating and Unmating Forces | Thermal Shock                | Altitude Immersion                 |
| Sample Preparation               | Contact Retention                    | Crimp Potential Drop         | Insert Retention                   |
| Insulation Resistance - 25°C     | Endurance                            | Vibration (Random)           | Corrosion                          |
| Withstanding Voltage - Sea Level | Gold Plating Porosity                | Physical Shock               | Analyses                           |
| Withstanding Voltage - Altitude  | Temperature Life                     | Ozone Exposure               | Service and Storage Life           |
| Contact Resistance               | Insulation Resistance - 200°C        | Fluid Immersion              | Gases and Toxic or Corrosive Fumes |

Table II

| Test or Environment                                           | Test Level or Special Requirements                                                                                                                                                                                                                                  | Parameters Limits                                                                                                                              | Measured Values or Comments                                                                                                                                                                                                                                                                                                                              |  |  |  |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| EXAMINATION OF PRODUCT                                        | Assure compliance with:<br>a) Applicable detail specifications and control drawings<br>b) Materials<br>c) Design and construction<br>d) Dimensional<br>e) Finish<br>f ) Product identification<br>g) Workmanship                                                    | Compliance to applicable detail specification and control drawings.                                                                            | Product submitted accompanied by Q.A.certificates of compliance. Complied with the applicable acceptance requirements for qualification testing.                                                                                                                                                                                                         |  |  |  |
| VISUAL EXAMINATION                                            | Visual examination of qualification test specimens for completeness, workmanship, identification and /or other detrimental conditions.                                                                                                                              | Visual examination acceptance.                                                                                                                 | No visible detection of any condition detrimental to normal function.                                                                                                                                                                                                                                                                                    |  |  |  |
| SAMPLE PREPARATION                                            | MIL-W-16878/4A, 28 AWG (min. dia.) and 22 AWG (max. dia.) wire.Daniels WA22A crimping tool. M22520/2-06 and M22520/2-09 contact positioner for resp.22D size socket and pin. MS7495A22M insertion and MS27495R22M removal tool.                                     | Assemblies to conform with specified wiring and termination requirements.                                                                      | Qualification test specimens prepared and terminated in accordance with specified wiring requirements. No difficulties encountered during wiring operation.                                                                                                                                                                                              |  |  |  |
| INSULATION RESISTANCE<br>[25 C (77 F)]                        | Unmated condition. 50% of contact complement measured. Between adjacent contact pairs and each contact and connector shell.                                                                                                                                         | 5.1 Gigohms minimum at 500 Vdc. Electrification Time 120 secs. maximum.                                                                        | Insul. res. range (ohms) (25 C) DPKA<br>Adj. Cont. Cont./Shell<br>300G-1.0T 1.1T-1.8T<br>DPKB<br>400G-1.6T 1.1T-20T<br>(Ganged parallel test circuits)                                                                                                                                                                                                   |  |  |  |
| DIELECTRIC WITHSTANDING VOLTAGE (SEA LEVEL)                   | Mated condition. 50% of contact complement measured. Test voltage 1350 Vac/rms-60hz, applied between adjacent contact pairs and each contact and connector shell.                                                                                                   | No electrical breakdown, flashover or excessive current leakage.Electrification time 2 secs. minimum.                                          | No evidence of breakdown or flashover Leakage <.5mA. (Ganged Parallel test circuits)                                                                                                                                                                                                                                                                     |  |  |  |
| SALT SPRAY (CORROSION)                                        | Method 101, test condition B. (48 hours) unmated. Salt solution 5% by weight. S.G. 1.026 to 1.040 at 22.8°C-23.9°C (73°F-75°F). Solution pH6.5 to 7.2 and chamber temp 33.9°C to 36.1°C (93°F to 97°F).                                                             | Visual examination. No degradation of normal connector functions.                                                                              | No detrimental corrosive attack on connector's surface finish or contacts.                                                                                                                                                                                                                                                                               |  |  |  |
| CONTACT RESISTANCE<br>[AT 25 C AND 200 C<br>(77 F AND 392 F)] | Mated condition 20% of contact complement tested. Test circuit per Fig. 2 measured across points YY performed at 25°C and 200°C (77°F and 392°F).<br>Contact/ Wire size      Test Current Adc<br>22D/28                      1.5<br>22D/22                      5.0 | Max. Voltage Drop (MV)<br>Wire Size    25 C (77°F)    200 C (392°F)<br>28              8              19<br>22              14              25 | MV-Drop Range. (25°C)<br>Wire Size      Adc              Range (mV)              Avg (mV)<br>28              1.5              2.3-5.2              3.8<br>22              5.0              6.3-10              8.2<br><br>(200°C)<br>28              1.5              9-17              11.8<br>22              5.0              16-21              17.8 |  |  |  |
| CONTACT SEPARATING FORCES                                     | 100% of socket contact complement measured. Separating force measured on steel test pin .0294 +.0001 (0.747 +0.002) dia. insertion depth .205 (5.21) min. from insert face.                                                                                         | Separating Force (ounce-force)<br>Min.      Max.<br>0.6      4.9                                                                               | Separating force range (ounce-force)<br>DPKA Sep. Force      Avg. Force<br>1.3-4.1      2.4<br>DPKB<br>1.0-2.9      2.0                                                                                                                                                                                                                                  |  |  |  |
| CONNECTOR MATING AND UNMATING FORCES                          | Mating dept. ,390 (9.91) panel spacing. Total of 10 cycles mating and unmatings. Forces measured on 10th cycle.                                                                                                                                                     | Axial mating and unmating forces 175 pounds-force maximum.                                                                                     | Mating/Unmating Force (pound-force)<br>Mate      Unmated<br>DPKA      45      34<br>DPKB      150      72<br>Forces obtained on 10th cycle                                                                                                                                                                                                               |  |  |  |
| CONTACT RETENTION                                             | Unmated. 50% of contacts measured. 10.0 lbf applied to contact engaging end. Zero reference at 2.0 lbf preload. Displacement measured under spec. load.                                                                                                             | Max. contact displacement under 10.0 lbf load .011 (0.28) maximum.                                                                             | Contact Displacement Range (inch)<br>DPKA<br>Pins      0.002-0.003      Avg. 0.0027<br>Sockets      0.002-0.004      0.0031<br>DPKB<br>Pins      0.002-0.004      0.0027<br>Sockets      0.002-0.003      0.0026                                                                                                                                         |  |  |  |
| ENDURANCE (DURABILITY)                                        | Mating dept. ,450 (11.43) panel spacing. Total of 500 cycles mating and unmating at a rate of 300 cycles/hour maximum.                                                                                                                                              | Withstand 500 cycles of durability conditioning without detrimental effects to function.                                                       | No detrimental damage. Connectors fully functional.                                                                                                                                                                                                                                                                                                      |  |  |  |

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## Additional Product Overview (continued)

Test Data - Table II (continued)

| Test or Environment                                 | Test Level or Special Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Parameters Limits                                                                                                                                             | Measured Values or Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| THERMAL SHOCK                                       | Mated condition. Five continuous cycles of temperature change. 30 mins. exposure at each temp. extreme constitutes one cycle. Transfer time between chambers 2 mins. max. temp. extremes: - 54 ± 3°C and 200 ± 3°C (-65 +_ 5.4°F and 392 ± 5.4°F).                                                                                                                                                                                                                                                                                                                                                         | Withstand temperature cycling. No damage.                                                                                                                     | No apparent damage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CRIMP POTENTIAL DROP                                | 20% of the contacts in each connector measured. Test circuit per Fig. 2 measured across points X-X and X'-X'.<br>Contact/Wire-size    Test Current (Adc)<br>22D/28                    1.5<br>22D/22                    5.0                                                                                                                                                                                                                                                                                                                                                                                 | Max. crimp potential drop:<br>Wire Size    M.V.<br>28              2.8<br>22              7.0                                                                 | Crimp mV drop range.<br>DPKA (sockets)<br>Adc            Range            Avg.<br>1.5            1.7-2.1           1.8<br>(Pins) 1.5           1.1-1.6           1.3<br>DPKB (Sockets)<br>Adc            Range            Avg.<br>5.0            1.8-2.4           2.1<br>(Pins) 5.0           1.4-1.8           1.5                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| DIELECTRIC WITHSTANDING VOLTAGE (ALTITUDE)          | Mated condition. 50% of contact complement measured. Performed at simulated altitude of 70,000 ft. (33.7 mm Hg pressure) Test voltage 825 Vac/rms-60 Hz, applied between adjacent contact pairs and each contact and connector shell.                                                                                                                                                                                                                                                                                                                                                                      | Same as at sea level conditions.                                                                                                                              | No evidence of breakdown or flashover. Leakage ≤.5mA. (Ganged Parallel test circuits)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| INSULATION RESISTANCE ELEVATED TEMP.[200°C (392°F)] | Unmated condition. 50% of contact complement measured. Test points identical to those measured at 25°C (77°F). Oven ambient controlled at 200°C (392°F). Stabilization period 30 minutes minimum.                                                                                                                                                                                                                                                                                                                                                                                                          | 204 Megohms minimum at 500 Vdc. Electrification time 120 secs. maximum,                                                                                       | Insul. Res. range (ohms) [200°C (392°F)]<br>DPKA<br>Adj. Cont.            Cont./Shell<br>1.4G-10G            2.4G-4.0G<br>DPKB<br>0.75G-10G           2.26G-5.0G<br>(Ganged parallel test circuits)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| VIBRATION (RANDOM)                                  | Method 214, Test condition II, Letter 'G'. Test level envelope per figure and table 214-2. Contact circuit series wired for current discontinuity monitoring. Eight hours duration in each of three mutually perpendicular axes. Connector mating depth .450 (11.43) panel spacing.                                                                                                                                                                                                                                                                                                                        | No current discontinuity ≥ 1.0 microsec. No cracking, breaking or loosening of connector parts.                                                               | Connectors met random vibration requirements. No electrical discontinuity detected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| PHYSICAL SHOCK                                      | Mated condition. .450 111.43) panel spacing. Shock pulse duration 11 ± 1mS, waveshape terminal peak sawtooth, peak amplitude 20g. Contact circuit series wired for current discontinuity monitoring. One shock pulse in each of three mutually perp. axes.                                                                                                                                                                                                                                                                                                                                                 | No current discontinuity ≥ 1.0 microsec. No cracking, breaking or loosening of connector parts.                                                               | Connectors met physical shock requirements. No electrical discontinuity or damage detected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| MOISTURE RESISTANCE                                 | Method 106, (Step 7b omitted) Mated condition. 10 days humidity and temperature cycling. At end Step 6 final cycle at 25°C (77°F) and 90-98% RH insulation resistance measured 100% between each and all other contacts and the shell in parallel circuit.                                                                                                                                                                                                                                                                                                                                                 | Insulation resistance at final humidity cycle 102 Megohms minimum at 50 Vdc.                                                                                  | Insul. Res. range (ohms ) final humidity cycle.<br>DPKA                    DPKB<br>1.66-500G            1.6-500G<br>Avg: 224G            Avg: 190G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| ALTITUDE IMMERSION                                  | Mated condition. Immersed in 5% salt solution by weight. Unsealed wire ends exposed to chamber atmosphere. Simulated test altitude 75,000 ft. (1.0 inch Hg). 30 mins. at altitude followed by 15 mins. at room ambient, Repeat for total of 3 cycles. Insul. res. and OWV measured 100% of contact complement at room ambient and submerged.                                                                                                                                                                                                                                                               | Insulation resistance 1.2 Gigohm minimum at 5 Vdc. DWV 1350 Vac/rms - 60 Hz, electrification time 60 secs. minimum. No breakdown, flashover or leakage ≤2 mA, | Final insul. Res ranges (ohms).<br>DPKA                    DPKB<br>1.5T-4.5T            0.7-3.5T<br>Avg. 1.9T            Avg: 1.3T<br>DWV - No evidence of breakdown or flashover Leakage ≤2 mA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| INSERT RETENTION                                    | Unmated. 46 1bf/in <sup>2</sup> . pressure lead applied to each inert face at 5 46 1bf/in <sup>2</sup> . maintained for 5 secs. min. at specified load.                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No insert dislocation from normal position in the connector shell.                                                                                            | No evidence of insert movement and/or dislocation from normal position.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| OZONE EXPOSURE                                      | Unmated. Ozone concentration 0.010 to 0.015 percent by volume. Exposure period 2 hours minimum at room temperature.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No deterioration.                                                                                                                                             | No evidence of ozone effects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| FLUID IMMERSION                                     | Fluid immersion rest fluids and procedures per Table 4:<br>Sample                    Test Fluid<br>No.                    4-1P/R            MIL-L-7808<br>4-2P/R            MIL-L-23699<br>4-3P/R            M2-V CHEVRON<br>4-4P/R            MIL-H-5606<br>4-5P/R            MIL-A-8243<br>4-6P/R            MIL-C-25769<br>4-7P/R            MIL-T-5624 (JP-5)<br>4-8P/R            Coolanol-25<br>4-9P/R            Regular (Leaded commercial auto-gasoline<br>4-10P/R           Solvent (a) MIL-STD-202)<br>4-11P/R           Solvent (b) MIL-STD-202)<br>4-12P/R           Solvent (c) MIL-STD-202) | No detrimental damage of effects to connector performance.<br>Axial<br>Mate and unmate forces after fluid immersion 175 1bf max.                              | Other than evidence of normal light swelling of the connector resilient seals, the samples did not exhibit any detrimental affects. Mateability was not impaired.<br><br>After Fluid Immersion<br>Mating/Unmating forces<br>(Pound-Force)<br>DPKA    Mate            Unmated    DPKB    Mate            Unmated<br>4-1P/R    125            27            4-7P/R    138            71<br>4-2P/R    125            31            4-8P/R    141            57<br>4-3P/R    127            35            4-9P/R    137            63.5<br>4-4P/R    132            35            4-10P/R    145            76<br>4-5P/R    132            63            4-11P/R    150            81<br>4-6P/R    123            55            4-12P/R    148            86 |
| GOLD PLATING POROSITY                               | Unwired, unassembled contact bodies. One part (by volume) concentrated Nitric Acid (S.G.-1.42) to one part distilled water. 30 secs. minimum immersion period.                                                                                                                                                                                                                                                                                                                                                                                                                                             | No visible reaction (bubbles forming) to reagent.                                                                                                             | No evidence of reaction to reagent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TEMPERATURE LIFE W/ CONTACT LOADING                 | Wired mated condition, with contacts under specific load: #22D (5 lbs.); #20 (7.5 lbs.);16 (12.5 lbs.). A current of 100 MA was applied during life of test. Test duration, 1000 hours at temperature of + 200°C (392°F).                                                                                                                                                                                                                                                                                                                                                                                  | Withstand temp life. No damage. No discontinuity higher than 1.0 microsecond. No contact dislodging under load.                                               | No evidence of contact dislodging and/or electrical discontinuity of 1.0 microsecond or greater during the specified temperature life exposure under contact loading conditions. All post test requirements were met.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Conclusion

All subject test specimens, connector components, materials, accessories and contacts covered by this report satisfied and/or exceeded the specified requirement.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPK (83733-Style)

## Additional Product Overview

### Weights

The following table provides the weights of DPK connector assemblies, mounting hardware, contacts, and sealing plugs. All connector assembly weights are listed without contacts (FO) and mounting hardware. To determine the total connector weight, add the weights of the mounting hardware, contacts, and sealing plugs to the connector assembly weight.

#### Example:

DPKB-101SK-7 (with 90 contacts and 11 sealing plugs)

|                              | Weight<br>Pounds | Weight<br>Grams |
|------------------------------|------------------|-----------------|
| DPKB-101SG-7-FO              | .2332            | 105.78          |
| Type K Spring Mount          | .0825            | 37.42           |
| 90 Number 20 Socket Contacts | .0639            | 28.98           |
| 11 Number 20 Sealing Plugs   | .0020            | 0.88            |
| Maximum Connector Weight     | .3816            | 173.06          |

| Part Number (Description) | Lbs.   | Grams  |
|---------------------------|--------|--------|
| DPKA-18PG-7-FO            | .1474  | 66.86  |
| DPKA- 18SG-7-FO           | .1496  | 67.86  |
| DPKA-32PG-7-FO            | .1496  | 67.86  |
| DPKA-18SG-7-FO            | .1518  | 68.86  |
| DPKA-51PG-7-FO            | .1529  | 69.35  |
| DPKA-51SG-7-FO            | .1551  | 70.35  |
| DPKA-G131PG-7-FO          | .1045  | 47.4   |
| DPKA-G131SG-7-FO          | .1077  | 48.85  |
| DPKB-48PG-7-FO            | .2398  | 108.77 |
| DPKB-48SG-7-FO            | .2486  | 112.76 |
| DPKB-59W7PG-7-FO          | .2354  | 106.78 |
| DPKB-59W7SG-7-FO          | .2442  | 110.78 |
| DPKB-64PG-7-FO            | .2354  | 106.78 |
| DPKB-64SG-7-FO            | .2442  | 110.78 |
| DPKB- 71PG-7-FO           | .2288  | 103.78 |
| DPKB-71SG-7-FO            | .2332  | 105.78 |
| DPKB-71C15PG-7-FO         | .2288  | 103.78 |
| DPKB-71C15SG-7-FO         | .2332  | 105.78 |
| DPKB-78PG-7-FO            | .2266  | 102.78 |
| DPKB-78SG-7-FO            | .2288  | 103.78 |
| DPKB-101PG-7-FO           | .2288  | 103.78 |
| DPKB-101SG-7-FO           | .2332  | 105.78 |
| DPKB-G185PG-7-FO          | .1628  | 73.85  |
| DPKB-G185SG-7-FO          | .1650  | 74.85  |
| #12 Pin, 030-9185-003     | .00298 | 1.353  |

| Part Number (Description)               | Lbs.   | Grams |
|-----------------------------------------|--------|-------|
| #12 Skt, 030-9186-003                   | .00291 | 1.318 |
| #16 Pin, 030-9205-007                   | .00135 | .611  |
| #16 Skt, 030-9206-006                   | .00146 | .664  |
| #20 Pin, 030-9173-006                   | .00062 | .280  |
| #20 Skt, 031-9174-004                   | .00071 | .322  |
| #22D Pin, 030-2042-000                  | .00021 | .093  |
| #22D Skt, 031-1147-000                  | .00025 | .111  |
| #12 Shielded Pin, 249-1825-001          | .00206 | .943  |
| #12 Shielded Skt, 249-1826-000          | .00258 | 1.168 |
| #8 Coaxial Pin, 59W7 Layout             | .00420 | 1.910 |
| #8 Coaxial Skt, 59W7 Layout             | .00650 | 2.948 |
| Type C Bushing, 012-0515-000 (4 reqd)   | .00606 | 2.750 |
| Type K Spring Mtg Captive (non-rotate)  | .08250 | 37.42 |
| Type F Nut (4 reqd)                     | .00072 | .325  |
| Type G Spring Mtg 231-0019-000 (4 reqd) | .01180 | 5.350 |
| Size 22; 225-1013-000                   | .00006 | .027  |
| Size 20; 225-0070-000                   | .00018 | .080  |
| Size 16; 225-0071-000                   | .00036 | .163  |
| Size 12; 225-0072-000                   | .00064 | .291  |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPA

## Product Overview



### DPA – Miniature Rack/Panel Connectors

DPA plugs are rugged, miniature rack/panel plugs that maximize insert space within a one-piece shell. Polarization is achieved via a keystone-cornered shell, and the coupling mechanism is based on friction. The operating temperature range is -55 °C to +125 °C (-67 °F to +257 °F).

### DPAF – Float Mount Shells

DPAF plugs are DPA plugs equipped with four rivets and washers on the contact termination side. The floating rivets have a 0.093 in (2.36 mm) inner diameter and provide a minimum float of 0.032 in (0.81 mm).

### DPAL - Large Flange Shells

DPAL plugs are DPA plugs with a large flange.

### DPAMA – LITTLE CAESAR® Contact Assembly

DPAMA plugs incorporate the proven LITTLE CAESAR® contact assembly, enabling rear insertion, release, and extraction of crimp-type contacts. Insertion requires no tool; extraction uses a disposable plastic tool. The hard dielectric, closed-entry socket insert includes lead-in chamfers to ensure proper mating of pin contacts. The contact design is simplified and robust, providing greater resistance to bending or damage. Contacts are crimped using the M22520/1-01 tool.

## Material Specifications

|           |             | DPA/DPAF/DPAL                      | DPAMA             |
|-----------|-------------|------------------------------------|-------------------|
| Shell     | Material    | Aluminum alloy                     |                   |
|           | Finish      | Cadmium plate with yellow chromate |                   |
| Insulator | Material    | Melamine                           | Diallyl Phthalate |
| Contacts  | Material    | Copper alloy                       |                   |
|           | Finish      | Gold over Copper alloy             |                   |
|           | Termination | Solder Pot                         | Crimp             |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

## DPA

## How to Order

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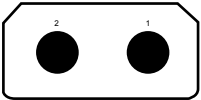
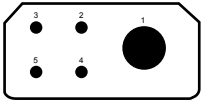
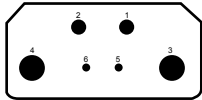
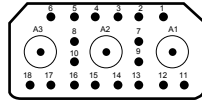
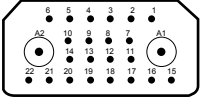
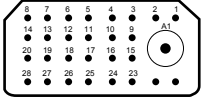
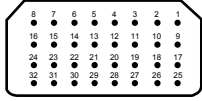
Note: Arrangements with coax contacts, such as 24C2, may be ordered without coax contacts by substituting a "W" for the "C" e.g., DPA-24C2-34P with two coax contacts becomes DPA-24W2-34P with two cavities. The customer can then order separately any snap in coax contact shown on page 98. The customer is thus able to "create" arrangements with infinite combinations of coax contacts.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPA

## Contact Arrangements

### Contact Terminations

|                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |
| <b>2</b>                                                                          | <b>5</b>                                                                          | <b>6</b>                                                                           | <b>21C3</b>                                                                         |
| 2 #4                                                                              | 1 #4<br>4 #14                                                                     | 2 #8<br>2 #12<br>2 #20                                                             | 18 #20<br>3 coax                                                                    |
| Test Voltage: 2900                                                                | Test Voltage: 2500                                                                | Test Voltage: 2600                                                                 | Test Voltage: 1500<br>(Coax 1000)                                                   |
|  |  |  |                                                                                     |
| <b>24C2*</b>                                                                      | <b>29C1</b>                                                                       | <b>32*</b>                                                                         |                                                                                     |
| 22 #20<br>2 coax                                                                  | 28 #20<br>1 coax                                                                  | 32 #20                                                                             |                                                                                     |
| Test Voltage: 1500<br>(Coax 1000)                                                 | Test Voltage: 1500<br>(Coax 1000)                                                 | Test Voltage: 1500                                                                 |                                                                                     |

\*Arrangement also available with LITTLE CAESAR contact assembly and may be employed in any shell type.

### DPA Coaxial Variations

| Termination Code | Variations of Basic Arrangements |       |       | Coaxial Type/Part Number         | Max. Coaxial Extension From Rear of Flange |              |
|------------------|----------------------------------|-------|-------|----------------------------------|--------------------------------------------|--------------|
|                  |                                  |       |       |                                  | 34                                         | 33           |
| 1                | A21C3                            | 24C2  | 29C1  | FIXED                            | .953 (24.21)                               | .453 (11.51) |
| 2                | 21C3                             | D24C2 | A29C1 | FIXED                            | .859 (21.82)                               | .359 (9.12)  |
| 3*               | B21C3                            | L24C2 | C29C1 | P-249-5012-000<br>S-249-5008-000 | 1.031 (26.91)                              | .500 (12.70) |
| 4                | C21C3                            | P24C2 | F29C1 | FIXED                            | 1.094 (27.79)                              | .594 (15.09) |
| 5                | D21C3                            | K24C2 | K29C1 | FIXED                            | 1.047 (26.59)                              | .561 (14.28) |
| 6*               | E21C3                            | N24C2 | L29C1 | P-249-5052-002<br>S-249-5051-001 | 1.218 (30.94)                              | .670 (17.02) |
| 7                | F21C3                            | B24C2 | M29C1 | FIXED                            | 1.094 (27.79)                              | .594 (15.09) |
| 8                | F21C3                            | C24C2 | N29C1 | FIXED                            | 1.094 (27.79)                              | .609 (15.47) |
| 9                | H21C3                            | R24C2 | P29C1 | FIXED                            | 1.125 (28.98)                              | .625 (15.88) |
| 10               | 21HV3                            | 24HV2 | 29HV1 | FIXED                            | 1.062(26.98)                               | .554 (14.07) |
| 11*              | J21C3                            | H24C2 | G29C1 | P-249-5052-002<br>S-249-5051-001 | 1.218 (30.94)                              | .670 (17.02) |
|                  | 21W3                             | 24W2  | 29W1  | Coaxials Not Supplied            |                                            |              |

\*Termination codes - 3, - 6, - 11 utilize snap - in non-removable coaxials which are supplied with the connector. These coaxials may be ordered separately when ordering the connectors without coaxials (21W3 24W2 and 29W1 layouts).

### DPAMA Coaxial Variations

| Variations of Basic Arrangements |       | Coaxial Type/Part Number     | Max. Coaxial Extension From Rear of Flange |              |
|----------------------------------|-------|------------------------------|--------------------------------------------|--------------|
|                                  |       |                              | 34                                         | 33           |
| 24W2                             | 29W1  | Coaxials Not Supplies*       | -                                          | -            |
| E24C2                            | B29C1 | Crimp Type for RG-58/U cable | 1.239 (31.47)                              | .737 (18.72) |

\*DPAMA coaxials purchased separately may be ordered under the following part numbers: Pin (Plug): 249-1741-000, Socket (receptacle): 249-9008-000, Crimp Tool: CA58073-0000, Extraction tool: CET-C11.

NOTE: DPA snap in coaxials and DPAMA crimp coaxials are NOT interchangeable but are intermateable.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

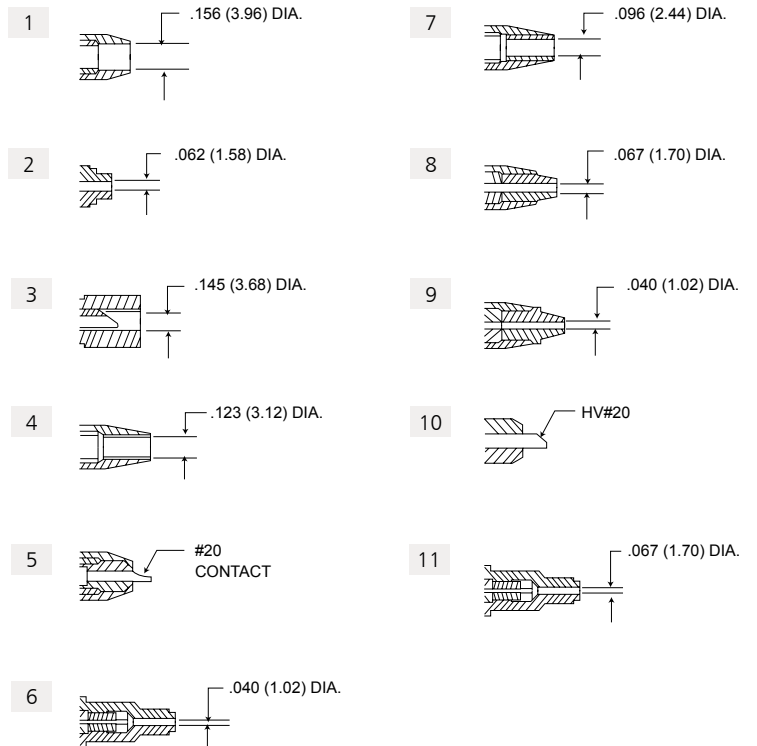
# DPA

## Contact Arrangements (continued)

### Contact Terminations

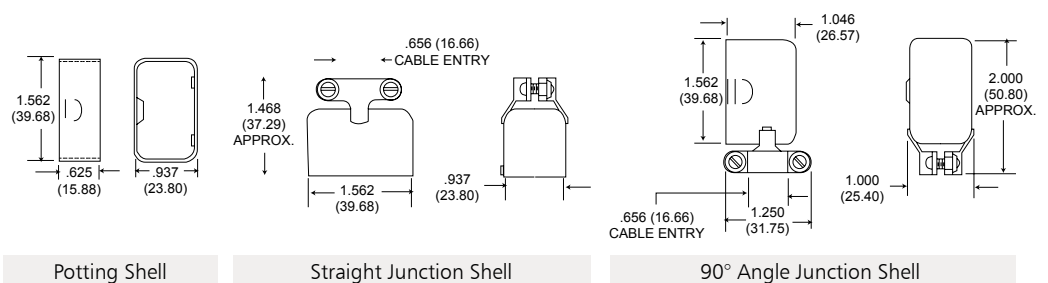
| Code | Cable Accommodation             |
|------|---------------------------------|
| 1    | RG-59B/U, RG-62A/U              |
| 2    | RG-187/U, RG-188/U              |
| 3    | RG-58C/U                        |
| 4    | RG-58C/U                        |
| 5    | #20 captive contact             |
| 6    | RG-178A/U, RG-196/U             |
| 7    | Special                         |
| 8    | RG-187/U, RG-188/U              |
| 9    | RG-178A/U, RG-196/U             |
| 10   | High Voltage wire accommodation |
| 11   | RG-187/U, RG-188/U              |

| Contact Size | Contact Extension |              |
|--------------|-------------------|--------------|
|              | Pin               | Socket       |
| 20           | .156 (3.96)       | .156 (3.96)  |
| 18           | .140 (3.56)       | .250 (6.35)  |
| 14           | .125 (3.18)       | .344 (8.74)  |
| 12           | .218 (5.54)       | .218 (5.54)  |
| 8            | .218 (5.54)       | .266 (6.76)  |
| 4            | .250 (6.35)       | .531 (13.49) |



### Accessories - Junction and Potting Shells

| Junction Shell           | Part Number |
|--------------------------|-------------|
| Potting Shell            | 22054       |
| Straight Junction Shell  | 20746       |
| 90° Angle Junction Shell | 20746-1     |



### Accessories - DPA Dust Caps

| Part Number  | Description                |
|--------------|----------------------------|
| 025-0572-001 | DPA-59-1 for shell size 33 |
| 025-0573-001 | DPA-60-1 for shell size 34 |

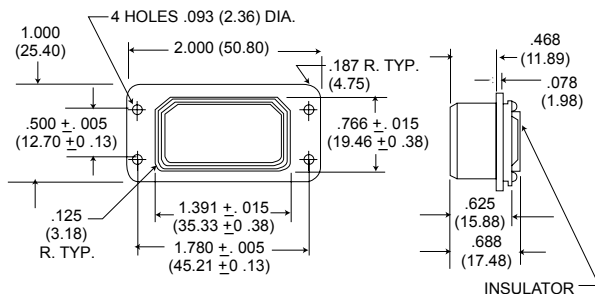
Conductive: DPA-60-1025-0573-001 (Protects Against Static Electricity)

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

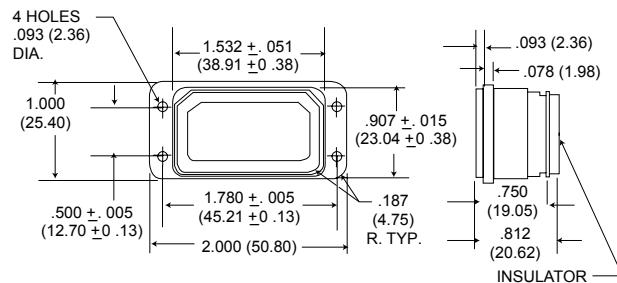
# DPA

## Shell Dimensions

### Solid Shell Dimensions

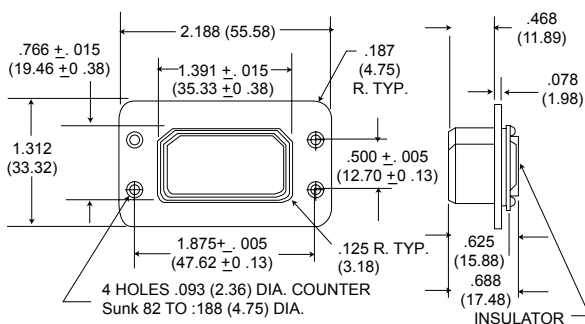


DPA-33

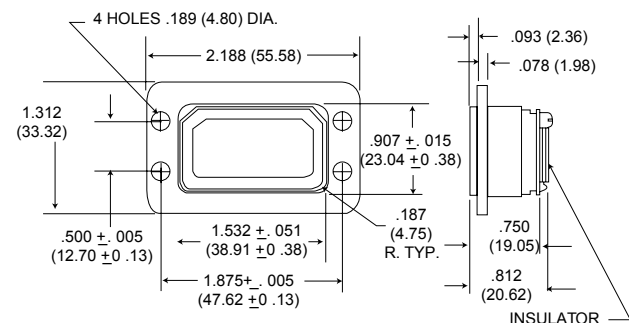


DPA-34

### Large Flange Shell Dimensions

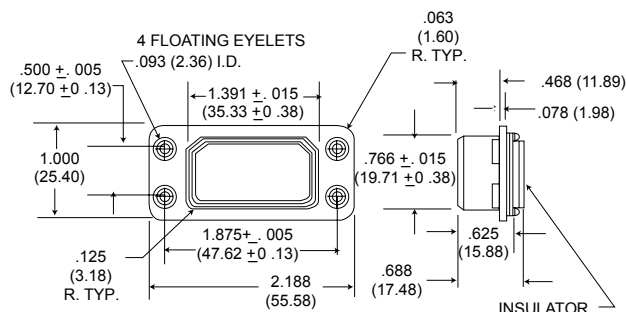


DPAL-33

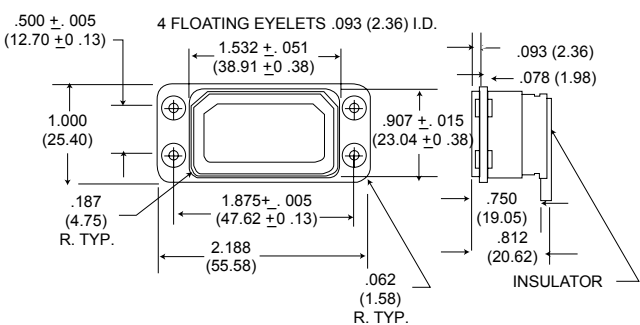


DPAL-34

### Float Mount Shell Dimensions



DPAF-34



DPAF-34

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPGM/DPJM/DPJMB

## Product Overview



Cannon's DPGM, DPJM, and DPJMB connectors are engineered for applications where space and weight are critical considerations. Their rectangular shape maximizes space utilization and facilitates easy removal of equipment for inspection or repair. The DPGM and DPJM connectors feature crimp, snap-in contacts with ring-type retention. The DPJMB connectors, on the other hand, incorporate the proven LITTLE CAESAR® rear-release contact retention assembly, enabling rear insertion, release, and extraction of crimp, snap-in contacts. They both have one piece diallyl phthalate insulators with polychloroprene wire-sealing grommets. A peripheral seal design accommodates axial tolerances of up to 0.125 in (3.175 mm) while maintaining effective environmental sealing. The size 34 shell includes a rubber seal encased to allow the step-down design of the

mating size 33 shell to seat securely into and against it.

These connectors also feature keystone corners for polarization and use friction coupling. Two shell styles with different mounting provisions are available.

For all new applications, these connectors are supplied only with insulators in the standard configuration—pin insulators in the size 34 (receptacle) shell and socket insulators in the size 33 (plug) shell.

For replacement purposes, it is recommended that customers convert to the standard insulator configuration where feasible. However, for cases where conversion is not possible, Cannon will continue to supply connectors with reversed insulators to support existing equipment.

## Material Specifications

|           |             | DPGM/DPJM/DPJMB                        |
|-----------|-------------|----------------------------------------|
| Shell     | Material    | Aluminum alloy                         |
|           | Finish      | Cadmium plate with olive drab irridite |
| Insulator | Material    | Diallyl phthalate                      |
| Contacts  | Material    | Copper alloy                           |
|           | Finish      | Gold plate                             |
|           | Termination | Crimp                                  |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPGM/DPJM/DPJMB

## How to Order

|                      |                                                                                                                                                                                                 |            |         |          |          |        |        |   |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|----------|----------|--------|--------|---|
| Product              | DPG/DPJ                                                                                                                                                                                         | DPG<br>DPJ | M<br>MB | 21<br>98 | 33<br>34 | S<br>P | K<br>K | 2 |
| Class:               | M - One piece insulator ring - type retention<br>MB - LITTLE CAESAR contact retention assembly                                                                                                  |            |         |          |          |        |        |   |
| Contact Arrangement: | See Page 103 for Contact Arrangements                                                                                                                                                           |            |         |          |          |        |        |   |
| Shell Style:         | 33 - Plug<br>34 - Receptacle                                                                                                                                                                    |            |         |          |          |        |        |   |
| Contact Type:        | P - Pin<br>S - Socket<br><br>K - 33-K-With 6-32 clinch nuts<br>34-K-Floating eyelet with 6-32 tapped I.D.<br><br>B - 33-B-Clearance holes for 6-32 screw<br>34-B-Floating eyelet with .140 I.D. |            |         |          |          |        |        |   |
| Modification:        | 2 - .125 (3.18) removed from front lip of -33 shell                                                                                                                                             |            |         |          |          |        |        |   |

Contacts, Coaxials and Junction Shells must be ordered separately, except for the DPJMB where the contacts are supplied with the connector. When (ordering or reordering) please specify the 3-4-3 contact part number as shown. We have cross-referenced these new part numbers with the previous part numbers (which have been obsoleted) for your convenience.

Example:  
031-0900-001 new "3-4-3" part number  
(038819-001) previous part number

# DPGM/DPJM/DPJMB

## Contact Arrangements

### DPGM Contact Arrangements

|                                   |                    |                    |            |
|-----------------------------------|--------------------|--------------------|------------|
|                                   |                    |                    |            |
| <b>C8</b>                         | <b>12</b>          | <b>15</b>          | <b>16</b>  |
| 8 coax                            | 12 #16             | 15 #16             | 16 #20     |
| Test Voltage: 1500                | *See note          | *See note          | **See note |
|                                   |                    |                    |            |
| <b>20C4</b>                       | <b>21</b>          | <b>32</b>          |            |
| 16 #20<br>4 coax                  | 21 #20             | 32 #20             |            |
| Test Voltage: 1500<br>(Coax 1000) | Test Voltage: 1500 | Test Voltage: 1500 |            |

\*All DPGM arrangements have a 1500 VAC test voltage except for arrangements 12 and 15, which is 3200 VAC for contact 1,5,8 and 12. The remaining contacts have a 2200 VAC test voltage. All coaxials have 1000 VAC rms test voltage.

\*\*DPGM arrangement 16 has a 1500 VAC test voltage for contact 2,3,6,10,11,12 and 16. The remaining contacts have a 1700 VAC test voltage.

### DPJM/DPJMB Contact Arrangements

|                                   |                    |
|-----------------------------------|--------------------|
|                                   |                    |
| <b>C21*</b>                       | <b>59</b>          |
| 21 coax                           | 49 #20<br>10 #12   |
| Test Voltage: 1000                | Test Voltage: 1500 |
|                                   |                    |
| <b>59C10*</b>                     | <b>98*†</b>        |
| 49 #20<br>10 coax                 | 98 #20             |
| Test Voltage: 1700<br>(Coax 1000) | Test Voltage: 1500 |

| Current Carrying Capacity of Wires and Cables |          |
|-----------------------------------------------|----------|
| Wire Size                                     | Amperage |
| #4                                            | 80       |
| #8                                            | 46       |
| #12                                           | 23       |
| #16                                           | 13       |
| #20                                           | 7.5      |

\*All DPJM and DPJMB power contact arrangements have a 1500 VAC rms test voltage. Coaxials have 1000 VAC rms voltage.

† Available with LITTLE CAESAR contact assembly (DPJMB).

# DPGM/DPJM/DPJMB

## Contact Arrangements (continued)

### Contact Data and Termination Tool

| Style     | Contact Size | Wire Size Accommodation | Contact Part Number |              | Crimp Tool Part Number | Locator     | Locator Color | Extraction Tool Part Number |
|-----------|--------------|-------------------------|---------------------|--------------|------------------------|-------------|---------------|-----------------------------|
|           |              |                         | Pin                 | Socket       |                        |             |               |                             |
| DPJMB     | 20           | 20-24                   | 030-9081-001        | 031-9082-001 | M22520/1-01            | M22520/1-02 | red           | CET 20-14                   |
|           | 12           | 12-14                   | 030-9185-002        | 031-9186-002 |                        |             | yellow        | CET 12-4                    |
| DPGM/DPJM | 20           | 20-24                   | 031-0905-000        | 031-0900-001 |                        |             |               | CIET-20                     |
|           | 16           | 16-20                   | 031-0944-000        | 031-0945-000 |                        |             |               | CIET-16                     |
|           | 12           | 12-14                   | 031-0909-000        | 031-0908-000 |                        |             |               | CIET-12                     |
|           | 20-18        | 18                      | 031-0907-000        | 031-0906-000 |                        |             |               | CIET-20                     |

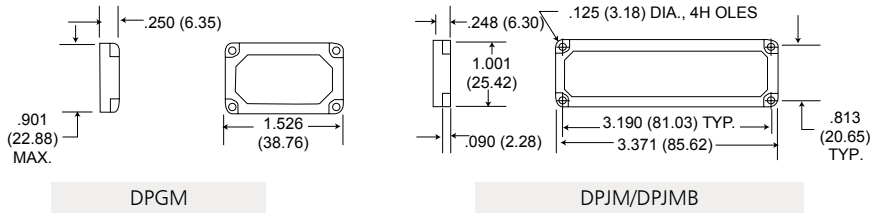
### Coaxial Data and Termination Tool

| Contact Size | Wire Size Accommodation | Contact Part Number |                     | Crimp Tool Part Number     | Ins/Ext Tool Part Number | Extraction Tool Number |
|--------------|-------------------------|---------------------|---------------------|----------------------------|--------------------------|------------------------|
|              |                         | Pin (Plug)          | Socket (Receptacle) |                            |                          |                        |
| Coax         | 50 ohm (RG 196/U)       | 249-1178-001        | 249-1177-001        | M22520/5-01 with Y-193 Die | CIT C2                   | CET C1                 |
|              | 75 ohm (RG 1871U)       | 249-1176-001        | 249-1175-001        | WT400 995-001-071          |                          |                        |
|              | 95 ohm (RG 195/U)       | 249-1174-001        | 249-1173-001        | WT402 HX3-138              |                          |                        |
|              | 150 ohm                 | 249-1172-001        | 249-1171-001        | WT408                      |                          |                        |

### Accessories - DPGM/DPJM/DPJMB Junction Shells

DPGM junction shells are essential for proper installation of connector and are ordered separately.

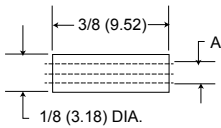
| Junction Shell | Part Number  |
|----------------|--------------|
| DPGM           | 248-1711-000 |
| DPJM/DPJMB     | 248-1710-000 |



### Accessories - Wire Bushings

| Sealing Wires on #12 and Coaxial Contacts |                |        |
|-------------------------------------------|----------------|--------|
| New Part Number                           | Wire Size O.D. | I.D. A |
| DPGM                                      | .040-.083      | 0.062  |
| DPJM/DPJMB                                | .080-.096      | 0.08   |

Small wires should be provided with rubber bushings before crimping. Approximately 1/16 (1.59) of an inch of bushing is visible when installed into grommet. Grommets with seal with out bushings or wire .096 (2.44) to .185 (4.70) to diameter.



### Accessories - Hole Fillers

| Contact Size | Part Number  |
|--------------|--------------|
| 20           | 225-0070-000 |
| 16           | 225-0071-000 |
| 12           | 225-0072-000 |
| Coaxial      | 225-0085-000 |

All holes in grommet require filling either by a wire and contract, or by means of wire hole plugs.

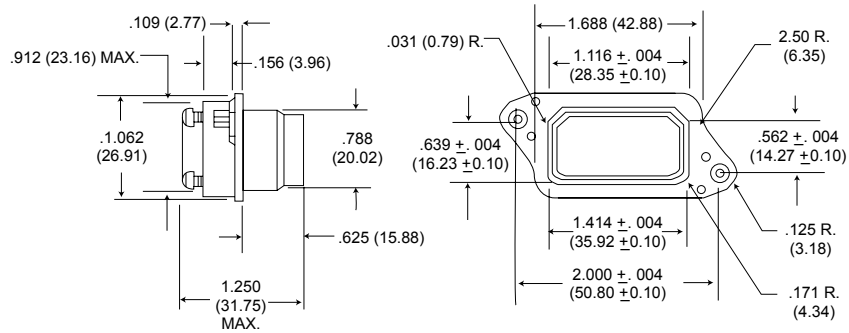
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPGM/DPJM/DPJMB

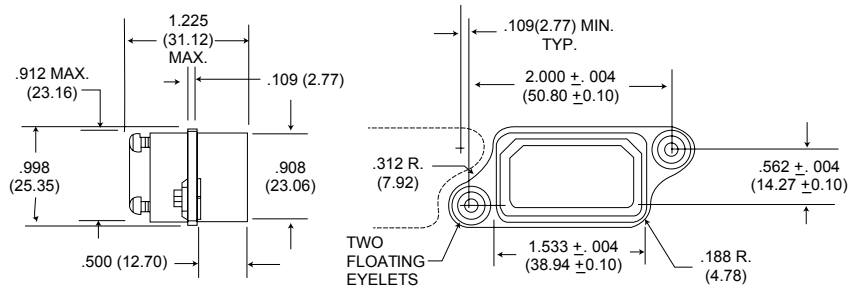
## Shell Dimensions

### DPGM Shell Dimensions

33 Shell

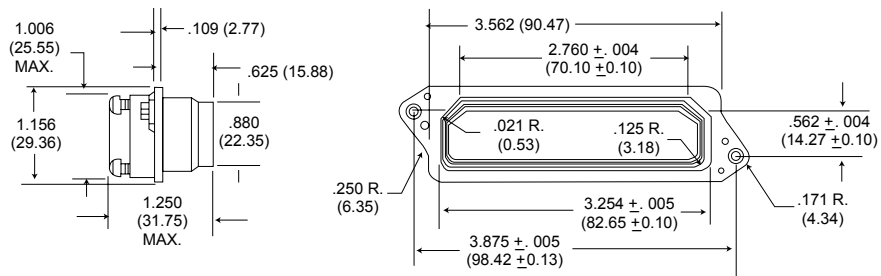


34 Shell

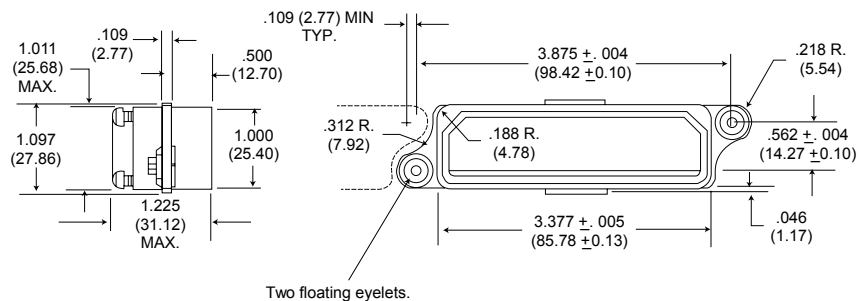


### DPJM/DPJMB Shell Dimensions

33 Shell



34 Shell

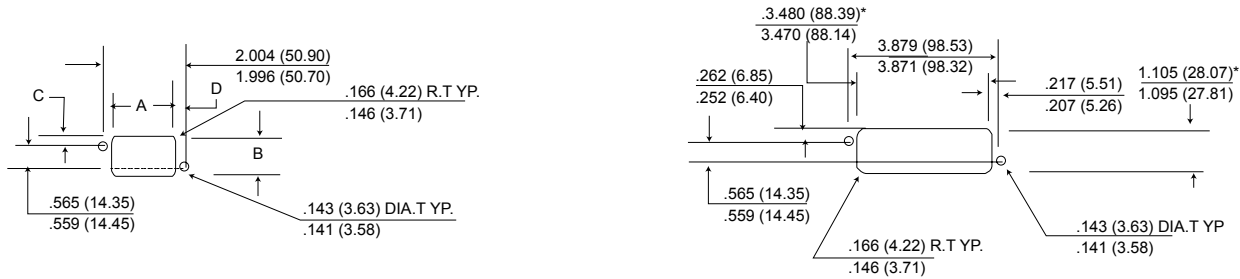


Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPGM/DPJM/DPJMB

## Shell Dimensions (continued)

### Panel Cutouts



| DPGM    |               |               |             | DPJM/DPJMB  |                                  |  |             |
|---------|---------------|---------------|-------------|-------------|----------------------------------|--|-------------|
|         | A             | B             | C           | D           | Gap Between Flanges after mating |  |             |
| DPGM-33 | 1.609 (40.87) | .985 (25.02)  | .214 (5.44) | .203 (5.16) | {                                |  | .500(12.70) |
|         | 1.599 (40.61) | .975 (24.76)  | .204 (5.18) | .193 (4.90) |                                  |  | .625(15.88) |
| DPG-34  | 1.636 (41.55) | 1.011 (25.68) | .227 (5.76) | .190 (4.83) | {                                |  | .500(12.70) |
|         | 1.626 (41.30) | 1.001 (25.42) | .217 (5.51) | .180 (4.57) |                                  |  | .625(15.88) |

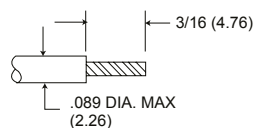
PANEL THICKNESS: Maximum sum of both panel thicknesses is 7/16 of an inch when 33 plug and 34 receptacle are back mounted. Shell style 33 modifications A and -2 can be back mounted ONLY. Shell style 33 modifications B and shell style 34 modifications B and H may be front or back mounted. Consult your account representative for additional information.

# DPGM/DPJM/DPJMB

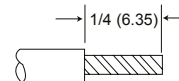
## Assembly

### Wiring and Crimping Contacts

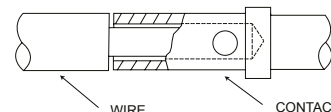
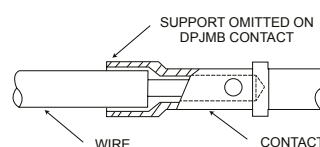
- Step 1** - Drop contact into crimp tool, it will locate on the contact shoulder.
- Step 2** - Take wire stripped to dimensions above, and push into the contact crimp pot until it is completely home. Where outside diameter of wire in the #12 or COAXIAL contact is less than .096 (2.44), a rubber bushing must be slipped over the wire before crimping (see page 108).
- Step 3** - Squeeze the crimp tool to secure the wire into the contact. It is not possible to remove the contact from the crimp tool until crimp is completed.
- Step 4** - Remove wired contact from tool.
- Step 5** - Inspect - If wires are stripped and crimped correctly, the wire will be visible through the small inspection hole in the contact.



#20 Contact



#20-18, #16 & #12 Contact



### Contact Insertion

After the contacts have been crimped, they should be threaded through the junction shell and inserted with the tools shown in the table. It is recommended that the contacts be inserted in the center horizontal row first, then work to the top and bottom horizontal rows.

| Contact Size                     | Tool Description | Assembly Number |
|----------------------------------|------------------|-----------------|
| 20                               | CIT - 20         | 038894-0000     |
| 16                               | CIT - 16         | 038895-0000     |
| 12                               | CIT - 12         | 038896-0000     |
| Coaxial<br>50-75,95 &<br>150 ohm | CIT - C2         | 038901-0000     |

### Contact Extraction

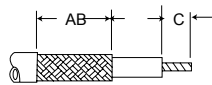
If it is necessary at any time to remove contacts, this may be accomplished with an impact extraction tool. Simply place the correct tool on the engaging end of the contact and push. A reversible tip is provided for pins and sockets.

| Contact Size                     | Tool Description | Assembly Number |
|----------------------------------|------------------|-----------------|
| 20                               | CET - 20A        | 038889-0100     |
| 16                               | CET - 16         | 038888-0000     |
| 12                               | CET - 12         | 038890-0000     |
| Coaxial<br>50-75,95 &<br>150 ohm | CET - C1         | 038869-0000     |

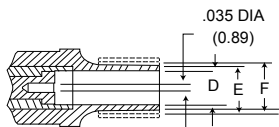
# DPGM/DPJM/DPJMB

## Assembly (continued)

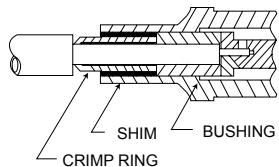
### Coaxial Contact Assembly



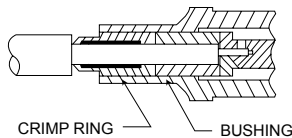
Cable Stripping



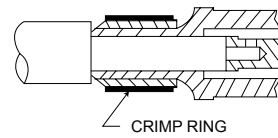
|         | Cable Trim Dimensions |             |             | Cable Entry Dimensions |                |                |
|---------|-----------------------|-------------|-------------|------------------------|----------------|----------------|
|         | A                     | B           | C           | D<br>min. dia.         | E<br>min. dia. | F<br>min. dia. |
| 150 ohm | 3/16<br>(4.76)        | 1/16 (1.59) |             | .154 (3.91)            | .183 (4.65)    | .202 (5.13)    |
| 95 ohm  |                       | 1/8 (3.18)  |             | .106 (2.69)            | .139 (3.53)    | .153 (3.89)    |
| 75 ohm  |                       |             |             | .122 (3.10)            | .158 (4.01)    |                |
| 50 ohm  | 1/4 (6.35)            |             | .106 (2.69) | .136 (3.53)            |                |                |



50 Ohm Contact (RG-196U)  
(assembly steps 1, 2, 3, 4, 5 & 8)

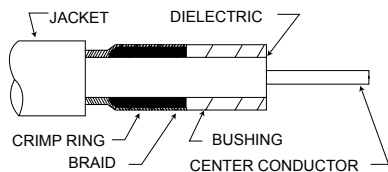


75 Ohm Contact (RG-187U)  
(assembly steps 1, 2, 3, 5 & 8)

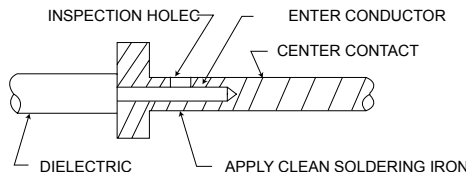


95 Ohm Contact (RG-195U)  
(assembly steps 1, 3, 6, 7 & 8)

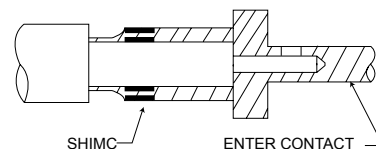
### Assembly Steps



Step 2



Step 3



Step 4

**Step 1** - After the coaxial cable has been stripped to the proper dimensions, tin the center conductor. If O.D. of cable is less than .096 (2.44), slip rubber bushing over wire. (50, 75 & 95 ohm)

**Step 2** - Assemble crimp ring under braid and add bushing to cable. (50 & 75 ohm)

**Step 3** - The center contact is supplied loose in the polyethylene bag. Insert the tinned conductor into the contact. Wire must be visible through inspection hole and dielectric pushed against contact shoulder. For 150 ohm contact shoulder must be flush against bushing. Heat contact with a clean soldering iron. Avoid solder outside contact, (50, 75, & 95 ohm)

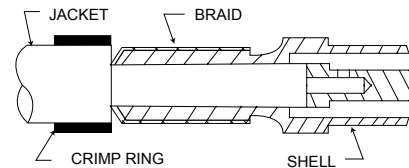
**Step 4** - Wrap shim around braid. (50 ohm)

**Step 5** - Feed cable and assembled parts into coaxial shell. Care is required if braid is to fit smoothly inside the shell. (50 & 75 ohm)

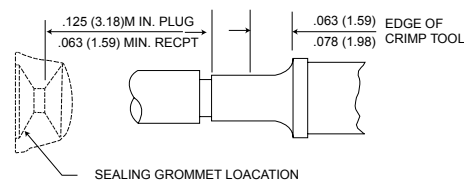
**Step 6** - Thread crimp ring over cable. Feed center contact into coaxial shell with the shell between the dielectric and the braid. (95 ohm)

**Step 7** - Slip crimp over the braid. (95 ohm)

**Step 8** - Crimp - crimp tool must be located 1/16 (1.58) to 5 / 64 (1.98) from shoulder of coaxial. (50, 75 & 95 ohms)



Step 6



Step 8

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

## Product Overview

### DPGM/DPJM Coaxial Contact Assembly

Cannon's DPD Rack and Panel connectors are distinguished from other connector lines by their rectangular shape, which provides maximum space utilization on a rack or chassis mounted equipment. The DPD is used in any commercial application where moisture/environmental resistance is not required, such as I/O connector or computer panels, GFE test equipment, and GSE ground support equipment. For example, one-half of a connector assembly is mounted on a

radio rack, or panel, and the mating connector is attached to a cable that connects to another instrument or rack. The DPD has a temperature range of -55°C to +125°C (-67°F to +257°F). In addition to standard DPD connectors with solder contacts, the DPDMA version has rear insertion, rear release crimp, snap-in contacts that feature the LITTLE CAESAR rear release contact retention assembly used in many other ITT product lines.

#### DPD - Standard Rack and Panel Connector Series

DPD connectors are the original rectangular rack and panel connectors with solder-type contact termination. They support a wide range of contact arrangements and are compatible with various endbells and junction shells.

#### DPDMA - LITTLE CAESAR® Contact Assembly

DPDMA connectors are DPD connectors equipped with the LITTLE CAESAR® contact assembly, allowing rear insertion, release, and extraction of crimp-type contacts. Contacts are inserted by hand and extracted using a disposable plastic tool. The hard dielectric, closed-entry socket inserts feature lead-in chamfers to ensure proper mating of pin contacts. DPD and DPDMA connectors are fully intermateable.

#### DPD2 - Two-Gang Version of DPD

DPD2 connectors are two-gang versions of the DPD solder-type connectors, designed to accommodate twice the

circuitry for instrument panel disconnect applications. The DPD2 shares the same shell style and materials as the DPD but includes a center coupling screw for secure engagement. Various coupling devices are illustrated on pages 116-117. DPD2 connectors can also be ordered without the engaging device by omitting the letter code "M" in the ordering nomenclature. Two optional polarizing posts allow for up to six alternate insert positions (see page 119).

#### DPD2MA - LITTLE CAESAR® Contact Assembly

DPD2MA connectors are DPD2 connectors fitted with the LITTLE CAESAR® contact assembly for rear insertion, release, and extraction of crimp-type contacts. Contacts are inserted manually and removed using a disposable plastic tool. Like other models, the hard dielectric, closed-entry socket inserts include lead-in chamfers to ensure positive mating of pin contacts. DPD2 and DPD2MA connectors are fully intermateable.

## Material Specifications

|                             |             | DPD/DPD2                        | DPDMA/DPD2MA      | DPD/DPDMA Specifications |
|-----------------------------|-------------|---------------------------------|-------------------|--------------------------|
| Shell/Polarization Hardware | Material    | Aluminum alloy                  |                   | QQ-A-591/A380            |
|                             | Finish      | Natural cadmium plate           |                   | QQ-P-416                 |
| Insulator                   | Material    | Melamine or fabricated phenolic | Diallyl Phthalate | MIL-M-14                 |
| Contacts                    | Material    | Copper alloy                    |                   | QQ-C-533                 |
|                             | Finish      | Silver or gold plate*           |                   | QQ-C-365 MIL-G-45204     |
|                             | Termination | Solder Pot                      | Crimp             | N/A                      |

\*Size 20 contacts have gold plate finish. All other sizes have silver plate finish. Tin alloy may be substituted for silver.

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

## How to Order

### DPD Single Gang

| Product                       | DPD  | DPD<br>DPD                                                                | R | MA | B28<br>32C2 | 34<br>33 | P<br>S | 1G<br>1A | Y | F0 |
|-------------------------------|------|---------------------------------------------------------------------------|---|----|-------------|----------|--------|----------|---|----|
| RoHS Version:<br>(Optional)   | R -  | RoHS Compliant                                                            |   |    |             |          |        |          |   |    |
| Class:                        |      | Blank - Solder contacts                                                   |   |    |             |          |        |          |   |    |
|                               | MA - | Crimp type contacts in<br>LITTLE CAESAR contact assembly                  |   |    |             |          |        |          |   |    |
| Contact<br>Arrangements:      |      | See Page 111 for Solder termination<br>See Page 112 for Crimp termination |   |    |             |          |        |          |   |    |
| Shell Style:                  | 33 - | Plug                                                                      |   |    |             |          |        |          |   |    |
|                               | 34 - | Receptacle                                                                |   |    |             |          |        |          |   |    |
| Contact Type:                 | P -  | Pin                                                                       |   |    |             |          |        |          |   |    |
|                               | S -  | Socket                                                                    |   |    |             |          |        |          |   |    |
| Mounting Hole<br>Variation*:  | 1A - | .144 (3.66) dia., for #6 flathead screw                                   |   |    |             |          |        |          |   |    |
|                               | 1B - | .144 (3.66) dia., 100° countersunk for #6 flathead screw                  |   |    |             |          |        |          |   |    |
|                               | 1G - | .152 (3.86) dia., 82°C countersunk for #6 flathead screw                  |   |    |             |          |        |          |   |    |
|                               | 1L - | .144 (3.66) dia., 82° countersunk for #6 flathead screw                   |   |    |             |          |        |          |   |    |
| Polarizing Position:          |      | See Polarization Positions on Page 119                                    |   |    |             |          |        |          |   |    |
| Contact<br>Modification Code: |      | Add F0 to order connector less contacts.                                  |   |    |             |          |        |          |   |    |

### DPD Double Gang

| Product                       | DPD  | DPD<br>DPD<br>DPD                                                         | R | 2<br>2<br>2 | MA | 56<br>70<br>156 | 34<br>33<br>34 | P<br>S<br>P | M<br>M<br>M | 1A<br>1B | X | F0 |
|-------------------------------|------|---------------------------------------------------------------------------|---|-------------|----|-----------------|----------------|-------------|-------------|----------|---|----|
| RoHS Version:<br>(Optional)   | R -  | RoHS Compliant                                                            |   |             |    |                 |                |             |             |          |   |    |
| Two Gang Shell                | 2 -  |                                                                           |   |             |    |                 |                |             |             |          |   |    |
| Class:                        |      | Blank - Solder contacts                                                   |   |             |    |                 |                |             |             |          |   |    |
|                               | MA - | Crimp type contacts in<br>LITTLE CAESAR contact assembly                  |   |             |    |                 |                |             |             |          |   |    |
| Contact<br>Arrangements:      |      | See Page 111 for Solder termination<br>See Page 112 for Crimp termination |   |             |    |                 |                |             |             |          |   |    |
| Shell Style:                  | 33 - | Plug                                                                      |   |             |    |                 |                |             |             |          |   |    |
|                               | 34 - | Receptacle                                                                |   |             |    |                 |                |             |             |          |   |    |
| Contact Type:                 | P -  | Pin                                                                       |   |             |    |                 |                |             |             |          |   |    |
|                               | S -  | Socket                                                                    |   |             |    |                 |                |             |             |          |   |    |
| Engaging Device:              |      | See Pages 116-117 for Engaging Devices                                    |   |             |    |                 |                |             |             |          |   |    |
| Mounting Hole<br>Variation*:  | 1A - | .144 (3.66) dia., for #6 flathead screw                                   |   |             |    |                 |                |             |             |          |   |    |
|                               | 1B - | .144 (3.66) dia., 100° countersunk for #6 flathead screw                  |   |             |    |                 |                |             |             |          |   |    |
|                               | 1G - | .152 (3.86) dia., 82°C countersunk for #6 flathead screw                  |   |             |    |                 |                |             |             |          |   |    |
| Polarizing Position:          |      | See Polarization Positions on Page 119                                    |   |             |    |                 |                |             |             |          |   |    |
| Contact<br>Modification Code: |      | Add F0 to order connector less contacts<br>(DPDMA/DPD2MA only)            |   |             |    |                 |                |             |             |          |   |    |

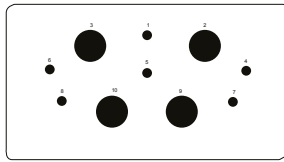
\*Omit code for standard .144 (3.66) dia. mounting hole 82° countersunk for #6 flathead screw

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

## Contact Arrangements

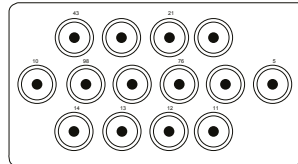
### DPD Solder Contact Arrangements



**N10**

Clearance

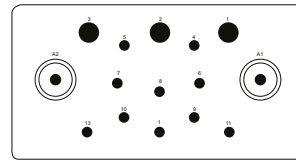
2 #16 5/32 (3.97)  
4 #16 9/64 (3.57)  
4 #4 9/64 (3.57)



**AJ14 (Crimp)  
AN14 (Solder)**

Clearance

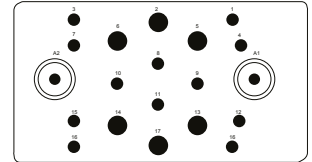
14 min. coax 1/16 (1.59)



**15C2**

Clearance

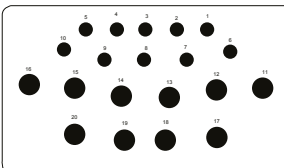
2 #14 3/16 (4.76)  
2 #14 7/32 (5.56)  
2 #14 1/4 (6.35)  
1 #14 9/32 (7.14)  
3 #14 13/64 (5.16)  
3 #10 11/64 (4.37)  
2 Coax Grounded



**B20C2**

Clearance

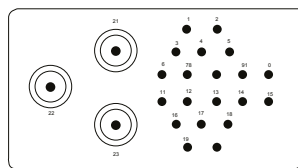
8 #16 3/64 (1.19)  
2 #16 11/64 (4.37)  
2 #16 5/32 (3.97)  
6 #14 5/32 (3.97)  
2 Coax Grounded



**G20**

Clearance

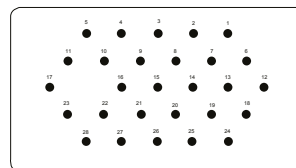
3 #14 5/64 (1.98)  
7 #14 1/16 (1.59)  
2 #10 1/16 (1.59)  
8 #8 1/16 (1.59)



**23C3**

Clearance

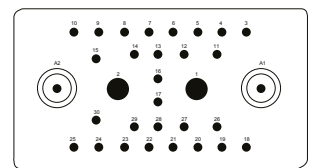
20 #16 1/16 (1.59)  
3 Coax Grounded



**B28**

Clearance

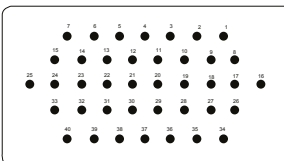
28 #16 7/64 (2.78)



**32C2**

Clearance

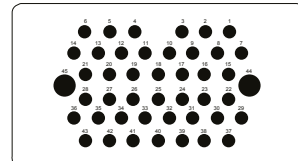
28 #16 3/64 (1.19)  
2 #8 (1.56 Dia.) 3/64 (1.19)  
2 Coax Grounded



**40\***

Clearance

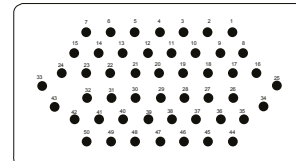
40 #16 1/16 (1.59)



**45**

Clearance

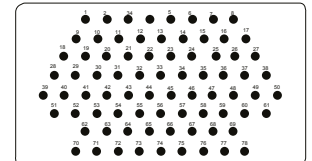
43 #16 3/64 (1.19)  
2 #10 3/64 (1.19)



**50**

Clearance

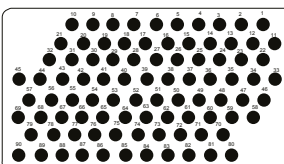
50 #16 1/16 (1.59)



**78**

Clearance

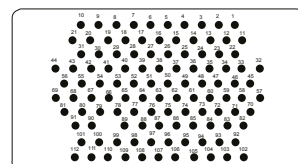
78 #16 1/32 (.79)



**90**

Clearance

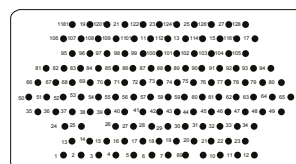
90 #16 1/32 (.79)



**112\***

Clearance

112 #20 3/64 (1.19)



**128\***

Clearance

128 #20 3/64 (1.19)

\*Fabricated inserts: 40, 112, 128; all other inserts are molded  
NOTE Face view of pin insert, see page 120 for test voltage

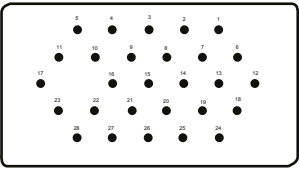
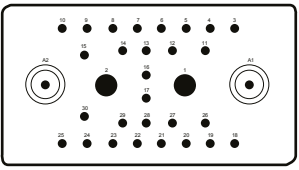
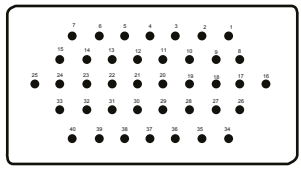
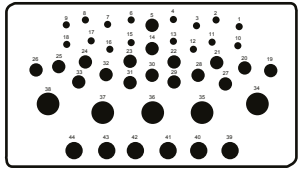
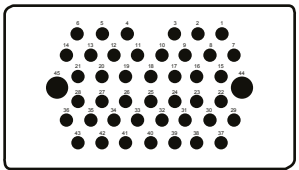
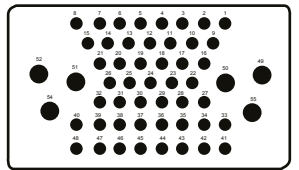
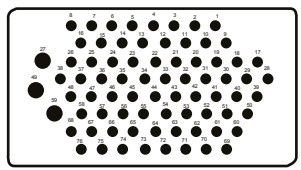
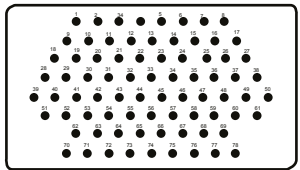
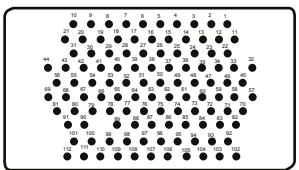
Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

## Contact Arrangements (continued)

### DPDMA Crimp Contact Arrangements

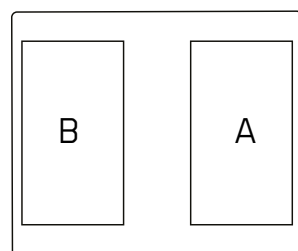
|                                                                                    |                                                                                                                                                                                                                                                                                |                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|    |                                                                                                                                                                                               |  |  |
| <b>B28</b>                                                                         | <b>32C2**</b>                                                                                                                                                                                                                                                                  | <b>40</b>                                                                          | <b>A44</b>                                                                          |
| Clearance                                                                          | Clearance                                                                                                                                                                                                                                                                      | Clearance                                                                          | Clearance                                                                           |
| 28 #16                                                                             | 28 #16                                                                                                                                                                                                                                                                         | 40 #16                                                                             | 16 #20                                                                              |
| 7/64 (2.78)                                                                        | 3/64 (1.19)                                                                                                                                                                                                                                                                    | 1/16 (1.59)                                                                        | 3/64 (1.19)                                                                         |
|                                                                                    | 2 #8 (1.56 Dia.)                                                                                                                                                                                                                                                               |                                                                                    | 17 #16                                                                              |
|                                                                                    | 3/64 (1.19)                                                                                                                                                                                                                                                                    |                                                                                    | 3/64 (1.19)                                                                         |
|                                                                                    | 2 Coax                                                                                                                                                                                                                                                                         |                                                                                    | 6 #12                                                                               |
|                                                                                    | Grounded                                                                                                                                                                                                                                                                       |                                                                                    | 3/64 (1.19)                                                                         |
|                                                                                    |                                                                                                                                                                                                                                                                                |                                                                                    | 5 #8 (.142 Dia.)                                                                    |
|                                                                                    |                                                                                                                                                                                                                                                                                |                                                                                    | 3/64 (1.19)                                                                         |
|    |                                                                                                                                                                                               |  |  |
| <b>45</b>                                                                          | <b>F54</b>                                                                                                                                                                                                                                                                     | <b>76</b>                                                                          | <b>78</b>                                                                           |
| Clearance                                                                          | Clearance                                                                                                                                                                                                                                                                      | Clearance                                                                          | Clearance                                                                           |
| 43 #16                                                                             | 48 #16                                                                                                                                                                                                                                                                         | 73 #20                                                                             | 78 #16                                                                              |
| 3/64 (1.19)                                                                        | 1/32 (0.79)                                                                                                                                                                                                                                                                    | 5/64 (1.98)                                                                        | 1/32 (.79)                                                                          |
| 2 #10                                                                              | 6 #12                                                                                                                                                                                                                                                                          | 3 #16                                                                              |                                                                                     |
| 3/64 (1.19)                                                                        | 1/16 (1.59)                                                                                                                                                                                                                                                                    |                                                                                    |                                                                                     |
|  | <p>NOTE Face view of pin insert, see page 120 for test voltage</p> <p>*Fabricated inserts: 112; all other inserts are molded</p> <p>**32C2 arrangement may be purchased less coaxial contacts as -30. All contact variations shown for 32C2 may be purchased in the DPDMA.</p> |                                                                                    |                                                                                     |
| <b>112*</b>                                                                        |                                                                                                                                                                                                                                                                                |                                                                                    |                                                                                     |
| Clearance                                                                          |                                                                                                                                                                                                                                                                                |                                                                                    |                                                                                     |
| 128 #20                                                                            |                                                                                                                                                                                                                                                                                |                                                                                    |                                                                                     |
| 3/64 (1.19)                                                                        |                                                                                                                                                                                                                                                                                |                                                                                    |                                                                                     |

### DPD2/DPD2MA Crimp Contact Arrangements

DPD2 Insert assemblies consist of two standard DPD insert mounted in a DPD2 shell. They are identified as insert "A" and insert "B". Any two inserts with similar contact arrangements can be used together. The

tabulation lists the DPD2 contact arrangement ordering number for the combination of two inserts. Contact your account representative for combination layouts not shown.

| DPD2 Arrangement Number | Side A | Side B |
|-------------------------|--------|--------|
| N20                     | N10    | N10    |
| G48                     | G20    | B28    |
| B56                     | B28    | B28    |
| 64                      | 32     | 32     |
| 64C4                    | 32C2   | 32C2   |
| B68                     | 40     | B28    |
| 77                      | 45     | 32     |
| 78                      | 50     | 28     |
| 80                      | 40     | 40     |
| 90                      | 45     | 45     |
| B98C2                   | B20C2  | 78     |
| G98                     | 78     | G20    |



DPD2/DPD2MA Insert Designations  
(face view - 34 shell)

| DPD2 Arrangement Number | Side A | Side B |
|-------------------------|--------|--------|
| H98C2                   | H20C2  | 78     |
| 100                     | 50     | 50     |
| A110                    | 32     | 78     |
| 123                     | 45     | 78     |
| A123                    | 78     | 45     |
| 152                     | 76     | 76     |
| 156                     | 78     | 78     |
| 180                     | 90     | 90     |
| 190                     | 78     | 112    |
| 224                     | 112    | 112    |
| 256                     | 128    | 128    |

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

## Contact Arrangements (continued)

### Contact Variations

| Arrangement Number | Basic Arrangement | Number of Contacts (Wire Size) |    |    |    |   |      |         | Notes Modifications                                                                                                                    |
|--------------------|-------------------|--------------------------------|----|----|----|---|------|---------|----------------------------------------------------------------------------------------------------------------------------------------|
|                    |                   | 20                             | 16 | 14 | 10 | 8 | Coax | Special |                                                                                                                                        |
| V14                | T14               |                                |    |    |    |   | 14   |         | Supplied less coaxial contacts (see page 114 for availability)                                                                         |
| 20                 | 32C2              |                                | 18 |    |    | 2 |      |         | #5, 7, 9, 12-17, 29, A1, A2 are open                                                                                                   |
| B20C2              | B20C2             |                                | 12 | 6  |    |   | 2    |         | Basic arr. str. coax RG-7/U, P249-0365-000; S249-0366-000                                                                              |
| C20C2              | B20C2             |                                | 12 | 6  |    |   | 2    |         | A1, A2-str. coax RG-59/U, RG-62/U, P249-0399-000, S249-0398-000                                                                        |
| G20                | G20               |                                | 18 | 10 | 2  | 8 |      |         | Basic Arrangement                                                                                                                      |
| B22C2              | 32C2              |                                | 20 |    |    | 2 | 2    |         | A1-90 Short coax RG-58/U, P249-0409-000, S249-0410-000; A2-Str. coax RG-58/U, P249-0257-000, S249-0258-000, #11-14, 16, 17, 26-29 open |
| 23C3               | 23C3              |                                | 20 |    |    |   | 3    |         | Basic Arrangement, Standard coax RG-7/U, P249-0365-000, S249-0366-000                                                                  |
| 23HV1              | 23C3              |                                | 20 |    |    | 2 |      | 1       | #21, 23-#8 removable; #22-HV kit 7.5K VAC: #16 wire, 20 amps                                                                           |
| G23C3              | 23C3              |                                | 28 |    |    |   | 3    |         | #21-23-str. coax RG-59/U. RG-62/U, P249-0399-000, S249-0398-000                                                                        |
| B28                | B28               |                                | 28 |    |    |   |      |         | Basic Arrangement                                                                                                                      |
| 30                 | 32C2              |                                | 28 |    |    | 2 |      |         | A1, A2-open                                                                                                                            |
| 31                 | 32C2              |                                | 28 |    |    | 3 |      |         | A1-open; A2-#8 removable                                                                                                               |
| B31C1              | 32C2              |                                | 28 |    |    | 2 | 1    |         | A1-open; A2-90 short coax, RG-58/U P249-0257-000, S249-0258-000                                                                        |
| 32                 | 32C2              |                                | 28 |    |    | 4 |      |         | A1, A2-#8 removable                                                                                                                    |
| 32C1               | 32C2              |                                | 28 |    |    | 3 | 1    |         | A1-str. coax RG-7/U, P249-0365-000, S249-0366-000 A2-#8 removable                                                                      |
| 32C1HV1            | 32C2              |                                | 28 |    |    | 2 | 1    | 1       | A1-str. coax RG-7/U, P249-0365-000, S249-0366-000<br>A2-HV kit, 7.5K VAC, #16 wire, 10 amp                                             |
| 32C2               | 32C2              |                                | 28 |    |    | 2 | 2    |         | Basic Arrangement A1, A2-str. coax RG-7/U, P249-0365-000, S249-0366-000                                                                |
| A32                | 32C2              |                                | 30 |    |    | 2 |      |         | A1, A2-#16 removable                                                                                                                   |
| E32C2              | 32C2              |                                | 28 |    |    | 2 | 2    |         | A1, A2-str. coax. RG-58/U, P249-0257-000, S249-0258-000                                                                                |
| T32C2              | 32C2              |                                | 28 |    |    | 2 | 2    |         | S/A E32C2 except RG-58/U insulated                                                                                                     |
| U32C2              | 32C2              |                                | 28 |    |    | 2 | 2    |         | A1, A2-str. coax RG-59/U, RG-62/U, P249-0399-000, S249-0398-000                                                                        |
| 40                 | 40                |                                | 40 |    |    |   |      |         | Basic Arrangement                                                                                                                      |
| A44                | A44               | 16                             | 17 |    | 6  | 5 |      |         | Basic Arrangement                                                                                                                      |
| 45                 | 45                |                                | 43 |    | 2  |   |      |         | Basic Arrangement                                                                                                                      |
| 50                 | 50                |                                | 50 |    |    |   |      |         | Basic Arrangement                                                                                                                      |
| F54                | F54               |                                | 48 | 12 |    |   |      |         | Basic Arrangement                                                                                                                      |
| 76                 | 76                | 73                             | 3  |    |    |   |      |         | Basic Arrangement                                                                                                                      |
| 78                 | 78                |                                | 78 |    |    |   |      |         | Basic Arrangement                                                                                                                      |
| C78                | 78                |                                | 78 |    |    |   |      |         | Contacts accommodate 16-20 wire DPDMA only                                                                                             |
| 90                 | 90                |                                | 90 |    |    |   |      |         | Basic Arrangement                                                                                                                      |
| 112                | 112               | 112                            |    |    |    |   |      |         | Basic Arrangement                                                                                                                      |
| 128                | 128               | 128                            |    |    |    |   |      |         | Basic Arrangement                                                                                                                      |

The contact variations shown are modifications of the basic arrangement. For variations not shown please contact your account representative.

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

## Contact Arrangements (continued)

### Contact Termination Data - Crimp contacts

| Contact Size | Type       | Part Number                  | Wire Size | Max. Wire Insul. O.D. | Crimp Tool Part Number          | Locator     | Extraction Tool Part Number | Layout/Usage                       |
|--------------|------------|------------------------------|-----------|-----------------------|---------------------------------|-------------|-----------------------------|------------------------------------|
| 20           | Pin Socket | 030-9081-000<br>031-9134-001 | 20-24     | .084 (2.13)           | M22520/1-01                     | M22520/1-02 | CET 20-8                    | 76,112, A44                        |
| 1620         | Pin Socket | 030-9123-000<br>031-9203-002 | 20-24     | .084 (2.13)           | M22520/1-01                     | Blue        | CET 16-9<br>CET 16-15       | B28, 32C2, 40, A44, F54, 45, 76 78 |
| 16           | Pin Socket | 030-9083-000<br>031-9206-003 | 16-20     | .110 (2.79)           | M22520/1-01                     | Blue        | CET 16-9<br>CET 16-15       |                                    |
| 12           | Pin Socket | 030-1909-000<br>031-1059-000 | 12-16     | .150 (3.81)           | M22520/1-01                     | Yellow      | CET 12-4                    | A44<br>F54                         |
| 30A (#10)    | Pin Socket | 030-1757-000<br>030-1758-000 | 10-12     | .206 (5.23)           | Solder<br>Pot Type Only         |             | CET 10-1                    | 45                                 |
| 40A (#8)     | Pin Socket | 030-9175-000<br>030-9176-000 | 8-10      | .250 (6.35)           |                                 |             |                             | 32C2                               |
| 8            | Pin Socket | 030-1908-000<br>030-9201-003 | 8-10      | .250 (6.35)           | CBT-600B<br>CCH-8-1<br>CCHP-8-6 |             | CET 8-2                     | A44                                |

### Contact Termination Data - Coaxial contacts

| Type       | Part Number                  | Description                            | Cable              | Layout Usage                  |
|------------|------------------------------|----------------------------------------|--------------------|-------------------------------|
| Pin Socket | 249-0365-000<br>249-0366-000 | Plug, Straight<br>Receptacle, Straight | F3                 | 15C2<br>B20C2<br>23C2<br>32C2 |
| Pin Socket | 249-0399-000<br>249-0398-000 | Plug, Straight<br>Receptacle, Straight | RG-59/U<br>RG-62/U |                               |
| Pin Socket | 249-0409-000<br>249-0410-000 | Plug, 90 Short<br>Receptacle, 90 Short | RG-58/U            |                               |
| Pin Socket | 249-0228-000<br>249-0226-000 | Plug, 90 Long<br>Receptacle, 90 Long   | RG-7/U             |                               |
| Pin Socket | 249-0229-000<br>249-0227-000 | Plug, 90 Short<br>Receptacle, 90 Short |                    |                               |
| Pin Socket | 249-1365-000<br>249-1357-000 | Plug, Solder<br>Receptacle, Solder     | RG-195/U           |                               |
| Pin Socket | 249-1333-000<br>249-1332-000 | Plug, Solder<br>Receptacle, Solder     | RG-59/U<br>RG-62/U | AN14                          |
| Pin Socket | 249-1264-000<br>249-1265-000 | Plug, Crimp<br>Receptacle, Crimp       | RG-59/U<br>RG-62/U | AN14                          |

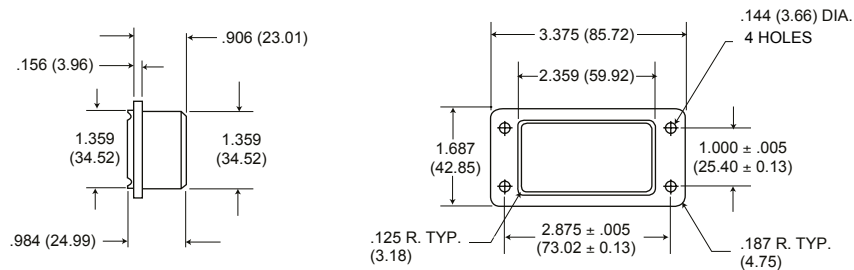
Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

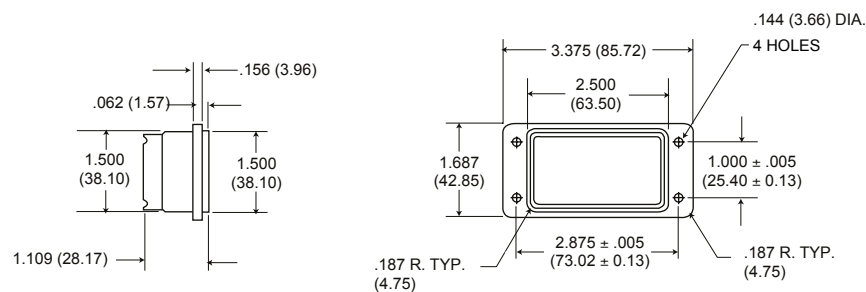
## Shell Dimensions

### Single Gang Dimensions

33 Plug



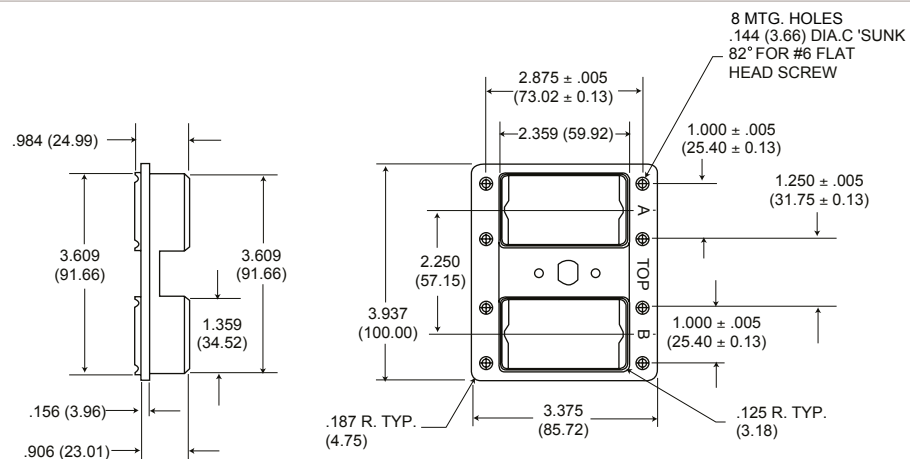
34 Receptacle



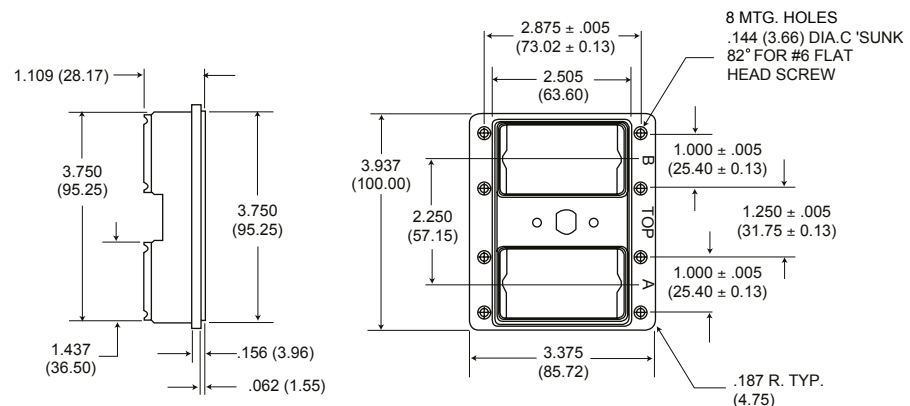
For mounting hole variations, see page 119

### Two Gang Dimensions

33 Plug



34 Receptacle



For headscrew variations, see page 119

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

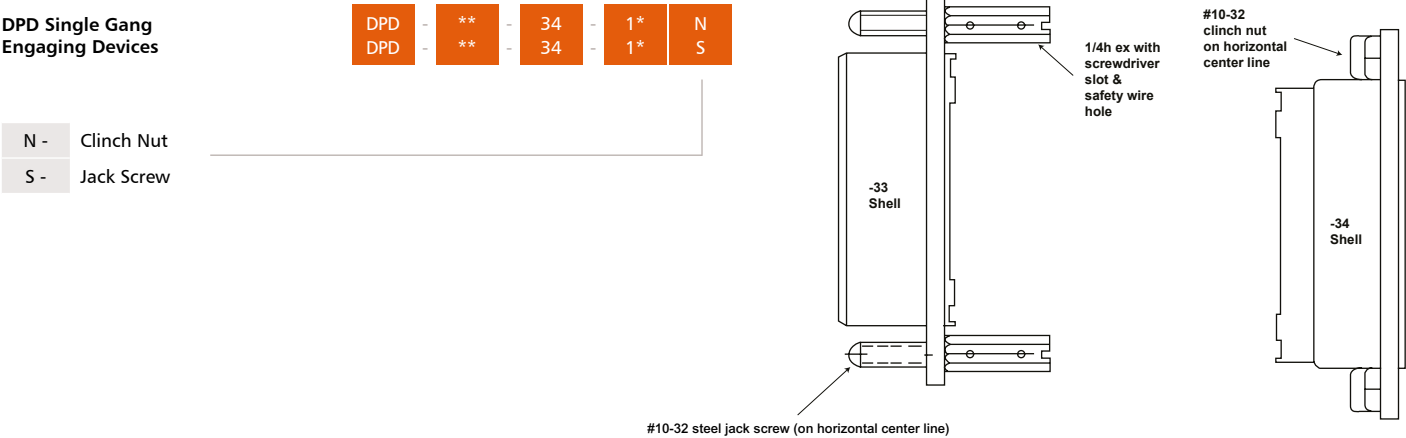
# DPD/DPDMA

## Engaging Devices

### Engaging Devices - Single Gang DPD/DPDMA

The DPD/DPDMA can be engaged by means of a No. 10-32 steel jack screw and clinch nut. This coupling device is designed to fasten connectors securely when they are used in other than standard Rack and Panel applications. The jack screws and clinch nuts are mounted on

the shell flanges at the factory. These devices may be specified on either size 33 or size 34 shells; however, it is preferred to place the jack screws on the size 33 shell and the clinch nuts on the size 34 shell. They are available for both DPD and DPDMA connectors.



### Engaging Devices – Two Gang DPD2/DPD2MA

The DPD2 is engaged by means of a variety of screw mechanisms. Engaging devices are interchangeable (within the thread group) with male or female mounting on either 33 or 34 shells. The accompanying

tabulation lists the available engaging devices, male opposite female, with which they mate.



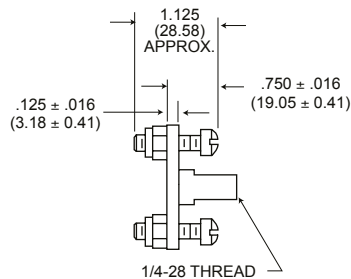
| Male Engaging Devices |                     | Female Engaging Devices |    |    |
|-----------------------|---------------------|-------------------------|----|----|
| Part Number           | Used on DPD2 DPD2MA | F                       | CF | DF |
| M                     | •                   | •                       |    |    |
| MA                    | •                   | •                       |    |    |
| CM                    | •                   |                         | •  |    |
| CMRA                  | •                   |                         | •  |    |
| DM                    | •                   |                         |    | •  |
| DM-1                  | •                   |                         |    | •  |
| DM-2                  | •                   |                         |    | •  |
| DM-3                  | •                   |                         |    | •  |
| DM-7                  | •                   |                         |    | •  |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

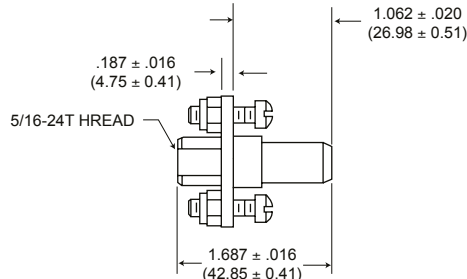
# DPD/DPDMA

## Engaging Devices (continued)

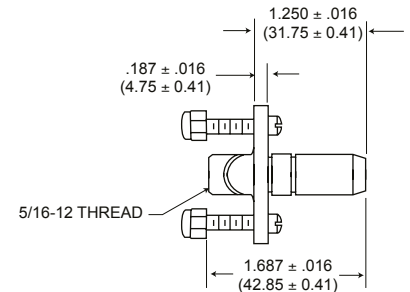
### Female Engaging Devices



P/N 013837-0010  
F  
1/4-28 UNF-2B Thread

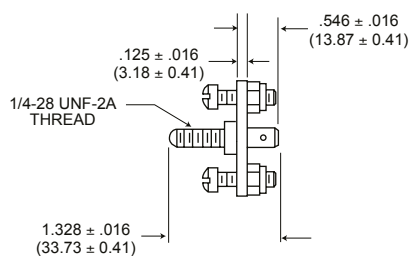


P/N 013837-0003  
CF  
5/16-24 UNF-2B Thread

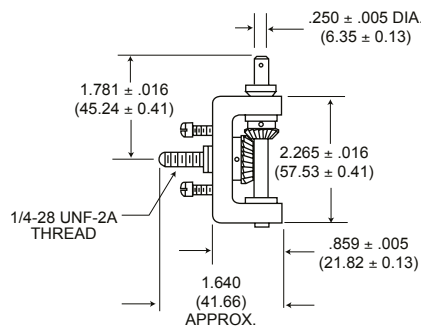


P/N 013837-0013  
DF  
5/16-12 Quad Lead Thread

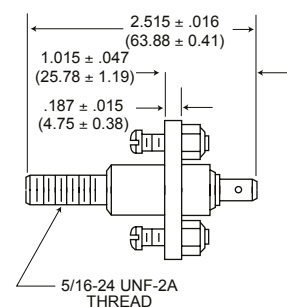
### Male Engaging Devices



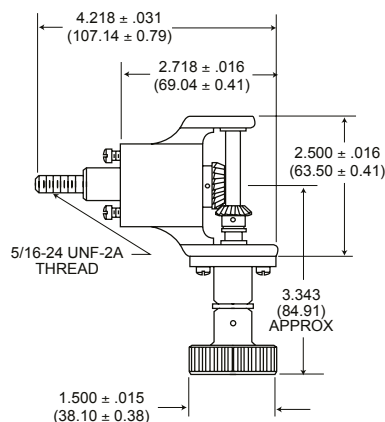
P/N 013837-0008  
M  
1/4-28 UNF-2A Thread



P/N 013837-0001  
MA  
1/4-28 UNF-2A Thread  
NOT FOR USE WITH POLARIZING POST



P/N 013837-0005  
CM  
5/16-24 UNF-2A Thread



P/N 013837-0042  
CMRA  
5/16-24 UNF-2A Thread (Ratchet Lock)

Dimensions shown in inches (mm)

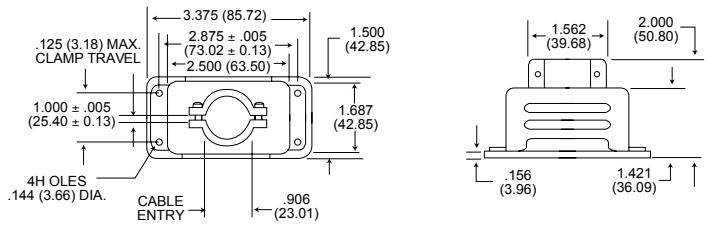
Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

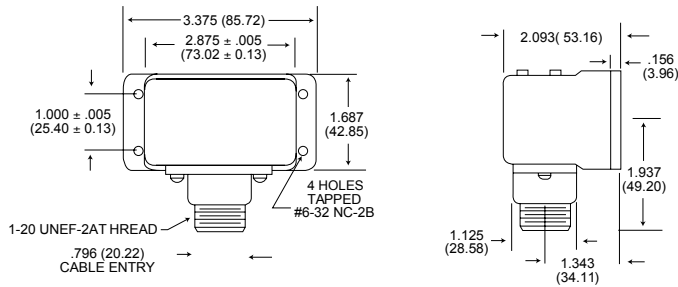
## Accessories

### DPD Junction Shells

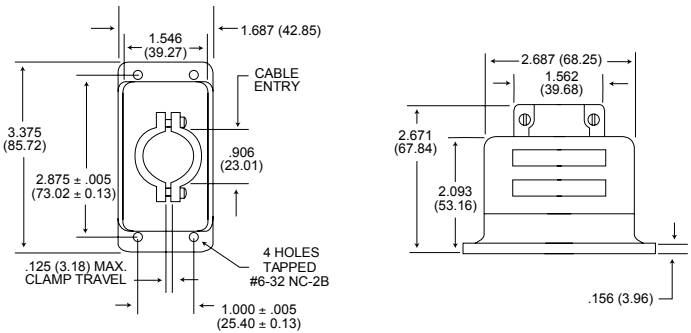
| Junction Shell               | Part Number  |
|------------------------------|--------------|
| DPD-33 Junction Shell        | 11612        |
| DPD-34 Junction Shell        | 12172        |
| DPD 90° Angle Junction Shell | 19929        |
| DPD2                         | 19941-1      |
| DPD2                         | 19941-2      |
| DPD2                         | 19941-3      |
| DPD2                         | 19941-7      |
| DPD/DPD2 Dust Cap            | 025-0585-000 |



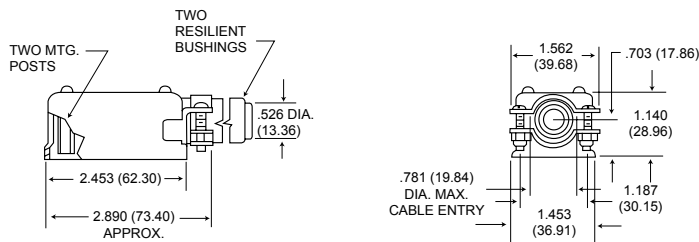
DPD-33 Junction Shell



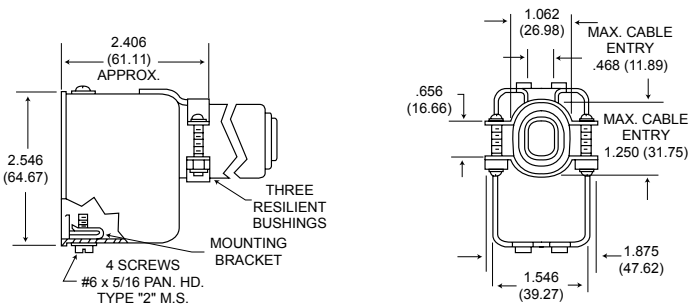
DPD-90°



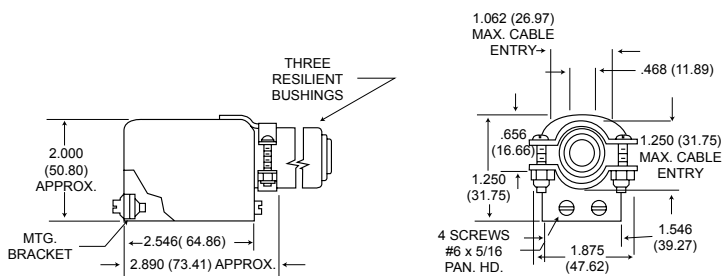
DPD-34 Junction Shell



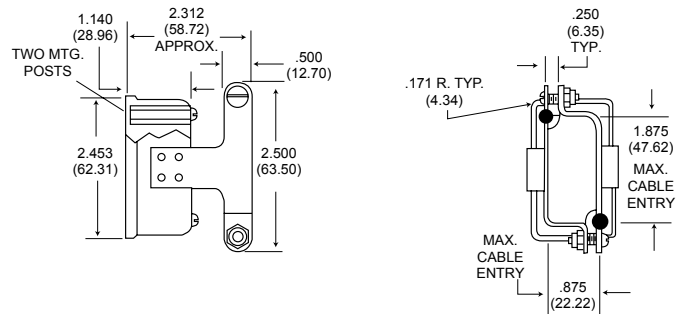
DPD2 19941-1



DPD2 19941-2



DPD2 19941-3



DPD2 19941-7

All tolerances ± .015 (0.38) unless otherwise noted.

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

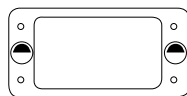
# DPD/DPDMA

## Polarization

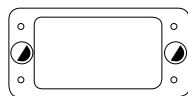
### DPD/DPDMA Polarization



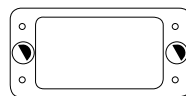
POSITION N



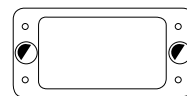
POSITION V



POSITION W



POSITION X



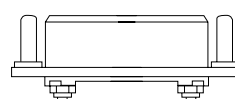
POSITION Y



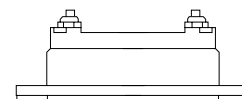
POSITION Z

Shaded area indicates extended portion of polarizing post.

DPD connectors can be supplied with polarizing posts to provide six or more alternate positions. This prevents cross plugging where two identical connectors are mounted close together. Shells with polarizing posts can be ordered by adding the desired position to the part number; for example: DPD-12C4-34P-1A-POS. Y. Polarizing positions are shown below and are face view of the 33 (plug) shell.

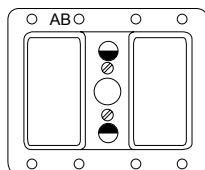


DPD 33 with  
POLARIZING POSTS

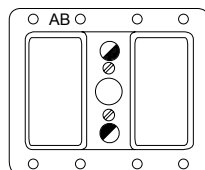


DPD 34 with  
POLARIZING KEYWAYS

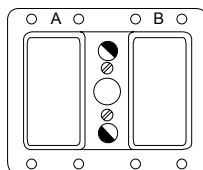
### DPD2/DPD2MA Polarization



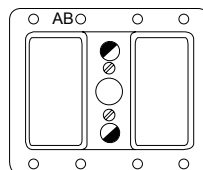
POSITION N



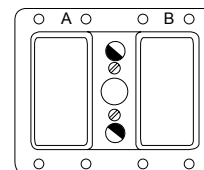
POSITION V



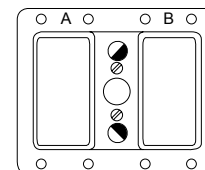
POSITION W



POSITION X



POSITION Y



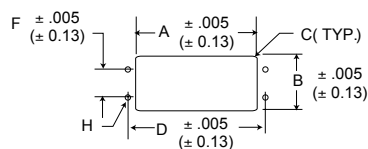
POSITION Z

Shaded area indicates extended portion of polarizing post.

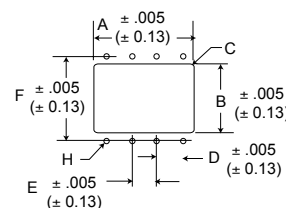
DPD2 series can be supplied with two polarizing posts to provide six or more alternate positions. This feature is designed to assist in preventing cross plugging. At present shells are modified upon request

only, by adding the desired position to the part number; e.g., DPD2-156-34PM-Pos. V. Polarizing positions shown are face view of 33 shell.

### Panel Cutouts



DPD



DPD2

| Type     | Clearance Hole               |                             |               | Mounting Hole |               |               | H Dia.      | Gap Between Flanges After Mating |
|----------|------------------------------|-----------------------------|---------------|---------------|---------------|---------------|-------------|----------------------------------|
|          | A Length Front/Rear Mounting | B Width Front/Rear Mounting | C Radius Max. | D             | E             | F             |             |                                  |
| DPD-34P  | 2.562 (65.07)                | 1.562 (39.67)               | .181 (4.60)   | 2.875 (73.02) | -             | 1.000 (25.40) | .144 (3.66) | .140 (3.56)                      |
| DPD-33S  | 2.421 (61.49)                | 1.421 (36.09)               | .125 (3.18)   |               |               |               |             |                                  |
| DPD2-34P | 3.781 (96.04)                | 2.562 (65.07)               | .187 (4.75)   | 1.000 (25.40) | 1.250 (31.75) | 2.875 (73.02) |             |                                  |
| DPD2-33S | 3.671 (93.24)                | 2.421 (61.49)               | .125 (3.18)   |               |               |               |             |                                  |

Dimensions shown in inches (mm)

Specifications and dimensions subject to change. Product images are reference only.

# DPD/DPDMA

## Assembly

### Voltage/Current Data

#### Insert Voltages/Test Results

There was no evidence of breakdown when the test voltages given were applied, for a period of one minute, between the contacts and between the shell and the contacts with spacings as noted.

| Current Carrying Capacity of Wires and Cables |          |
|-----------------------------------------------|----------|
| Wire Size                                     | Amperage |
| #4                                            | 100      |
| #6                                            | 80       |
| #8                                            | 60       |
| #10                                           | 35       |
| #14                                           | 25       |
| #16                                           | 20       |
| #20                                           | 7.5      |

#### Lab Conditions

Ambient Temperature: 23°C to 27°C (73°F to 80.6°F), Relative Humidity: 69% to 73%, Barometric Pressure: 29.70 (754.38) to 29.75 (755.65)

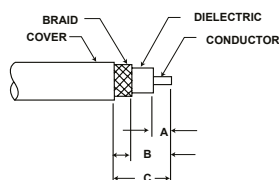
| Contact Clearance | Test Voltage 60 cps (ac rms) | Contact Clearance | Test Voltage 60 cps (ac rms) |
|-------------------|------------------------------|-------------------|------------------------------|
| 1/64 (0.40)       | 540 Volts                    | 3/16 (4.76)       | 3650 Volts                   |
| 1/32 (0.79)       | 1000 Volts                   | 13/64 (5.16)      | 3850 Volts                   |
| 3/64 (1.19)       | 1300 Volts                   | 7/32 (5.56)       | 4050 Volts                   |
| 1/16 (0.59)       | 1700 Volts                   | 15/64 (5.95)      | 4240 Volts                   |
| 5/64 (1.98)       | 2050 Volts                   | 1/4 (6.35)        | 4420 Volts                   |
| 3/32 (2.38)       | 2350 Volts                   | 19/64 (7.54)      | 4940 Volts                   |
| 7/64 (2.78)       | 2600 Volts                   | 5/16 (7.94)       | 5100 Volts                   |
| 1/8 (3.18)        | 2900 Volts                   | 3/8 (9.52)        | 5750 Volts                   |
| 9/64 (3.57)       | 3050 Volts                   | 25/64 (9.92)      | 5890 Volts                   |
| 5/32 (3.97)       | 3250 Volts                   | 13/32 (11.03)     | 6020 Volts                   |
| 11/64 (4.37)      | 3450 Volts                   | 7/16 (11.11)      | 6300 Volts                   |
|                   |                              | 1/2 (12.70)       | 6800 Volts                   |

### Stripping Instructions

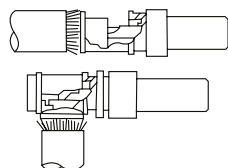
ITT Cannon recommends resistance soldering for all solder contacts, particularly for RF cable where excessive heat will damage the dielectric. Wires should be pre-tinned. Shells, bushings, endbells and junction shells (where applicable) must be slipped over wire bundles before soldering or crimping is started. The mechanical steps in wiring coaxials are described below.

#### R Coaxial (Straight and 90°)

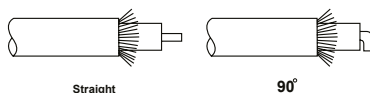
**Step 1** - Cut cable even. Trim to dimensions shown on tabulation. Care should be taken not to injure the conductor or dielectric.



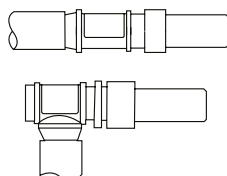
**Step 3** - Remove solder pot cover. Insert cable and solder conductor to contact. If a straight contact is used, the dielectric should but against contact solder pot.



**Step 2** - Comb braid, tin conductor and remove flux. If a 90° contact is used, bend conductor 90° after



**Step 4** - Replace solder pot cover and solder braid to ferrule.



| Coax Type        | Cable Size | A           | Trim B       | C            |
|------------------|------------|-------------|--------------|--------------|
| Straight R Coax  | RG-7/U     | .171 (4.34) | .421 (10.69) | .515 (13.08) |
|                  | RG-59/U    |             | .546 (13.87) | .671 (17.04) |
|                  | RG-62/U    |             | .543 (13.87) |              |
| 90° angle R Coax | RG-7/U     | .218 (5.54) | .312 (7.92)  | .437 (11.10) |
|                  | RG-58/U    |             |              |              |
|                  | RG-59/U    |             | .531 (13.49) | .593 (15.06) |
|                  | RG-62/U    |             |              |              |

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

# About ITT Cannon

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for the energy, transportation and industrial markets. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life. Founded in 1920, ITT is headquartered in Stamford, Connecticut, with employees in more than 35 countries and sales in a total of approximately 125 countries. For more information visit [itt.com](http://itt.com)

ITT's Cannon brand offers a product portfolio that remains one of the most extensive in the industry. Continuous investment in technology, research and investment have enabled us to provide new, innovative solutions to markets including:

- **Commercial Aerospace**
- **Military & Defense**
- **Industrial**
- **Medical**

When you specify an ITT Cannon interconnect solution, you can depend on products that are designed, developed, and manufactured to the highest standards of quality and reliability. This tradition of excellence is rooted in ITT's corporate culture, which is built on the principles of Six Sigma.

At ITT, Six Sigma is more than a quality philosophy—it is a company-wide discipline that drives continuous improvement across every aspect of the business. Our Value-Based Management and Value-Based Product Development systems serve as key foundations, supporting the advancement of both leadership and engineering excellence.

## Six Sigma Manufacturing

Cannon operates manufacturing facilities in the United States, Germany, Italy, Mexico, China, and Japan, all of which have particular product area strengths that allow ITT Cannon to offer a truly global presence to our customers. Our facilities are world class and accommodate full vertical integration, utilizing the latest manufacturing technologies including automated and robotic machining centers, Super Market manufacturing cells, Kanban pull systems, and automated electrical, mechanical, and optical test and inspection equipment. The combination of our manufacturing strength and our advanced manufacturing facilities allows Cannon to offer products at market driven prices. Our capabilities, especially in robotics, computerized precision tooling, Kaizen Project Management, Six Sigma tools and testing give Cannon the most optimized global manufacturing footprint in the interconnect industry.

## The Custom Difference

As an industry leader in harsh environment interconnect applications, Cannon's world class engineering teams work directly with our customers to design and develop cost-effective solutions for their applications. In many cases we may modify one of our standard designs to ensure a highly reliable solution where timing is critical. When custom connectors are required, we collaborate with clients and partners with a goal to design the most reliable, cost-effective solution possible. Our engineering and product management teams provide a thorough analysis of proposed solutions, ensuring our customers receive the right solution for their program and application needs.

## RoHS Compliance Information

Cannon has implemented a rigorous parts control plan across all its electronics manufacturing facilities worldwide, ensuring that the Cannon product portfolio meets the requirements of European Union Directive 2002/95/EC—commonly known as the Restriction of Hazardous Substances (RoHS) directive.

Where applicable, specific Cannon products may be ordered with an R-prefix part number, ensuring delivery of RoHS-compliant components for commercial electronics applications and equipment.

As most RoHS-restricted substances are related to metal plating and lead-based solder coatings, Cannon offers RoHS-compliant products with the following plating finishes: electroless nickel, stainless steel, anodized aluminum, and gold plating. For board-mount connectors, gold plating is recommended as the preferred alternative to traditional tin-lead solder finishes.



# Product Safety Information

THIS NOTE MUST BE READ IN CONJUNCTION WITH THE PRODUCT DATA SHEET/CATALOG. FAILURE TO OBSERVE THE ADVICE IN THIS INFORMATION SHEET AND THE OPERATING CONDITIONS SPECIFIED IN THE PRODUCT DATA SHEET/ CATALOG COULD RESULT IN HAZARDOUS SITUATIONS.

## 1. MATERIAL CONTENT AND PHYSICAL FORM

Electrical connectors do not usually contain hazardous materials. They contain conducting and non-conducting materials and can be divided into two groups.

- a) Printed circuit types and low cost audio types which employ all plastic insulators and casings.
- b) Rugged, Fire Barrier and High Reliability types with metal casings and either natural rubber, synthetic rubber, plastic or glass insulating materials. Contact materials vary with type of connector and also application and are usually manufactured from either: Copper, copper alloys, nickel, alumel, chromel or steel. In special applications, other alloys may be specified.

## 2. FIRE CHARACTERISTICS AND ELECTRIC SHOCK HAZARD

There is no fire hazard when the connector is correctly wired and used within the specified parameters. Incorrect wiring or assembly of the connector or careless use of metal tools or conductive fluids, or transit damage to any of the component parts may cause electric shock or burns. Live circuits must not be broken by separating mated connectors as this may cause arcing, ionization and burning. Heat dissipation is greater at maximum resistance in a circuit. Hot spots may occur when resistance is raised locally by damage, e.g. cracked or deformed contacts, broken strands of wire. Local overheating may also result from the use of the incorrect application tools or from poor quality soldering or slack screw terminals. Overheating may occur if the ratings in the product Data Sheet/Catalog are exceeded and can cause breakdown of insulation and hence electric shock. If heating is allowed to continue it intensifies by further increasing the local resistance through loss of temper of spring contacts, formation of oxide film on contacts and wires and leakage currents through carbonization of insulation and tracking paths. Fire can then result in the presence of combustible materials and this may release noxious fumes. Overheating may not be visually apparent. Burns may result from touching overheated components.

## 3. HANDLING

Care must be taken to avoid damage to any component parts of electrical connectors during installation and use. Although there are normally no sharp edges, care must be taken when handling certain components to avoid injury to fingers. Electrical connectors may be damaged in transit to the customers, and damage may result in creation of hazards. Products should therefore be examined prior to installation/use and rejected if found to be damaged.

## 4. DISPOSAL

Incineration of certain materials may release noxious or even toxic fumes.

## 5. APPLICATION

Connectors with exposed contacts should not be selected for use on the current supply side of an electrical circuit, because an electric shock could result from touching exposed contacts on an unmated connector. Voltages in excess of 30 V ac or 42.5 V dc are potentially hazardous and care should be taken to ensure that such voltages cannot be transmitted in any way to exposed metal parts of the connector body. The connector and wiring should be checked, before making live, to have no damage to metal parts or insulators, no solder blobs, loose strands, conducting lubricants, swarf, or any other undesired conducting particles. Circuit resistance and continuity check should be made to make certain that there are no high resistance joints or spurious conducting paths. Always use the correct application tools as specified in the Data Sheet/Catalog. Do not permit untrained personnel to wire, assemble or tamper with connectors. For operation voltage please see appropriate national regulations.

## IMPORTANT GENERAL INFORMATION

(i) Air and creepage paths/Operating voltage. The admissible operating voltages depend on the individual applications and the valid national and other applicable safety regulations. For this reason the air and creepage path data are only reference values. Observe reduction of air and creepage paths due to PC board and/or harnessing.

(ii) Temperature

All information given are temperature limits. The operation temperature depends on the individual application.

(iii) Other important information

Cannon continuously endeavors to improve their products. Therefore, Cannon products may deviate from the description, technical data and shape as shown in this catalog and data sheets.

All data subject to change without notice.



## Notes

Dimensions shown in inches (mm)  
Specifications and dimensions subject to change. Product images are reference only.

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## Why ITT

ITT is a focused multi-industrial company that designs and manufactures highly engineered critical components and customized technology solutions. ITT's Cannon brand is a leading global manufacturer of connector products serving international customers in aerospace, defense, medical, industrial and transportation end markets. ITT's Connector business, which also includes the Veam and BIW Connector Systems brand, manufactures and supplies a variety of connectors and interconnects that make it possible to transfer data, signal and power in an increasingly connected world.

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