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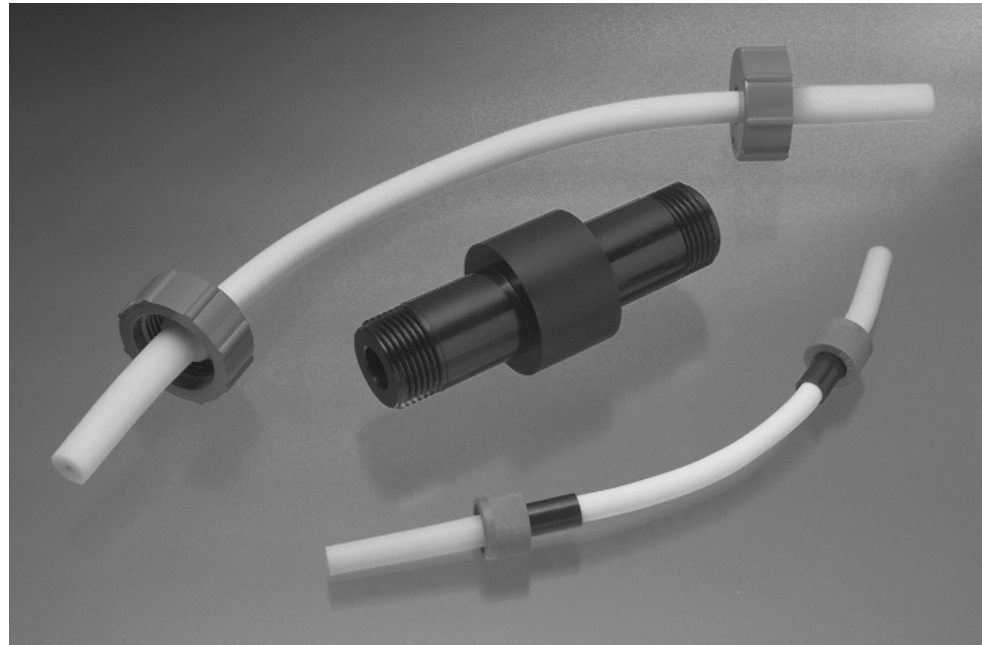
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## Introduction

### Product Facts

- No exposed high voltage parts
- Space saving — maximum performance from small size and weight
- Fast connect and disconnect
- Wide temperature range — -67°F to +257°F [-55°C to +125°C], continuous
- Positive mating of lead into receptacle
- Hermetically sealed
- RFI shielding — optional
- Fungus, moisture, oil, and chemical resistant
- High altitude operation — at any altitude without voltage derating
- Excellent mechanical strength — resists vibration and shock
- High dielectric strength
- Preamsembled — no tools required
- High reliability — operates under extreme environmental conditions
- Unaffected by ultra-violet light
- Corona resistant — virtually unaffected by ozone or corona
- Radiation resistant
- Lead wire remains flexible to -67°F [-55°C]
- Non-toxic insulation — does not give off toxic fumes when burned
- Excellent shelf life
- Meets applicable military specifications
- Color coded for easy identification
- Quick, easy installation



The development of high voltage hermetically sealed connectors and LGH High Voltage Lead Assemblies and Receptacles represents two major advances in the science of high voltage application — both pioneered by Tyco Electronics. As a result of this technological advantage, Tyco Electronics is the leading manufacturer of high voltage, high altitude, high temperature lead assemblies and connectors.

In the field of high voltage application, Tyco Electronics

has conducted extensive research, development, quality studies and reliability programs yielding numerous standard products for military and industrial high voltage applications.

LGH High Voltage Lead Assemblies and Receptacles are used in many systems' designed to meet or exceed military specifications. A sampling of specifications to which samples of these products have been tested, is listed to the right.

For more information contact Tyco Electronics.

### LGH Test Methods and Conditions

LGH Leads and Receptacles, LGH 1/4 through LGH 4

**Product Spec.** — 108-36033  
EIA RS-364

### Electrical

**Dielectric Withstanding Voltage** — EIA-364-20 Condition I (MS202, Method 301)

**Insulation Resistance** — EIA-364-21, (MS202, Method 302)

### Mechanical

**Vibration, Sinusoidal** — EIA-364-28, Test Condition I, (MS202, Method 201)

**Shock** — EIA-364-27, Method H

### Environmental

**Barometric Pressure** — Sea Level to 70,000 feet, MIL-Std-202, Method 105, Condition C

**Thermal Shock** — EIA-364-32, 5 cycles -67°F to +257°F [-55°C to +125°C]

### Lead Assemblies and Receptacles

#### Voltage Ratings

The voltage ratings tabulated here and noted elsewhere apply to LGH molded-end lead assemblies properly mated with appropriate LGH receptacles, which are properly potted or otherwise protected on the back end.

**LGH Lead Assemblies** are manufactured with a silicone rubber end having a specified mating length (see above table) molded onto a 16 AWG white silicone rubber wire. These assemblies provide extreme reliability and safety for high voltage applications in severe environments.

**Minimum Bend Radii, nominal**, for cables without additional covering over silicone insulation and for shielded cable.

LGH Series	Insulation Type	
	Standard	Shielded
¼, ½, ¾L	.25 6.4	.75 19.0
1, 1L, 3	.50 12.7	1.00 25.4
2, 4	1.00 25.4	1.50 38.1

#### Maximum Conductor Resistance

All Series	4.75 ohms/1000 ft. 15.6 ohms/1000m.
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## LGH High Voltage Connectors

### Introduction (Continued)

LGH leads and receptacles find wide application where high voltage is used in harsh environments. LGH leads and receptacles are lightweight, miniature, extremely reliable and they maintain peak performance under high temperature, high altitude applications. They are equally applicable to low temperature, low altitude devices.

Leads and receptacles shown on the following pages are commonly used items. Hundreds of variations of these products are available, as well as custom-made units. Consult Tyco Electronics for information on high voltage connectors for applications not satisfied by components listed here.

When ordering LGH items: identify item, list AMP part number, and specify quantity. Note: Special packaging, special marking and/or special testing of LGH leads and receptacles are available on request, as well as custom-made assemblies. Consult Tyco Electronics for details.

LGH Series	Mating Length/Depth	Normal Capacitance		Wire Size	Operating Voltage* Kilovolts DC	3 Min. Hipot** Kilovolts DC
		pF/ft.	pF/m			
LGH ¼	.25 [6.35]	***	—	22 AWG	5	7.5
LGH ½	.53 [13.46]	55	180	16 AWG	10	15
LGH ¾L	.89 [22.61]	55	180	16 AWG	15	23
LGH 1	.88 [22.35]	35	115	16 AWG	20	30
LGH 1L	1.69 [42.93]	35	115	16 AWG	25	38
LGH 2	1.44 [36.58]	28	144	16 AWG	30	45
LGH 3	1.81 [45.97]	35	115	16 AWG	40	55
LGH 4	2.00 [50.80]	28	144	16 AWG	50	60

\*Sea level to 70,000 ft. [21,336 m], -55°C to +125°C [-67°F to +257°F].

\*\*Sea level at 25°C (77°F).

\*\*\*LGH ¼ is not shielded

#### Specifications

**Lead Length Tolerance (including pigtail)** — Lengths to 24 [609.6], ±.125 [3.28]; 24 [609.6] and longer, ±1% of length.

**Lead Insulation** — Silicone rubber, durometer reading 60 to 70 (reference MIL-W-16878/8, Type FF); color, white. Lead assemblies with other colors and insulation materials such as PVC and Teflon can be manufactured on request.

**Conductors (per MIL-W-16878/8)** — LGH ¼, LGH ½L, LGH 1, LGH 1L and LGH

3 lead assemblies contain 41 strands minimum of 32 AWG [0.03 mm<sup>2</sup>] wire, silver plated, to compose a 16 AWG [1.25 mm<sup>2</sup>] stranded conductor .06 nominal O.D. [1.5]; LGH 2 and LGH 4 lead assemblies contain 19 strands minimum of 29 AWG [0.07 mm<sup>2</sup>] wire, silver plated, to compose a 16 AWG [1.25 mm<sup>2</sup>] stranded conductor .06 nominal O.D. [1.5]. Silver plating is per ASTM-B298-58T.

**Pigtail** — Solder dipped

**Socket** — Bronze per ASTM-140, alloy B, gold plated per MIL-G-45204,

Type II, (0.000030 [0.00076] gold over 0.000030 [0.00076] nickel per QQ-N-290). Socket is crimped to lead wire.

**Cap Materials** — Polycarbonate glass-filled polyester or glass-filled epoxy.

**Molded End** — Silicone rubber per ZZ-R-765, Class IIa and IIb, grade 60.

**Positive Stop Ferrule** — Glass-filled polyester

**Marking** — Per MIL-STD-130

**Washer** — TFE, electrical grade

#### LGH ¼ - 22 AWG (19/34)



Single End Lead Assembly



Single End Lead Assembly with Positive Stop Ferrule



Shielded Lead Assembly



RFI Shielded Lead Assembly

**LGH Receptacles** are manufactured in molded glass epoxy having a specified mating depth (see table on previous page). When used with LGH lead assemblies they offer the ultimate in dependability, even under harsh environmental conditions. Typical receptacles are shown here. Specific units, with part numbers, are shown by series in the following pages.

### LGH Receptacles for Canned Units

These receptacles are for hermetically sealed, gas- or oil-filled units, and they are recommended for canned units filled with potting compound.\*

\*CAUTION: Follow manufacturer's instructions on preparing and handling potting. LGH voltage ratings apply only when a proper bond is achieved between the back end of the receptacle and the compound.

### LGH Receptacles for Cast or Encapsulated Units

These units are for use where no metal can is required.

### Specifications (All units)

**Pin Assembly** — Brass per ASTM-B-16 and QQ-B-626; tin plated per MIL-T-10727, Type I or II, .00010" min. thickness.\*

**Body** — Molded glass-filled epoxy

**Marking** — Per MIL-STD-130

### (Canned units only)

**Solder Flange** — Brass per ASTM-B-16 and QQ-B-626; tin plated per MIL-T-10727, Type I or II, .00010" min. thickness

**Hermeticity** — Leak rate less than  $1 \times 10^{-8}$  cc He/sec. per MIL-STD-202, Method 112B, Cond. C.

\*Hermetically sealed receptacles are plated after molding therefore we cannot guarantee the minimum thickness of copper under plating .000100 [0.00254] on the mating end of the pin contact.



Glass-epoxy receptacle for encapsulated units



Glass-epoxy receptacle for splice application



Hermetically sealed, glass-epoxy receptacle for canned units



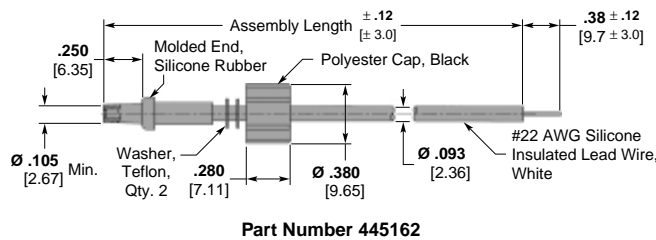
Glass-epoxy, flanged receptacle for bulkhead splice applications



Glass-epoxy, flanged receptacle for bulkhead applications

## LGH Lead Assemblies and Receptacles, 5 KVDC, LGH 1/4

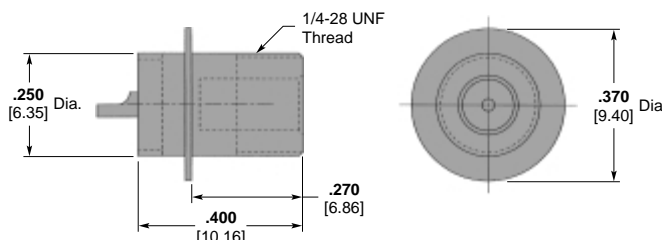
### Single End Lead Assemblies



Part Number 445162

Assembly Length	Part Number
6.0	445162-1
152.4	445162-2
12.0	445162-3
304.8	445162-3
18.0	445162-4
457.2	445162-4
24.0	445162-4
609.6	445162-4

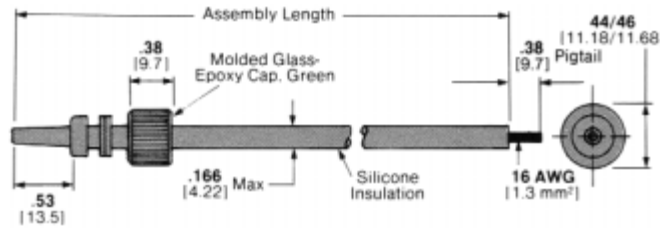
### Receptacle, Metal Flange



Part Number 445159-1

LGH Lead Assemblies and Receptacles, 10 KVDC, LGH 1/2

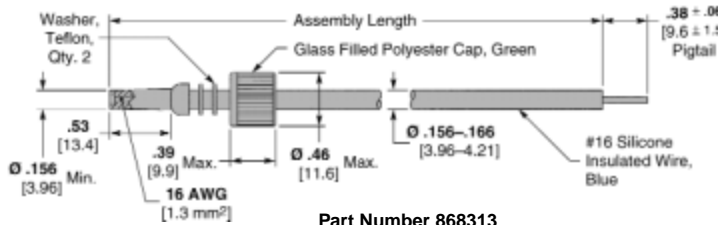
Single End Lead Assemblies



Part Number 830611

Assembly Length	Part Number
6.0 152.4	2-830611-1
12.0 304.8	4-830611-8
18.0 457.2	2-830611-5
24.0 609.6	830611-1
36.0 914.4	1-830611-0
48.0 1219.2	2-830611-3

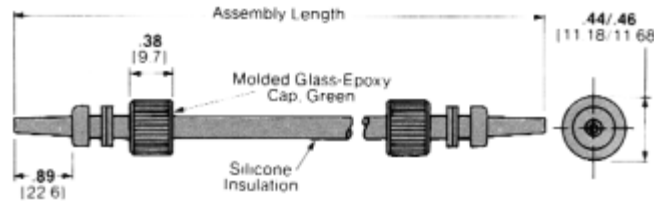
Single Molded End Lead Assemblies



Part Number 868313

Assembly Length	Part Number
24.0 609.6	868313-3

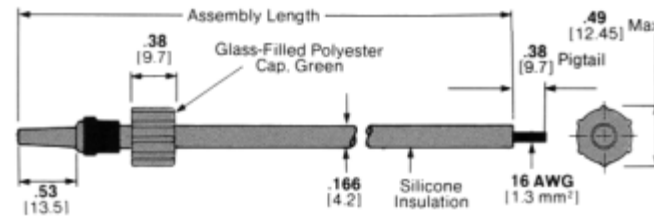
Double End Lead Assemblies



Part Number 830612

Assembly Length	Part Number
6.0 152.4	830612-3
12.0 304.8	830612-2
18.0 457.2	830612-8
24.0 609.6	830612-1
36.0 914.4	2-830612-6
48.0 1219.2	830612-4

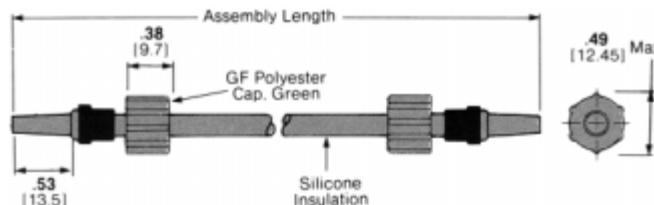
Single End Lead Assemblies with Positive Stop Ferrules



Part Number 862545

Assembly Length	Part Number
6.0 152.4	862545-1
12.0 304.8	862545-4
18.0 457.2	862545-6
24.0 609.6	862545-8
36.0 914.4	1-862545-8
48.0 1219.2	1-862545-1

Double End Lead Assemblies with Positive Stop Ferrules



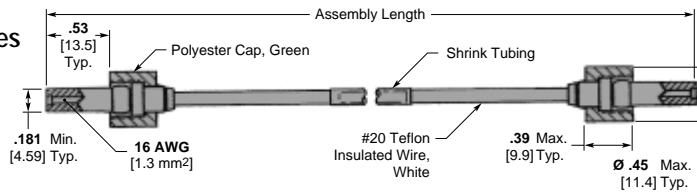
Part Number 862546

Assembly Length	Part Number
6.0 152.4	862546-1
12.0 304.8	862546-4
18.0 457.2	862546-6
24.0 609.6	862546-8
36.0 914.4	1-862546-0
48.0 1219.2	1-862546-5

**Note:** Standard length leads are tabulated here. Tyco Electronics can make available numerous variations in lengths and material to suit almost any application. Choices of insulation materials include TEFLON, UL listed silicone and UL listed PVC. Other materials, colors, wire and configurations can be used in manufacture. For more information, consult Tyco Electronics.

LGH Lead Assemblies and Receptacles, 10 KVDC, LGH 1/2 (Continued)

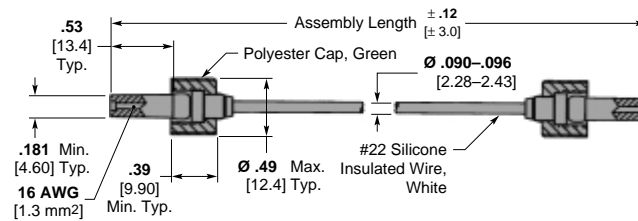
Double End Lead Assemblies with Positive Stop Ferrules with Teflon Wire



Part Number 860529

Assembly Length	Part Number
6.0 152.4	860529-2
7.0 177.8	860529-6
10.0 254.0	860529-8
13.0 330.2	1-860529-0
16.0 406.4	860529-4

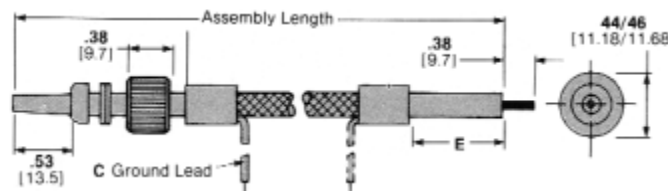
Double End Lead Assemblies with Positive Stop Ferrules with #22 Wire



Part Number 449578

Assembly Length	Part Number
11.0 ±.12 279.4 ± 3.0	449578-1

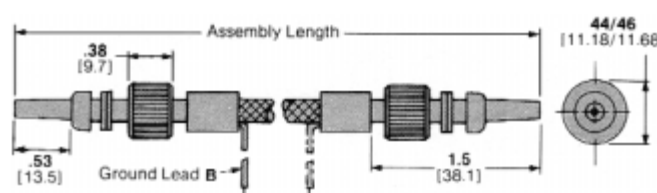
Shielded Single End Lead Assemblies with Ground Lead



Part Number 846985

Assembly Length	Dims.		Part Number
	C	E	
12.0 304.8	6.0 152.4	2.0 50.8	846985-9
18.0 457.2	6.0 152.4	1.5 38.1	2-846985-2
24.0 609.6	6.0 152.4	1.5 38.1	2-846985-3
36.0 914.4	12.0 304.8	2.0 50.8	1-846985-8

Shielded Double End Lead Assemblies with Ground Lead

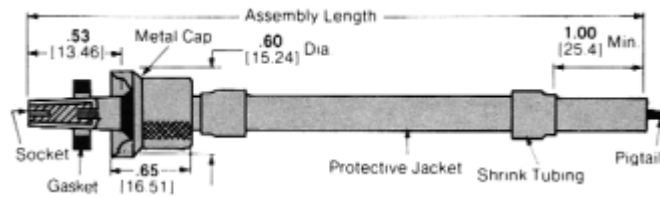


Part Number 858885

Assembly Length	Dim.		Part Number
	B		
12.0 304.8	8.0 203.2		858885-3
18.0 457.2	6.0 152.4		2-858885-7
24.0 609.6	8.0 203.2		858885-4
36.0 914.4	6.0 152.4		2-858885-5
48.0 1219.2	6.0 152.4		858885-6

LGH Lead Assemblies and Receptacles, 10 KVDC, LGH 1/2 (Continued)

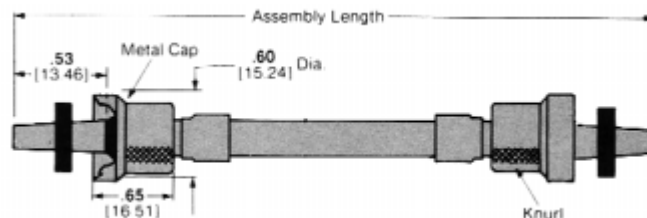
RFI Shielded Single End Lead Assemblies\*



Part Number 861807

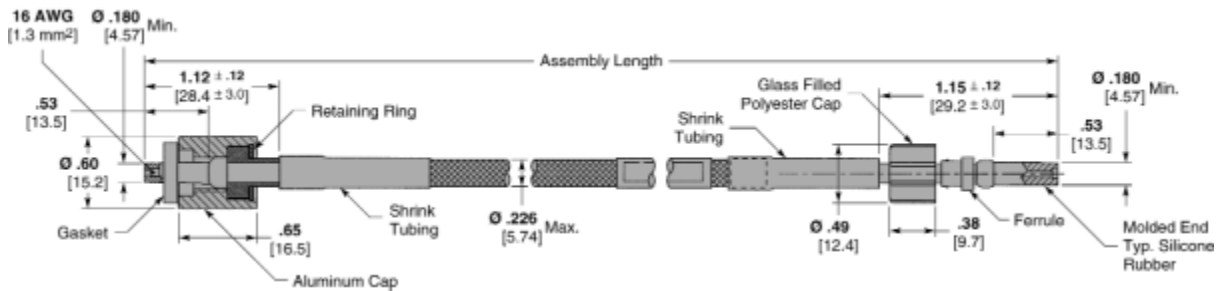
Assembly Length	Part Number
12.0 304.8	861807-1
18.0 457.2	861807-2
24.0 609.6	861807-7
36.0 914.4	861807-9

RFI Shielded Double End Lead Assemblies\*



Part Number 861808

Assembly Length	Part Number
12.0 304.8	861808-1
18.0 457.2	861808-9
24.0 609.6	1-861808-0
36.0 914.4	1-861808-2
48.0 1219.2	1-861808-6



Part Number 863330-1

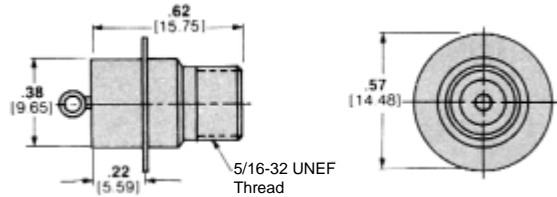
Assembly Length	Part Number
18.0 457.2	863330-1

\* These RFI Shielded Lead Assemblies mate with Receptacle Part Number 861252-1.

**Glass-Epoxy Receptacles with .53 [13.46] Barrel Depth**

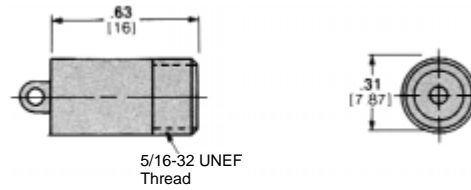
Flanged, for Hermetic Seal  
Part Number 861252-1

Weight — 2 grams



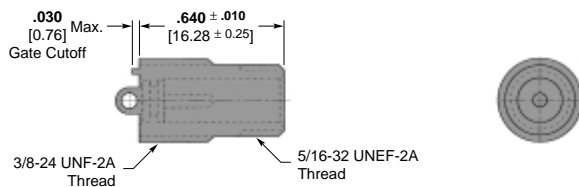
**For Encapsulated Units  
Part Number 830178-1**

Weight — 1.2 grams



Receptacles are available with gold plated contacts.

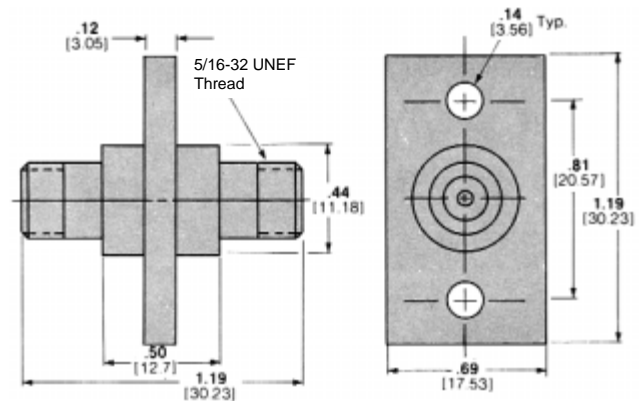
**Special Receptacle  
Part Number 448462-1**



Note: Receptacle will accept a LGH-1/2 lead with a .53 [13.5] molded end length.

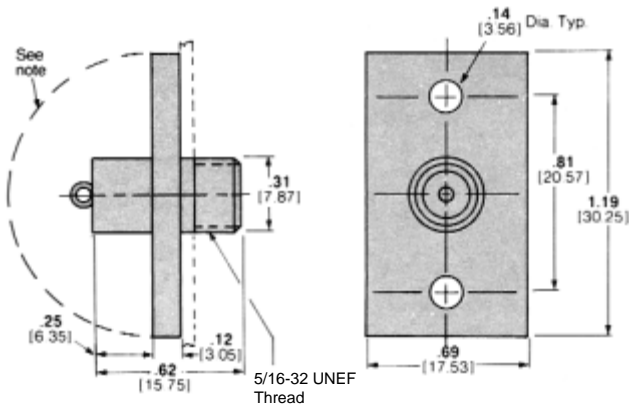
**Bolt-mount, Feed-through  
Part Number 830174-1**

Weight — 5.8 grams



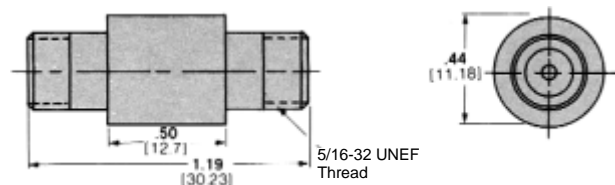
**Flanged, Bolt Mount  
Part Number 830395-1**

Weight — 4.2 grams



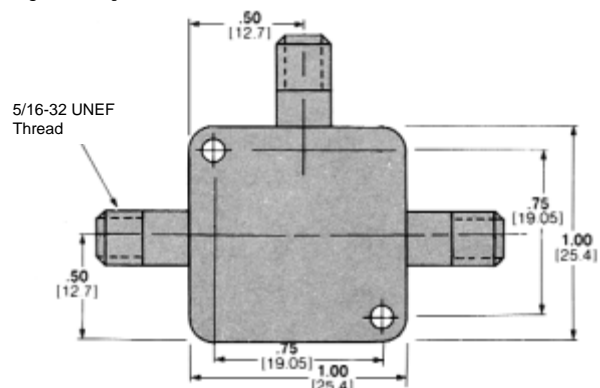
**Splice  
Part Number 830177-1**

Weight — 3.5 grams

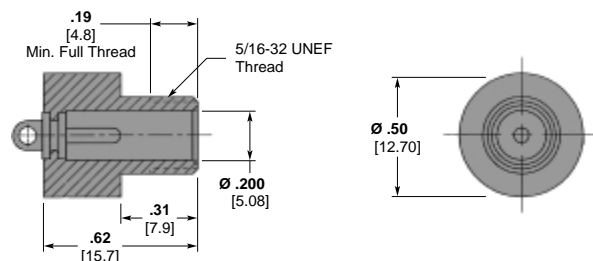


**T Connector  
Part Number 849418-1**

Weight — 15 grams



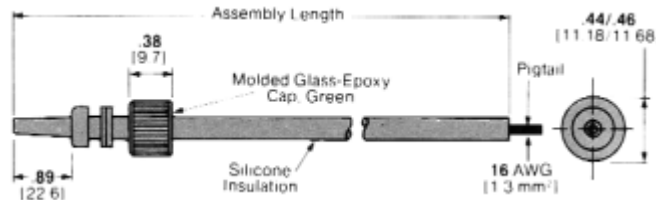
**Receptacle  
Part Number 830200-1**



Note: Receptacle to mate with AMP LGH-1/2 Lead Assembly.

LGH Lead Assemblies and Receptacles, 15 KVDC, LGH 1/2 L

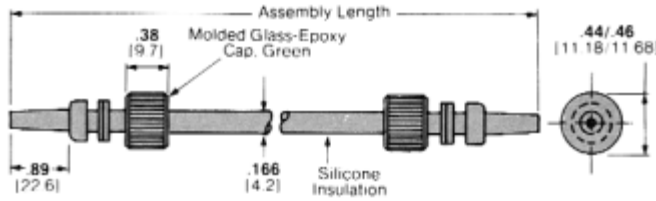
Single End Lead Assemblies



Part Number 830613

Assembly Length	Part Number
6.0 152.4	1-830613-0
12.0 304.8	830613-2
18.0 457.2	1-830613-2
24.0 609.6	830613-1
36.0 914.4	830613-7
48.0 1219.2	1-830613-4

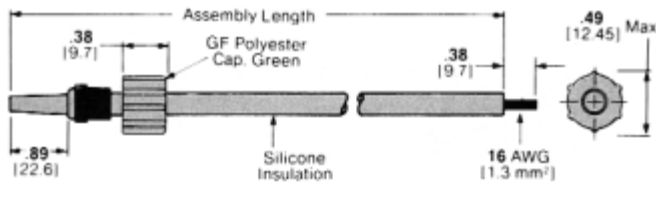
Double End Lead Assemblies



Part Number 830614

Assembly Length	Part Number
6.0 152.4	1-830614-5
12.0 304.8	830614-2
18.0 457.2	830614-3
24.0 609.6	830614-1
36.0 914.4	1-830614-6
48.0 1219.2	2-830614-5

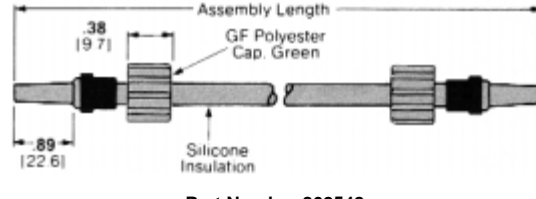
Single End Lead Assemblies with Positive Stop Ferrules



Part Number 862547

Assembly Length	Part Number
6.0 152.4	862547-1
12.0 304.8	862547-4
18.0 457.2	862547-6
24.0 609.6	862547-8
36.0 914.4	862547-9
48.0 1219.2	1-862547-9

Double End Lead Assemblies with Positive Stop Ferrules



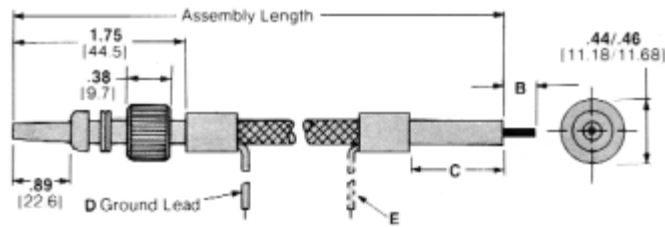
Part Number 862548

Assembly Length	Part Number
6.0 152.4	862548-1
12.0 304.8	862548-4
18.0 457.2	862548-6
24.0 609.6	862548-8
36.0 914.4	1-862548-6
48.0 1219.2	1-862548-4

High Voltage Connectors

#### LGH Lead Assemblies and Receptacles, 15 KVDC, LGH 1/2 L (Continued)

#### Shielded Single End Lead Assemblies



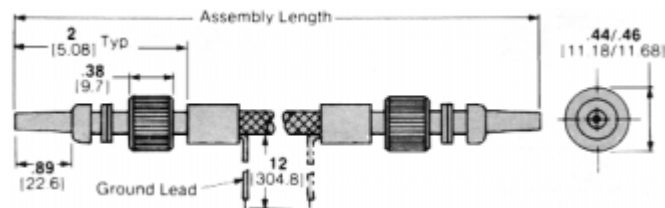
Part Number 858886

Assembly Length	Terminated End		Pigtail End		Part Number
	Ground Lead Length(s) D & E	C	Pigtail Length B		
12.0 304.8	8.0 203.2†	1.5 38.1	.25 6.4		858886-2
18.0 457.2	8.0 203.2	3.0 76.2	.38 9.7		1-858886-4
24.0 609.6	12.0 304.8	3.0 76.2	.38 9.7		1-858886-8
36.0 914.4	12.0 304.8*	6.0 152.4	.38 9.7		858886-1
	8.0 203.2†	3.0 76.2	.38 9.7		858886-6

\*One ground lead, pigtail end only.

†One ground lead, terminated end only.

#### Shielded Double End Lead Assemblies

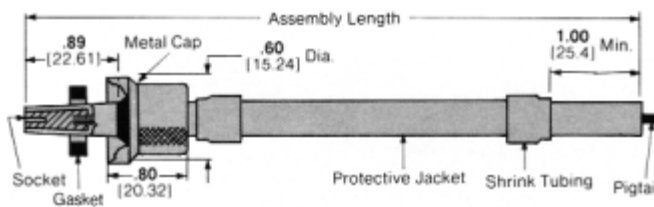


Part Number 858945

Assembly Length	Part Number
12.0 304.8	1-858945-6
18.0 457.2	1-858945-5*
24.0 609.6	2-858945-1
36.0 914.4	858945-3
48.0 1219.2	1-858945-4

\*Two ground leads, 12.0 [304.8] each.

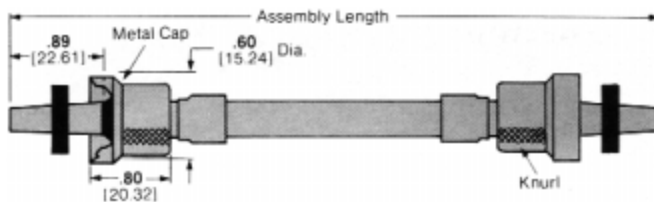
#### RFI Shielded Single End Lead Assemblies\*



Part Number 861809

Assembly Length	Part Number
12.0 304.8	861809-1
18.0 457.2	861809-4
24.0 609.6	861809-5
36.0 914.4	861809-6

#### RFI Shielded Double End Lead Assemblies\*



Part Number 861810

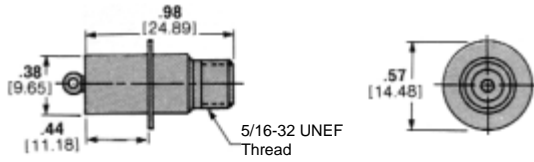
Assembly Length	Part Number
12.0 304.8	861810-1
18.0 457.2	861810-6
24.0 609.6	861810-7
36.0 914.4	861810-9

\* These RFI Shielded Lead Assemblies mate with Receptacle Part Number 861253-1.

**Glass-Epoxy Receptacles with .89 [22.61] Barrel Depth**

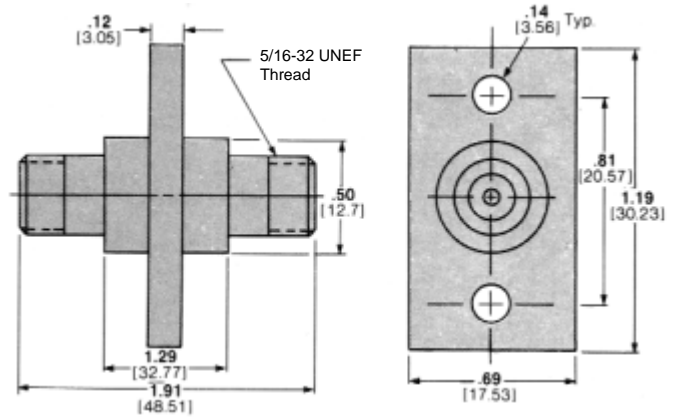
Flanged, For Hermetic Seal  
Part Number 861253-1

Weight — 3 grams



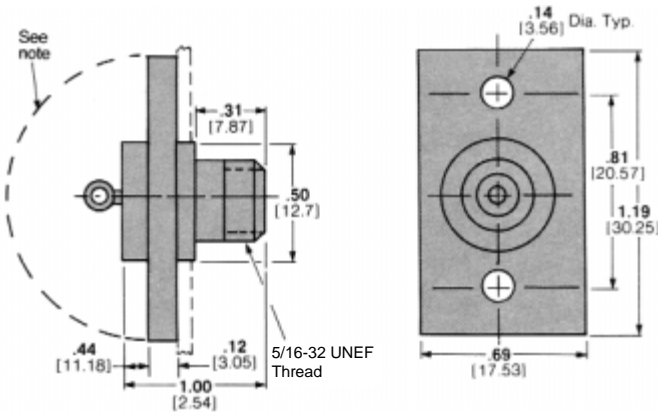
**Bolt-Mount, Feed-Through**  
Part Number 858856-1

Weight — 14 grams



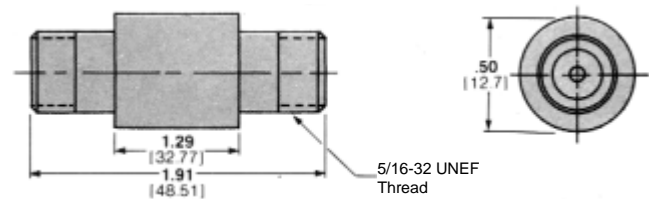
**Flanged, Bolt Mount**  
Part Number 858857-1

Weight — 6 grams



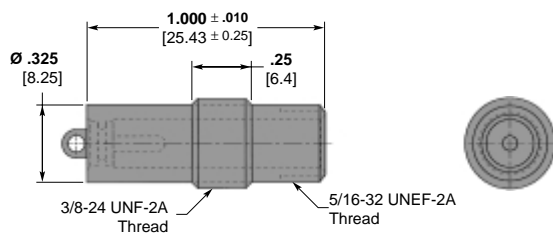
**Splice**  
Part Number 858082-1

Weight — 10.5 grams



**Note:** If the panel or mounting hardware is at ground potential, guard against arc-over and breakdown within the area defined by this line.

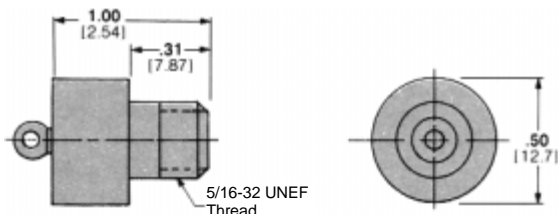
**Special Receptacle**  
Part Number 448464-1



**Note:** Receptacle will accept a LGH-1/2L lead with a .89 [22.6] molded end length.

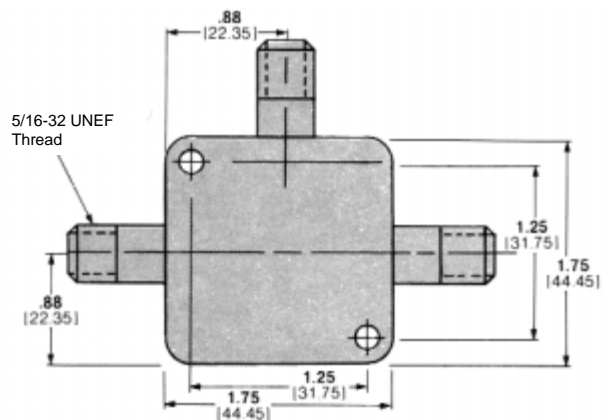
**For Encapsulated Units**  
Part Number 858855-1

Weight — 3 grams



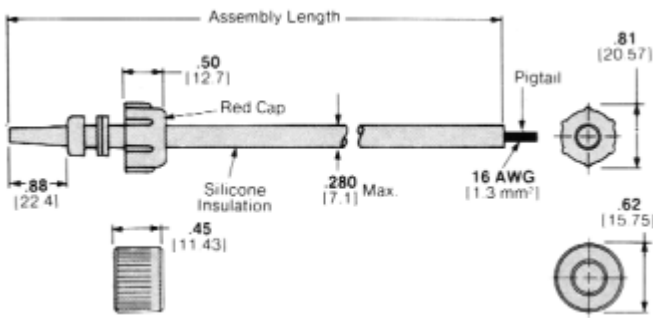
**T Connector**  
Part Number 850736-1

Weight — 23 grams



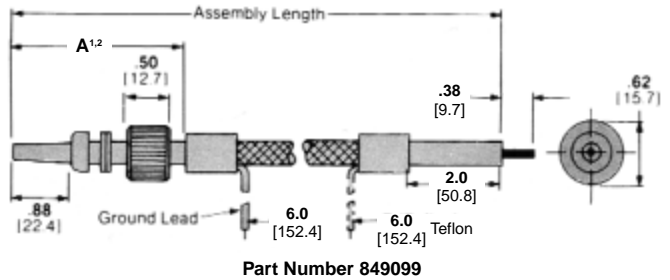
Receptacles are available with gold plated contacts.

Single End Lead Assemblies



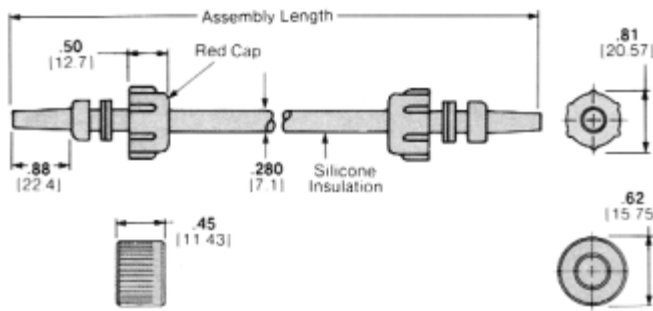
Part Number 837655 and 863701

Shielded Single End Lead Assemblies



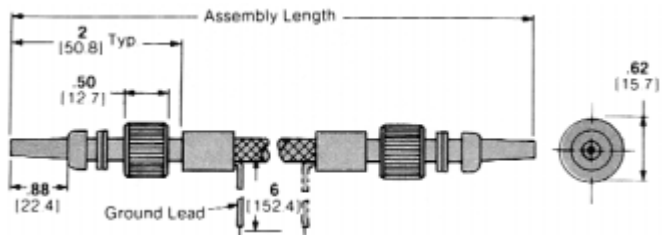
Part Number 849099

Double End Lead Assemblies



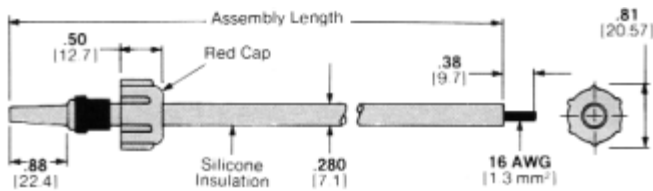
Part Number 830126 and 863702

Shielded Double End Lead Assemblies



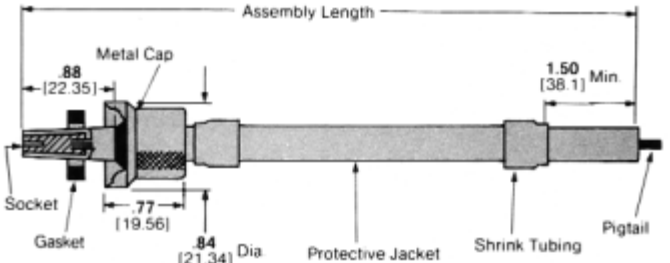
Part Number 849104

Single End Lead Assemblies with Positive Stop Ferrules



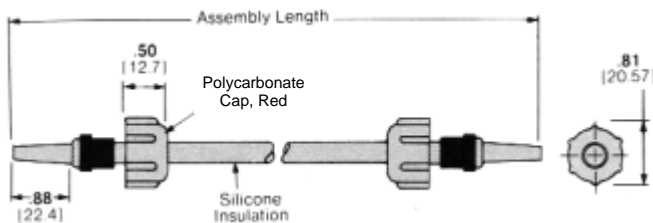
Part Number 862549 and 863703

RFI Shielded Single End Lead Assemblies\*



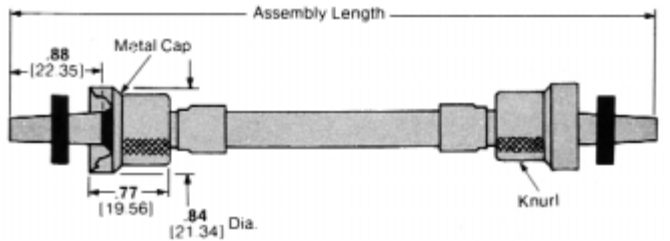
Part Number 861811

Double End Lead Assemblies with Positive Stop Ferrules



Part Number 862550

RFI Shielded Double End Lead Assemblies\*



Part Number 861812

\* These RFI Shielded Lead Assemblies mate with Receptacle Part Number 861254-1.

LGH Lead Assemblies and Receptacles, 20 KVDC, LGH 1 (Continued)

Lead Assemblies (Continued)

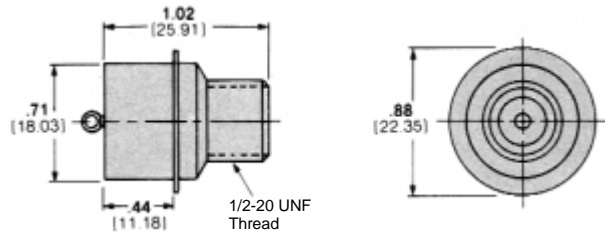
Description	Assembly Length	Part Numbers			
		Polycarbonate Cap	Glass-Filled Polyester Cap	Glass Epoxy Cap	Metal Cap
Single End Lead Assemblies	6 152.4	837655-7	863701-7	—	—
	12 304.8	1-837655-1	1-863701-1	—	—
	18 457.2	1-837655-0	1-863701-0	—	—
	24 609.6	837655-8	863701-8	—	—
	36 914.4	837655-5	863701-5	—	—
	48 1219.2	1-837655-3	1-863701-3	—	—
	Double End Lead Assemblies	6 152.4	—	863702-2	830126-2
12 304.8		1-830126-3	1-863702-3	—	—
18 457.2		1-830126-2	1-863702-2	—	—
24 609.6		1-830126-6	1-863702-6	—	—
36 914.4		1-830126-7	1-863702-7	—	—
48 1219.2		2-830126-1	2-863702-1	—	—
Single End Lead Assemblies (with Positive Stop Ferrules)		6 152.4	862549-1	863703-1	—
	12 304.8	862549-4	863703-4	—	—
	18 457.2	862549-6	863703-6	—	—
	24 609.6	862549-8	863703-8	—	—
	36 914.4	862549-9	863703-9	—	—
	48 1219.2	1-862550-3	—	—	—
Double End Lead Assemblies (with Positive Stop Ferrules)	6 152.4	862550-1	—	—	—
	12 304.8	862550-4	—	—	—
	18 457.2	862550-6	—	—	—
	24 609.6	862550-8	—	—	—
	36 914.4	862550-9	—	—	—
	48 1219.2	1-862550-3	—	—	—
Shielded Single End Lead Assemblies	6 152.4	—	—	849099-7 <sup>1</sup>	—
	12 304.8	—	—	1-849099-2 <sup>1</sup>	—
	18 457.2	—	—	849103-5 <sup>2</sup>	—
	24 609.6	—	—	849099-9 <sup>1</sup>	—
	36 914.41	—	—	849103-1† <sup>2</sup>	—
	48 1219.2	—	—	849099-4 <sup>1</sup>	—
Shielded Double End Lead Assemblies	18 457.2	—	—	1-849104-5	—
	24 609.6	—	—	849104-1	—
	36 914.4	—	—	1-849104-6*	—
	48 1219.2	—	—	1-849104-7	—
	48 1219.2	—	—	1-849104-9*	—
RFI Shielded Single End Lead Assemblies**	12 304.8	—	—	—	861811-1
	18 457.2	—	—	—	861811-4
	24 609.6	—	—	—	861811-5
	48 1219.2	—	—	—	861812-1
RFI Shielded Double End Lead Assemblies**	12 304.8	—	—	—	861812-1
	18 457.2	—	—	—	861812-4
	24 609.6	—	—	—	861812-3
	48 1219.2	—	—	—	861812-2

\*Two ground leads, 6 [152.4] each.  
 \*\*These RFI Shielded Lead Assemblies mate with Receptacle Part Number 861254-1.  
 †One ground lead, terminated end only. <sup>1</sup>A dim. 3.0 [76.2]. <sup>2</sup>A dim. 2.0 [50.8].

**Glass-Epoxy Receptacles with .88 [22.35] Barrel Depth**

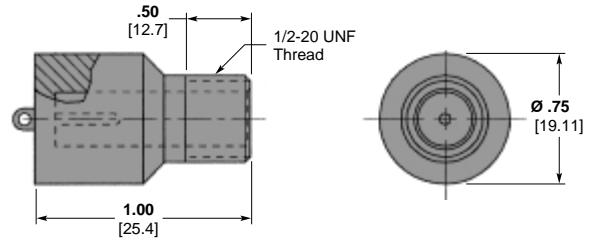
Flanged, for Hermetic Seal  
Part Number 861254-1

Weight — 5 grams



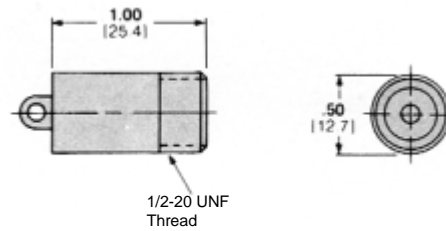
These receptacles are for use with RFI Shielded Lead Assemblies shown on the preceding page.

**Molded Receptacle  
Part Number 850306-3**

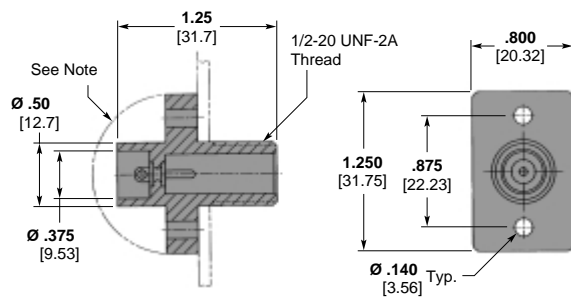


**For Encapsulated Units  
Part Number 834333-2**

Weight — 4 grams

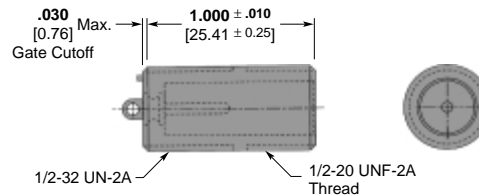


**Bulkhead Receptacle  
Part Number 449690-1**



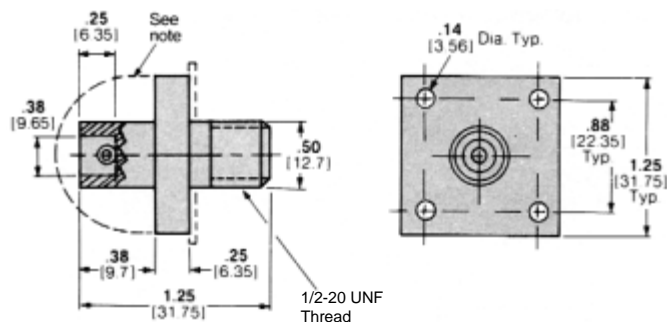
**Note:** Customer must protect back end against arc-over and breakdown if bulk-head and mounting hardware are metallic and at ground potential.

**Special Receptacle  
Part Number 448463-1**



**Flanged, Bolt Mount  
Part Number 858827-1**

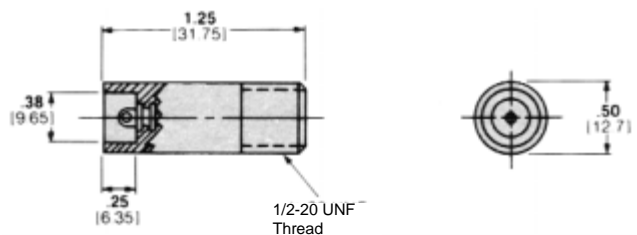
Weight — 16 grams



**Note:** If the panel or mounting hardware is at ground potential, guard against arc-over and breakdown within the area defined by this line.

**With Recessed Terminal for  
Encapsulated Units  
Part Number 849610-3**

Weight — 5 grams



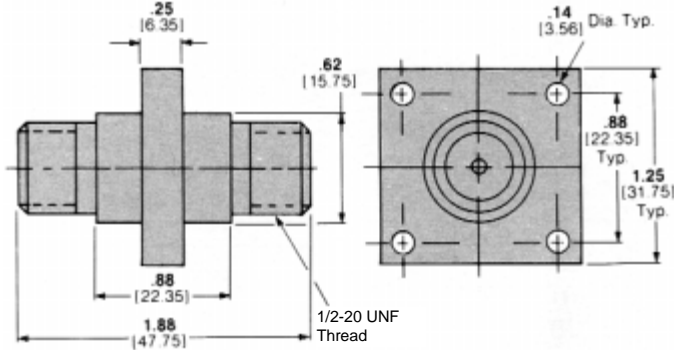
Receptacles are available with gold plated contacts.

**Glass-Epoxy Receptacles with .88 [22.35] Barrel Depth**

(Continued)

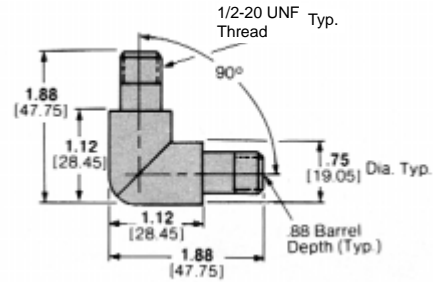
**Bolt Mount, Feed-Through**  
Part Number 846793-1

Weight — 23 grams



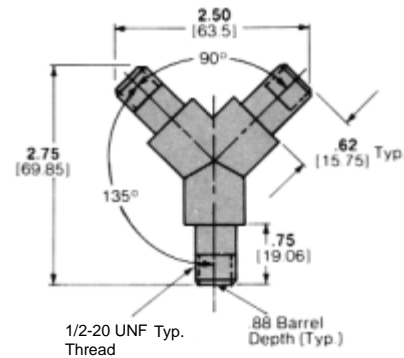
**L-Shape Receptacles with .88 [22.35] Barrel Depth**

**Splice**  
Part Number 849662-1 —  
Tin Plated Pins



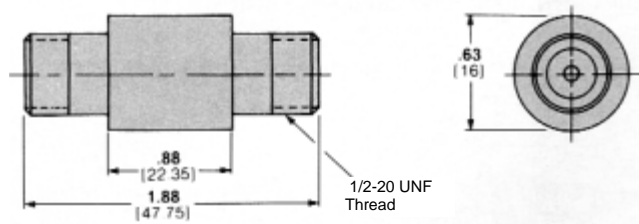
**Y-Shape Receptacles with .88 [22.35] Barrel Depth**

**Splice**  
Part Number 849693-1 —  
Tin Plated Pins



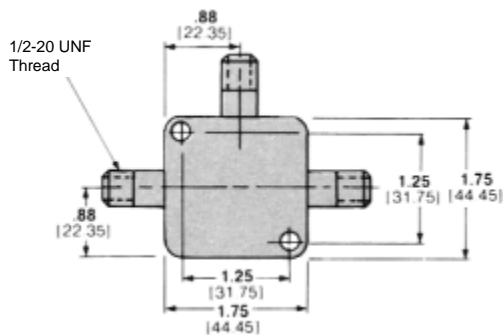
**Splice**  
Part Number 830149-1

Weight — 10 grams



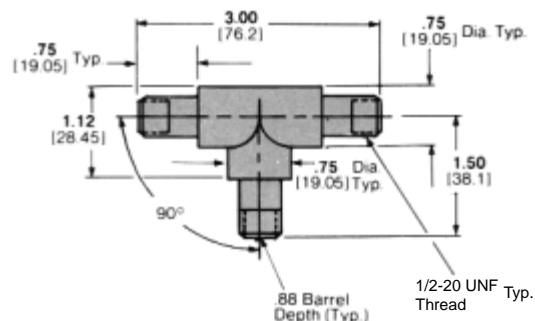
**T-Shape Connector**  
Part Number 836674-1

Weight — 100 grams



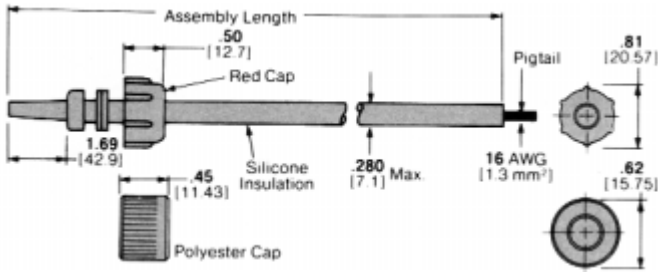
**T-Shape Receptacles with .88 [22.35] Barrel Depth**

**Splice**  
Part Number 849671-1 —  
Tin Plated Pins



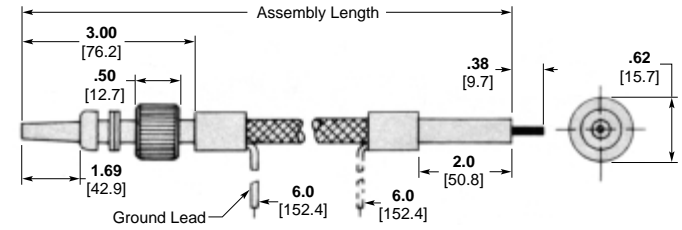
Receptacles are available with gold plated contacts.

**Single End Lead Assemblies**



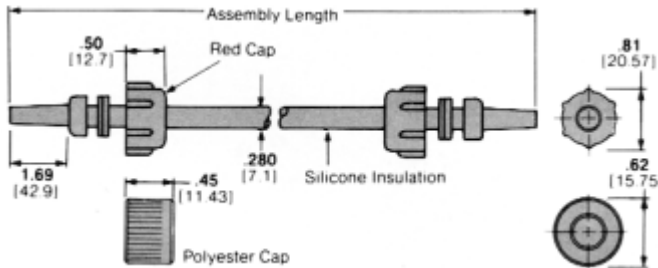
Part Number 830637

**Shielded Single End Lead Assemblies**



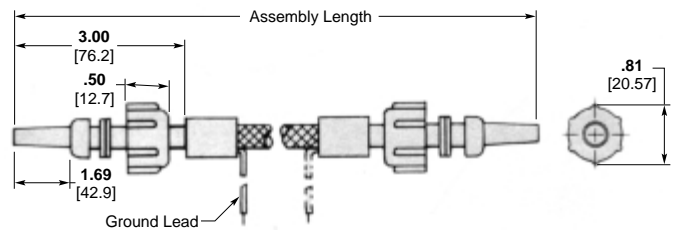
Part Number 846938

**Double End Lead Assemblies**



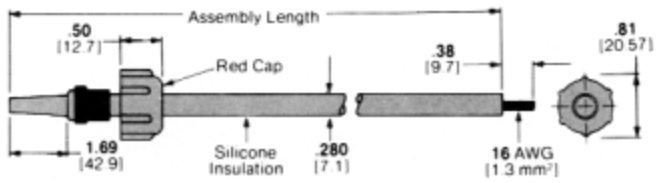
Part Number 830638

**Shielded Double End Lead Assemblies**



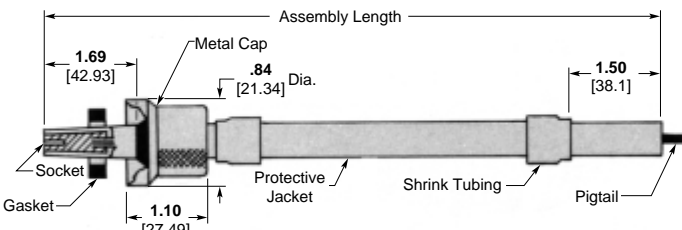
Part Number 849616

**Single End Lead Assemblies with Positive Stop Ferrules**



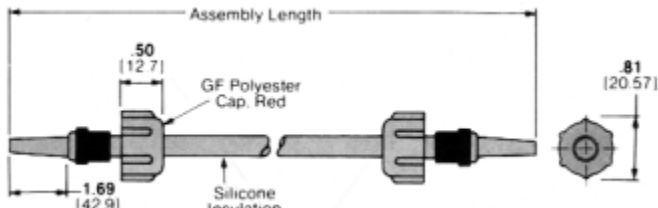
Part Number 862551

**RFI Shielded Single End Lead Assemblies**



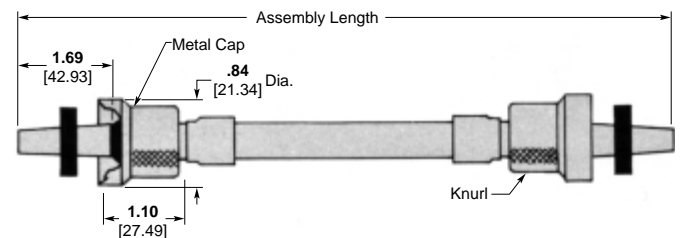
Part Number 861813

**Double End Lead Assemblies with Positive Stop Ferrules**



Part Number 862552

**RFI Shielded Double End Lead Assemblies**



Part Number 861814

LGH Lead Assemblies and Receptacles, 25 KVDC, LGH 1 L (Continued)

Lead Assemblies (Continued)

Description	Assembly Length	Part Numbers			
		Polycarbonate Cap	Glass-Filled Polyester Cap	Glass Epoxy Cap	Metal Cap
Single End Lead Assemblies	6 152.4	2-830637-1	2-863705-1	—	—
	12 304.8	1-830637-2	1-863705-2	—	—
	18 457.2	1-830637-3	1-863705-3	—	—
	24 609.6	2-830637-8	2-863705-8	—	—
	36 914.4	830637-5	863705-5	—	—
	48 1219.2	2-830637-4	2-863705-4	—	—
	Double End Lead Assemblies	6 152.4	—	863706-2	830638-2
12 304.8		1-830638-5	1-863706-5	—	—
18 457.2		2-830638-0	2-863706-0	—	—
24 609.6		830638-9	863706-9	—	—
36 914.4		830638-6	863706-6	—	—
48 1219.2		1-830638-9	1-863706-9	—	—
Single End Lead Assemblies (with Positive Stop Ferrules)		6 152.4	862551-1	863707-1	—
	12 304.8	862551-4	863707-4	—	—
	18 457.2	862551-6	863707-6	—	—
	24 609.6	862551-8	863707-8	—	—
	36 914.4	1-862551-5	1-863707-5	—	—
	48 1219.2	1-862551-2	1-863707-2	—	—
	Double End Lead Assemblies (with Positive Stop Ferrules)	6 152.4	—	—	862552-1
12 304.8		862552-4	—	—	—
18 457.2		862552-6	—	—	—
24 609.6		862552-8	—	—	—
36 914.4		1-862552-3	—	—	—
48 1219.2		1-862552-0	—	—	—
Shielded Single End Lead Assemblies		18 457.2	—	—	2-846938-0
	24 609.6	—	—	2-846938-1	—
	36 914.4	—	—	1-846938-6††	—
	48 1219.2	—	—	846938-8†	—
Shielded Double End Lead Assemblies	12 304.8	—	—	849616-7	—
	18 457.2	—	—	1-849616-5	—
	36 914.4	—	—	1-849616-0*	—
	60 1524.0	—	—	2-849616-2*	—
RFI Shielded Single End Lead Assemblies**	12 304.8	—	—	—	861813-1
	24 609.6	—	—	—	861813-2
	48 1219.2	—	—	—	861813-5
RFI Shielded Double End Lead Assemblies	12 304.8	—	—	—	861814-1
	18 457.2	—	—	—	1-861814-9
	24 609.6	—	—	—	2-861814-1
	36 914.4	—	—	—	1-861814-5
	48 1219.9	—	—	—	861814-1

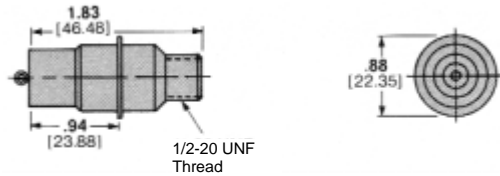
\*Two equal length ground leads.  
 \*\*These RFI Shielded Lead Assemblies mate with Receptacle Part Number 861255-1.  
 †One ground lead, pigtail end only.  
 ††One ground lead, terminated end only. Pigtail End 13 [330.2].

High Voltage Connectors

**Glass-Epoxy Receptacles with 1.69 [42.93] Barrel Depth**

Flanged, for Hermetic Seal  
Part Number 861255-1

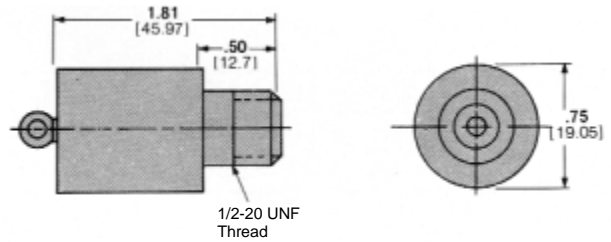
Weight — 17 grams



These receptacles are for use with RFI Shielded Leads shown on the preceding page.

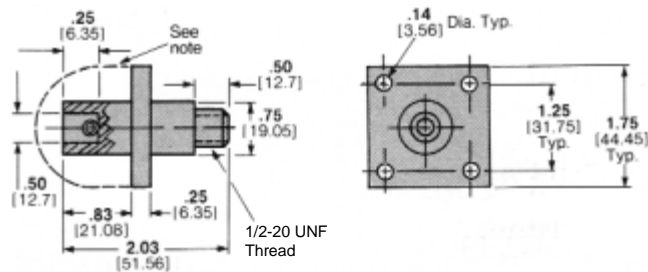
**For Encapsulated Units**  
Part Number 858868-1

Weight — 15 grams



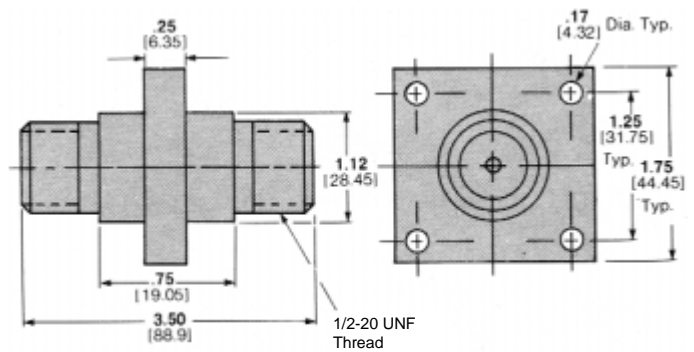
**Flanged, Bolt Mount**  
Part Number 846814-1

Weight — 32 grams



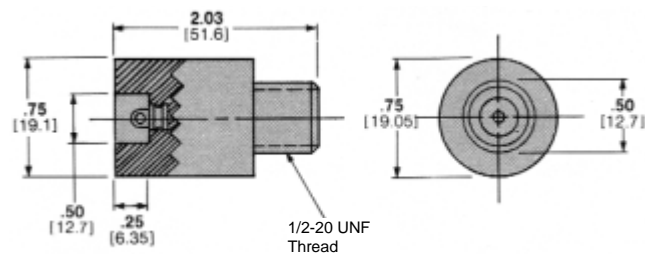
**Bolt-mount, Feed-through**  
Part Number 858873-1

Weight — 70 grams



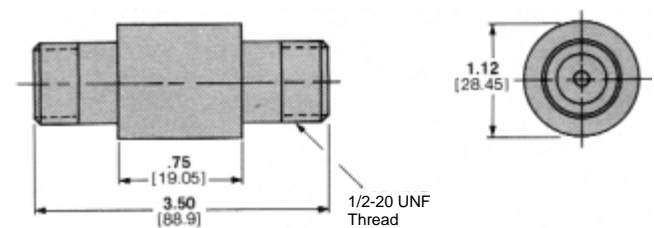
**With Recessed Terminal for Encapsulated Units**  
Part Number 859058-3

Weight — 16 grams



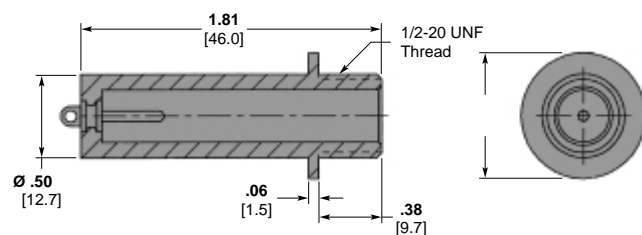
**Splice**  
Part Number 858030-1

Weight — 52 grams



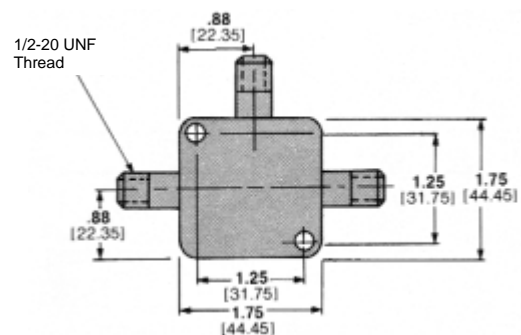
**Flanged Receptacle**  
Part Number 449925-1

Color — Red



**T-Shape Connector**  
Part Number 830699-1

Weight — 110 grams

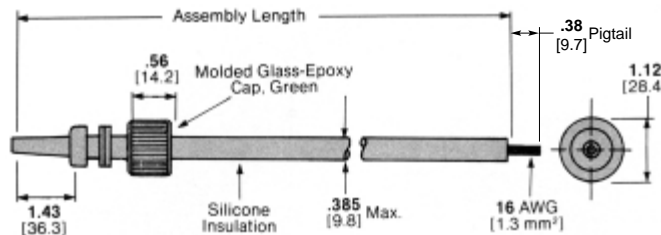


**Note:** If the panel or mounting hardware is at ground potential, guard against arc-over and breakdown within the area defined by this line.

Receptacles are available with gold plated contacts.

LGH Lead Assemblies and Receptacles, 30 KVDC, LGH 2

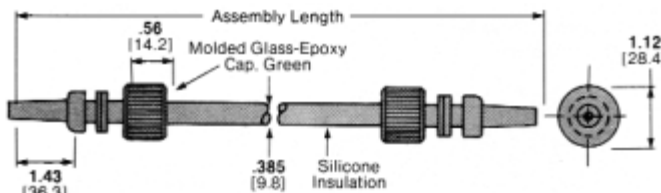
Single End Lead Assemblies



Part Number 839564

Assembly Length	Part Number
6.0 152.4	1-839564-8
12.0 304.8	839564-1
18.0 457.2	2-839564-9
24.0 609.6	839564-2
36.0 914.4	1-839564-9
48.0 1219.2	1-839564-3

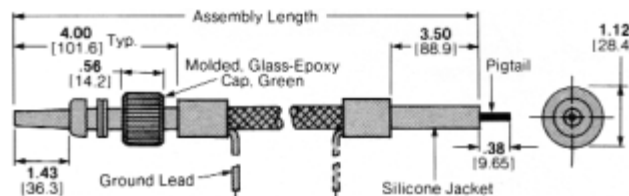
Double End Lead Assemblies



Part Number 839565

Assembly Length	Part Number
8.0 203.2	1-839565-3
12.0 304.8	839565-1
18.0 457.2	2-839565-9
24.0 609.6	839565-9
36.0 914.4	2-839565-5
48.0 1219.2	839565-6

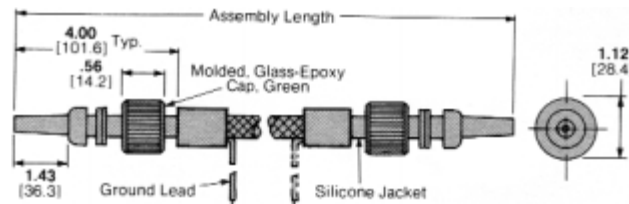
Shielded Single End Lead Assemblies



Part Number 849371

Assembly Length	Part Number
12.0 304.8	849371-2
18.0 457.2	849371-8
24.0 609.6	849371-3
48.0 1219.2	849371-9

Shielded Double End Lead Assemblies

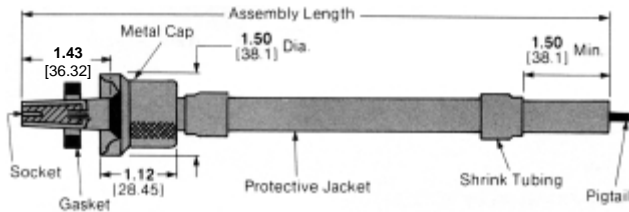


Part Number 848075

Assembly Length	Part Number
24.0 609.6	1-848075-5
36.0 914.4	1-848075-6
48.0 1219.2	2-848075-2**

\*\*Two ground leads, 6.0 [152.4] each

RFI Shielded Single End Lead Assemblies\*



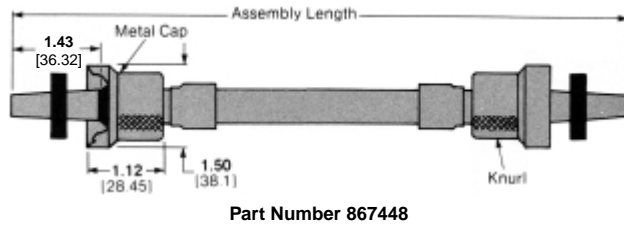
Part Number 867447

Assembly Length	Part Number
12.0 304.8	867447-1
24.0 609.6	867447-2
36.0 914.4	867447-3
48.0 1219.2	867447-4

**Note:** Standard length leads are tabulated here. Tyco Electronics can make available numerous variations in length and material to suit almost any application. Choices of insulation materials include TEFLON, UL listed silicone and UL listed PVC. Other materials, colors, wire and configurations can be used in manufacture. For more information, consult Tyco Electronics.

\* These RFI Shielded Lead Assemblies mate with Receptacle Part Number 861256-1.

**RFI Shielded Double End Lead Assemblies\***



Part Number 867448

Assembly Length	Part Number
12.0 304.8	867448-1
24.0 609.6	867448-2
36.0 914.4	867448-3
48.0 1219.2	867448-4

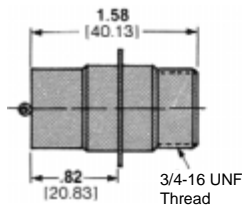
**Note:** Standard length leads are tabulated here. Tyco Electronics can make available numerous variations in length and material to suit almost any application. Choices of insulation materials include TEFLON, UL listed silicone and UL listed PVC. Other materials, colors, wire and configurations can be used in manufacture. For more information, consult Tyco Electronics.

\* These RFI Shielded Lead Assemblies mate with receptacle 861256-1.

**Glass-Epoxy Receptacles with 1.44 [36.58] Barrel Depth**

Flanged, for Hermetic Seal  
Part Number 861256-1

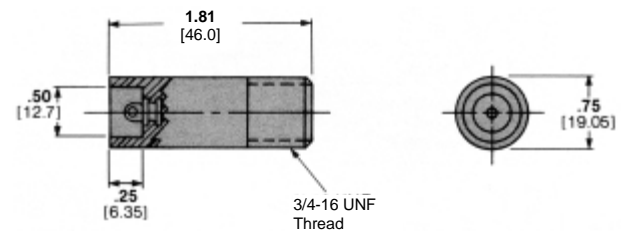
Weight — 20 grams



These receptacles are for use with RFI Shielded Leads shown on the preceding page.

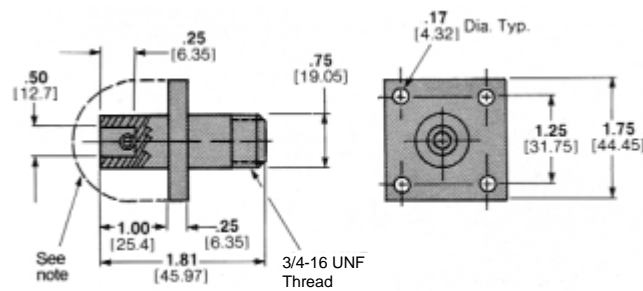
With Recessed Terminal for Encapsulated Units  
Part Number 849588-1

Weight — 20 grams



Flanged, Bolt Mount  
Part Number 850910-1

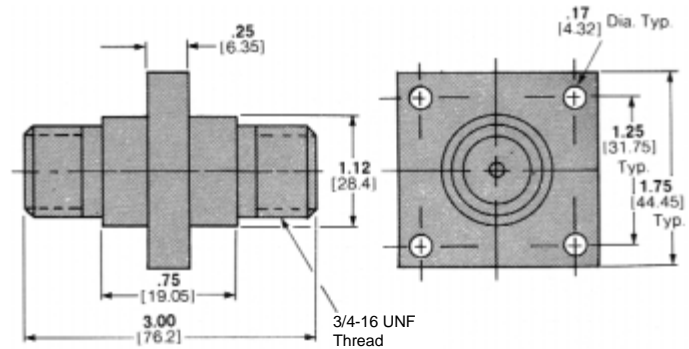
Weight — 42 grams



**Note:** If the panel or mounting hardware is at ground potential, guard against arc-over and breakdown within the area defined by this line.

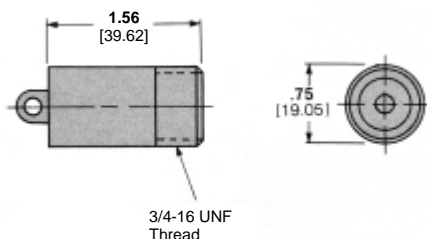
Bolt-mount, Feed-through  
Part Number 850735-1

Weight — 70 grams



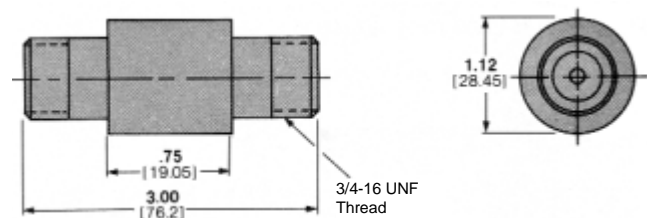
For Encapsulated Units  
Part Number 1-849587-1

Weight — 17 grams



Splice  
Part Number 850555-1

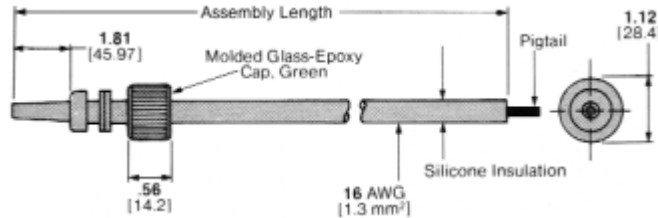
Weight — 43 grams



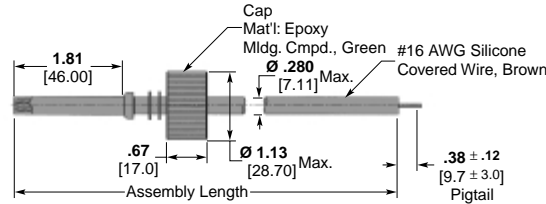
Receptacles are available with gold plated contacts.

LGH Lead Assemblies and Receptacles, 40 KVDC, LGH 3

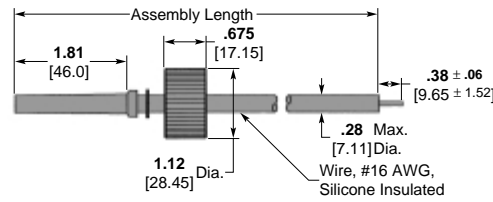
Single End Lead Assemblies



Part Number 837975



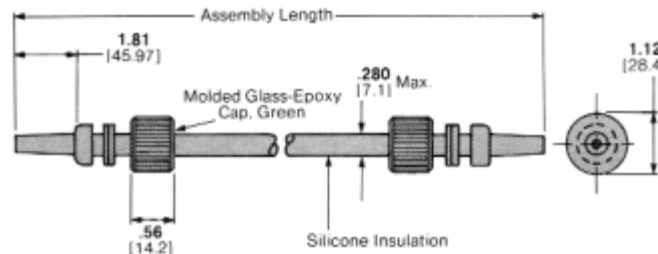
Part Number 868354



Part Number 869084

Assembly Length	Wire Color	Part Number
6.0 152.4	—	837975-6
12.0 304.8	—	837975-8
18.0 457.2	—	837975-3
24.0 609.6	—	1-837975-6
36.0 914.4	—	837975-2
48.0 1219.2	—	837975-9
60.0 ± 1.00 1524.0 ± 25.4	Brown	868354-2
18.0 ± .25 457.2 ± 6.35	Brown	869084-1
18.0 ± .25 457.2 ± 6.35	Red	869084-2
18.0 ± .25 457.2 ± 6.35	Yellow	869084-3
18.0 ± .25 457.2 ± 6.35	Green	869084-4
18.0 ± .25 457.2 ± 6.35	White	869084-5
24.0 ± .25 609.6 ± 6.35	Brown	869084-6
24.0 ± .25 609.6 ± 6.35	Yellow	869084-7
24.0 ± .25 609.6 ± 6.35	Green	869084-8
24.0 ± .25 609.6 ± 6.35	White	869084-9
36.0 ± .25 914.4 ± 6.35	Brown	1-869084-0
48.0 ± .25 1219.2 ± 6.35	Red	1-869084-1
36.0 ± .25 914.4 ± 6.35	Yellow	1-869084-2
36.0 ± .25 914.4 ± 6.35	Green	1-869084-3

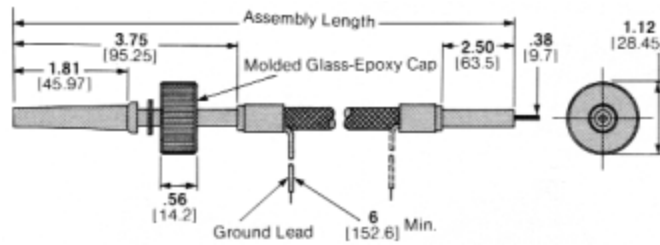
Double End Lead Assemblies



Part Number 830649

Assembly Length	Part Number
12.0 304.8	830649-1
18.0 457.2	830649-3
24.0 609.6	1-830649-0
36.0 914.4	830649-2
48.0 1219.2	830649-6

Shielded Single End Lead Assemblies

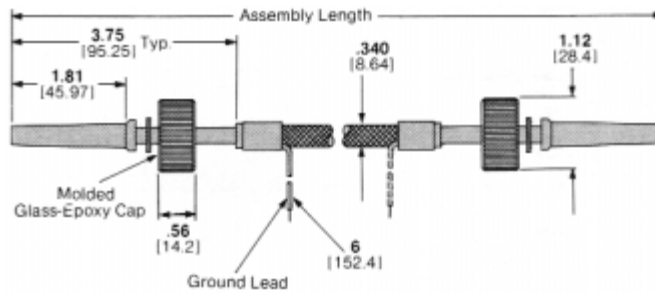


Part Number 848076

Assembly Length	Part Number
12.0 304.8	1-848076-1
18.0 457.2	848076-5
24.0 609.6	848076-1
36.0 914.4	848076-8*
48.0 1219.2	848076-3
360.0 9144.0	2-848076-1
16.25 412.8	2-848076-2
29.75 755.7	2-848076-3
20.25 514.4	2-848076-4
21.75 552.5	2-848076-5
16.25 412.8	2-848076-6

All leads are shielded and glass braid covered.  
\*Two ground leads each 7" long.

Shielded Double End Lead Assemblies



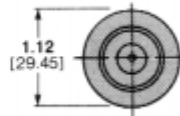
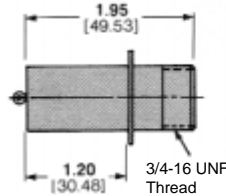
Part Number 848077

Assembly Length	Part Number
12.0 304.8	848077-4
24.0 609.6	848077-1
48.0 1219.2	848077-3

**Glass-Epoxy Receptacles with 1.81 [45.97] Barrel Depth**

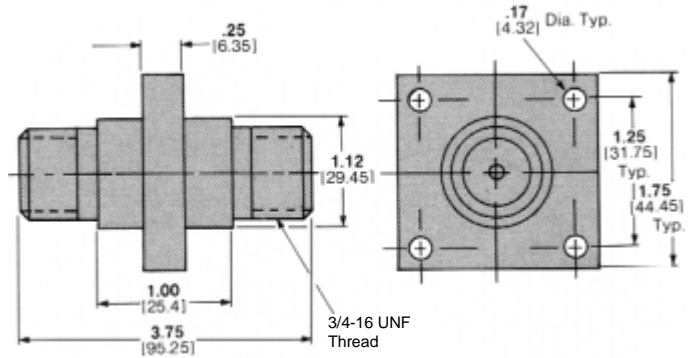
Flanged, For Hermetic Seal  
Part Number 861257-1

Weight — 32 grams



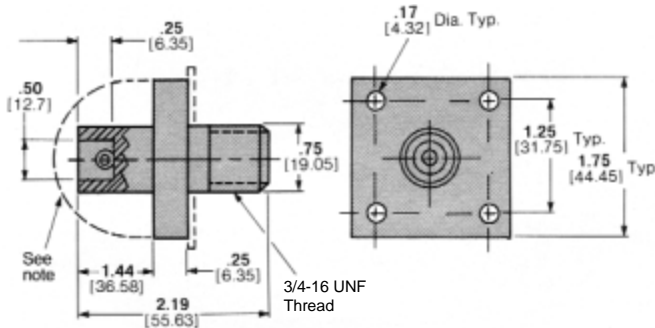
**Bolt-Mount, Feed-Through**  
Part Number 850909-1

Weight — 91 grams



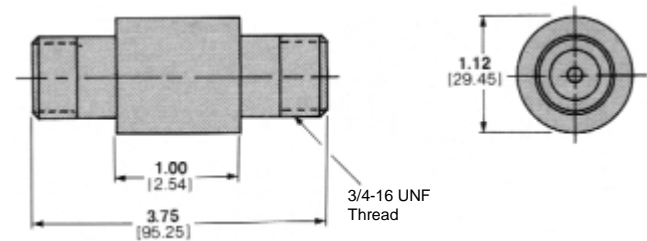
**Flanged, Bolt Mount**  
Part Number 850911-1

Weight — 53 grams



**Splice**  
Part Number 850908-1

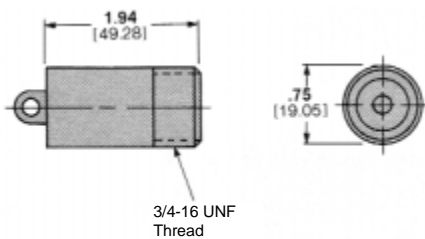
Weight — 65 grams



**Note:** If the panel or mounting hardware is at ground potential, guard against arc-over and breakdown within the area defined by this line.

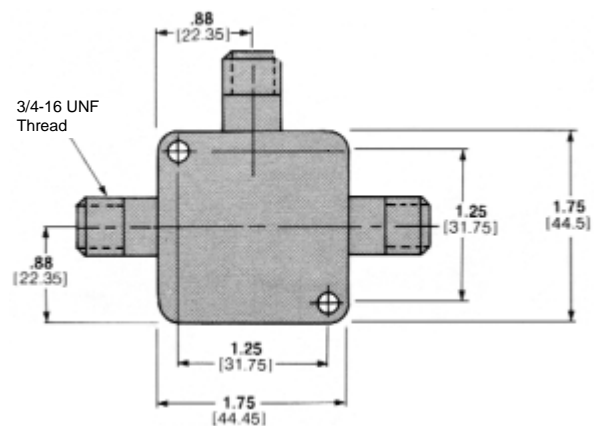
**For Encapsulated Units**  
Part Number 849587-9

Weight — 28 grams



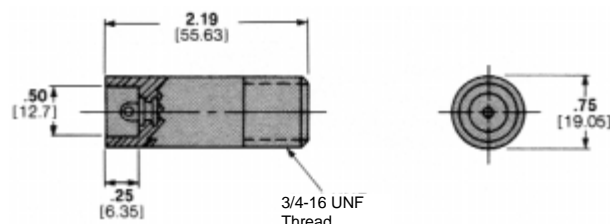
**T-Shape Connector**  
Part Number 860708-1

Weight — 135 grams



**With Recessed Terminal For Encapsulated Units**  
Part Number 849588-3

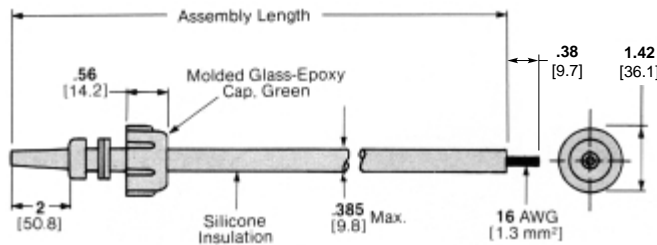
Weight — 34 grams



Receptacles are available with gold plated contacts.

LGH Lead Assemblies and Receptacles, 50 KVDC, LGH 4

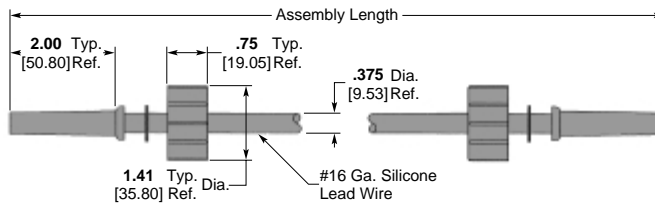
Single End Lead Assemblies



Part Number 846290

Assembly Length	Part Number
6.0 152.4	1-846290-7
12.0 304.8	846290-1
18.0 457.2	1-846290-6
24.0 609.6	846290-3
36.0 914.4	846290-6
48.0 1219.2	846290-4

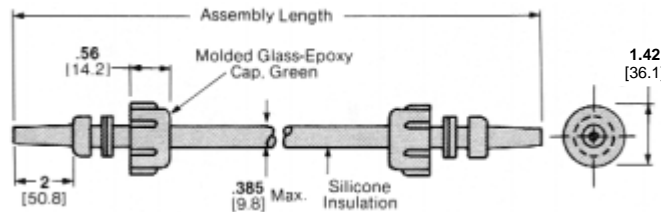
Double End Lead Assemblies (White Wire)



Part Number 445217

Assembly Length	Part Number
18.0 ± .12 457.2 ± 3.05	445217-2
24.0 ± .24 609.6 ± 6.10	445217-1

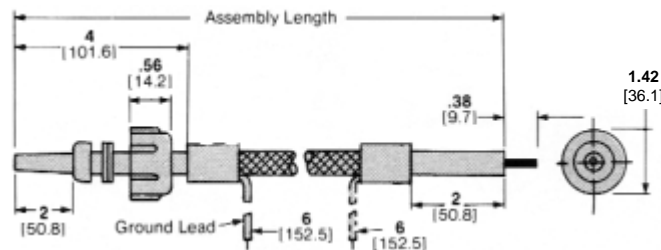
Double End Lead Assemblies



Part Number 846291

Assembly Length	Part Number
12.0 304.8	846291-1
18.0 457.2	1-846291-1
24.0 609.6	846291-3
36.0 914.4	846291-4

Shielded Single End Lead Assemblies



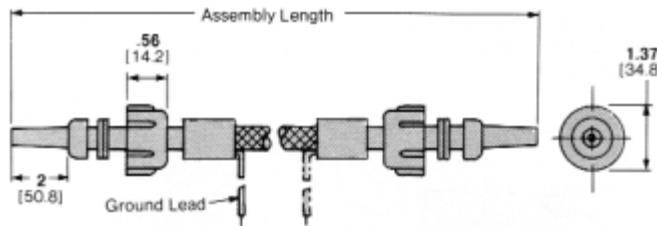
Part Number 848078

Assembly Length	Part Number
24.0 609.6	848078-1
36.0 914.4	2-848078-0
48.0 1219.2	848078-2

**Note:** Standard length leads are tabulated here. Tyco Electronics can make available numerous variations in length and material to suit almost any application. Choices of insulation materials include TEFLON, UL listed silicone and UL listed PVC. Other materials, colors, wire and configurations can be used in manufacture. For more information, consult Tyco Electronics.

LGH Lead Assemblies and Receptacles, 50 KVDC, LGH 4 (Continued)

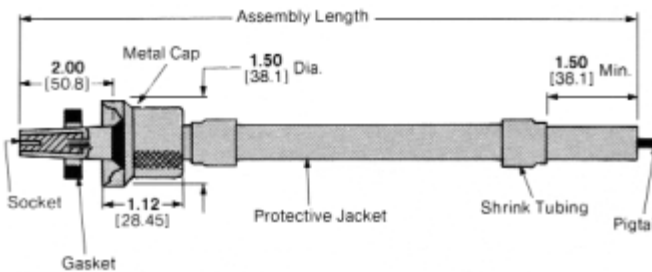
Shielded Double End Lead Assemblies



Assembly Length	Part Number
12.0	846950-6
304.8	846950-7
48.0	1-846950-0
1219.2	

Part Number 846950

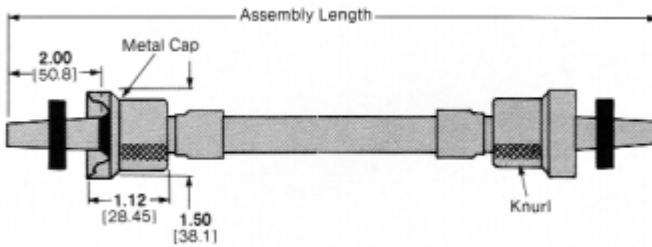
RFI Shielded Single End Lead Assemblies\*



Assembly Length	Part Number
12.0	865089-4
304.8	
18.0	865089-5
457.2	
24.0	865089-6
609.6	
36.0	865089-7
914.4	
48.0	865089-8
1219.2	

Part Number 865089

RFI Shielded Double End Lead Assemblies\*



Assembly Length	Part Number
12.0	865090-4
304.8	
18.0	865090-7
457.2	
24.0	865090-1
609.6	
36.0	865090-5
914.4	

Part Number 865090

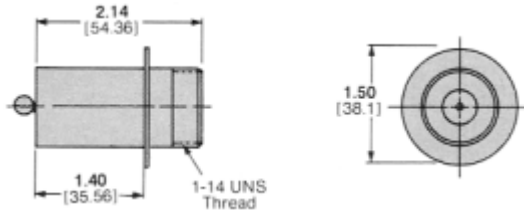
**Note:** Standard length leads are tabulated here. Tyco Electronics can make available numerous variations in length and material to suit almost any application. Choices of insulation materials include TEFLON, UL listed silicone and UL listed PVC. Other materials, colors, wire and configurations can be used in manufacture. For more information, consult Tyco Electronics.

\* These RFI Shielded Lead Assemblies mate with receptacle 861258-1.

**Glass-Epoxy Receptacles with 2.00 [50.8] Barrel Depth**

Flanged, For Hermetic Seal  
Part Number 861258-1

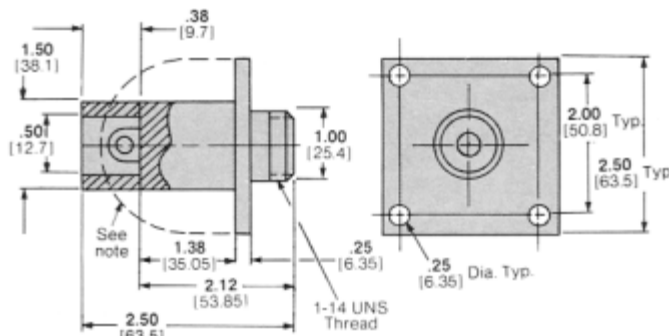
Weight — 48 grams



These receptacles are for use with RFI Shielded Leads shown on the preceding page.

**Flanged, Bolt Mount**  
Part Number 850912-1

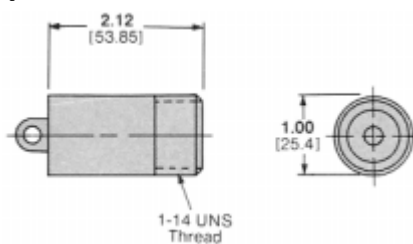
Weight — 100 grams



**Note:** If the panel or mounting hardware is at ground potential, guard against arc-over and breakdown within the area defined by this line.

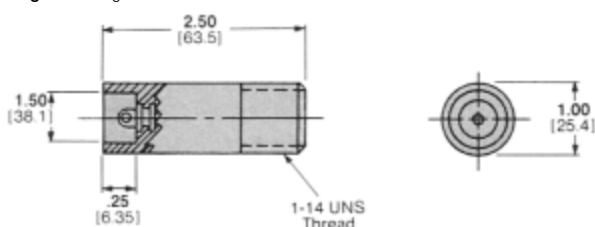
**For Encapsulated Units**  
Part Number 836567-1

Weight — 42 grams



**With Recessed Terminal For Encapsulated Units**  
Part Number 849853-1

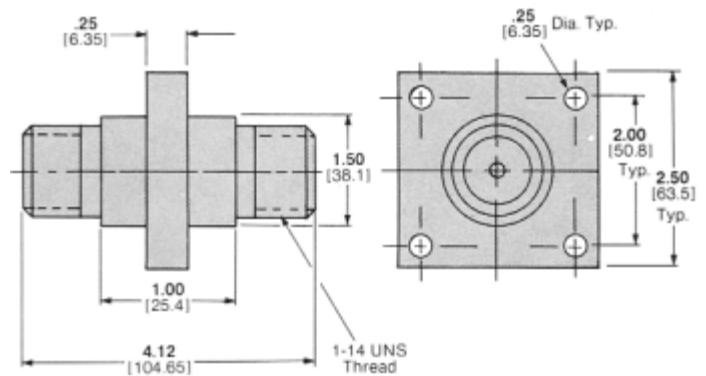
Weight — 55 grams



Receptacles are available with gold plated contacts.

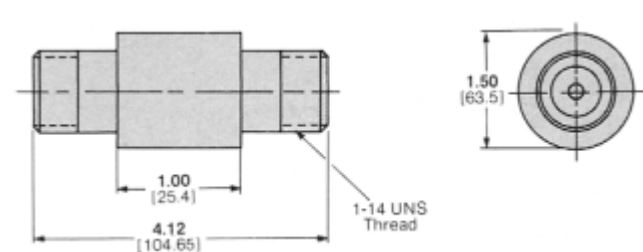
**Bolt-Mount, Feed-Through**  
Part Number 840468-1

Weight — 137 grams



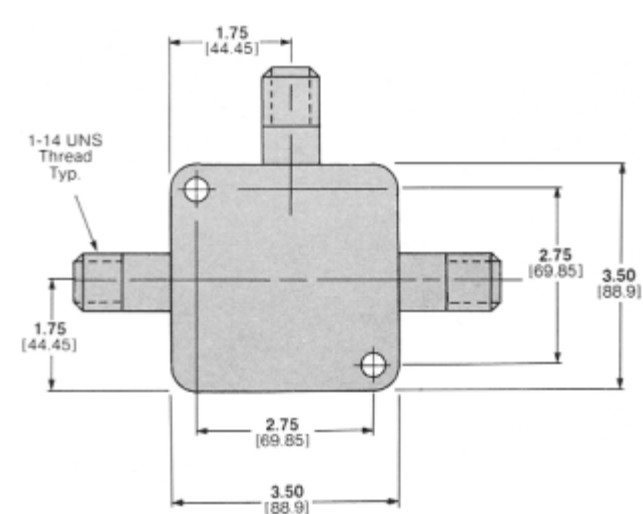
**Splice**  
Part Number 840467-1

Weight — 105 grams



**T-Shape Connector**  
Part Number 850554-1

Weight — 315 grams



Commercial Single Line Connectors

Product Facts

- All parts made of UL Recognized, 94V-0 rated, plastic material
- Designed to exceed minimum creepage and clearance for specified voltages per applicable international specifications
- Available with or without leads
- Maximum flexibility of application through elimination of predetermined lead lengths
- Machine applied terminations provide for lowest applied cost



The AMP family of Commercial Single Line Connectors provides solutions to high-voltage connection problems at low applied cost. The connectors are excellent for commercial application in industrial environments. Ease of application makes them suitable for large-volume production applications. Crimp, snap-in contacts can be machine terminated or hand-tool crimped.

Housings are self-extinguishing plastic, UL rated 94V-0. 10 KVDC connectors accept 20–24 AWG [0.2–0.6 mm<sup>2</sup>] wires. 20 KVDC connectors have contacts which accept 22–20 AWG [0.3–0.6 mm<sup>2</sup>] and 18–16 AWG [0.8–1.4 mm<sup>2</sup>] conductors. Connectors rated for 30 KVDC offer three choices of contact sizes to cover the 16-8 AWG [1.25–8 mm<sup>2</sup>] range.

Performance Specifications

All Series

- Altitude** — Sea level to 10,000 feet [3048 m]
- Temperature** — 59°F to +185°F [15°C to +85°C]
- Product Specification** — 108-36034

10 KVDC Connectors

- Voltage** — 10 KVDC
- Current** — 5 amperes, continuous, rms
- Dielectric Withstanding Test** — 15 KVDC for 3 minutes at sea level, 77°F [25°C]
- Instruction Sheet** — Part Number 867443-1

20 KVDC Connectors

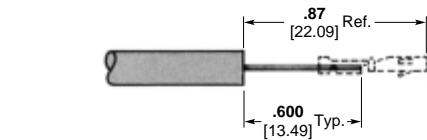
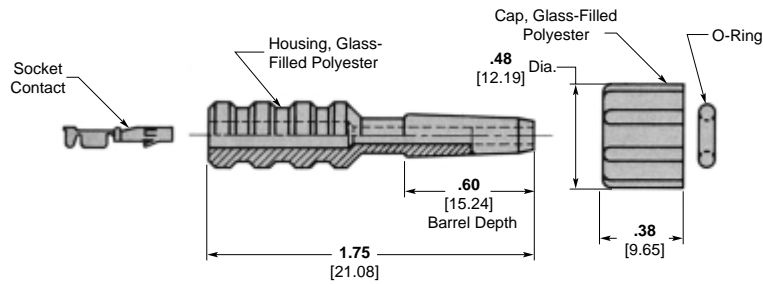
- Voltage** — 8 KVAC, rms, 60 Hz; 20 KVDC
- Current** — 7.5 amperes, continuous, rms
- Dielectric Withstanding Test** — 12 KVAC, rms, 60 Hz for 3 minutes at sea level, 77°F [25°C]; 30 KVDC for 3 minutes at sea level, 77°F [25°C]
- Instruction Sheets** — Plugs — Part Number 862749-1 Receptacles — Part Number 862755-1

30 KVDC Connectors

- Voltage** — 12 KVAC, rms, 60 Hz; 30 KVDC
- Current** — 25 amperes, continuous, rms
- Dielectric Withstanding Test** — 16 KVAC, rms, 60 Hz for 3 minutes at sea level, 77°F [25°C]; 40 KVDC for 3 minutes at sea level, 77°F [25°C]

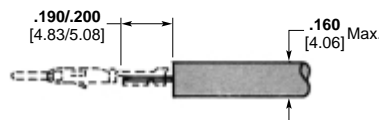
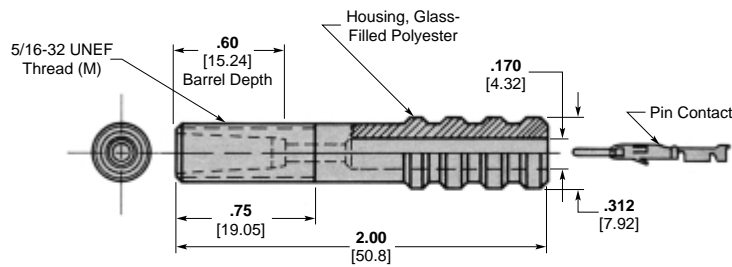
Commercial Single Line 10 KVDC Connectors

Plug Kits



**Recommended Wire Preparation**  
(Ref. Socket Contact Part Number 203802-6)

Receptacle Kit

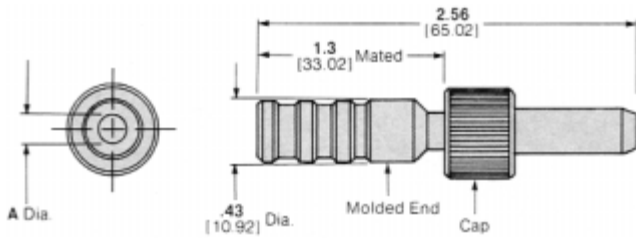


**Recommended Wire Preparation**  
(Ref. Pin Contact Part Number 203816-6)

Voltage Rating	Description	Wire Size		Max. Ins. Dia.	Contact Type	Kit Part Number	Tooling Part No.	
		AWG	mm <sup>2</sup>				Hand Tool	Extraction Tool
10 KVDC	Plug Kits*	20-24	0.2-0.6	.105 2.66	Type XI Socket	867157-1	91544-1	91038-3
				.160 4.06	Type XI Socket	867157-2	91544-1	91038-3
	Receptacle Kit*	20-24	0.2-0.6	.160 4.06	Type XI Pin	867156-1	91544-1	91038-3

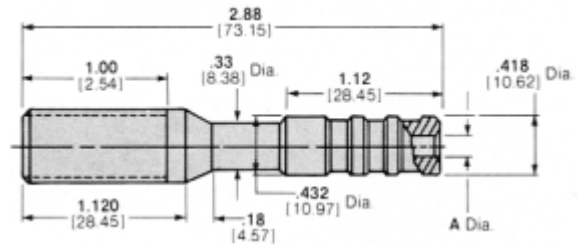
\* Contact included with kit.

**Plug Kits**

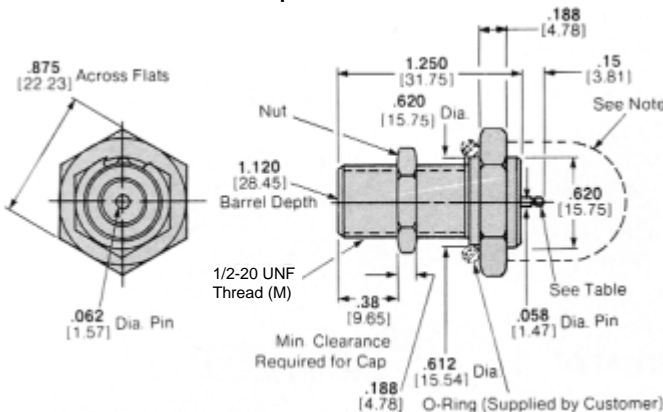


These plugs mate with receptacles shown on this page.

**Free-Hanging Receptacle Kits**

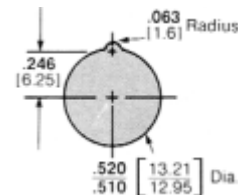
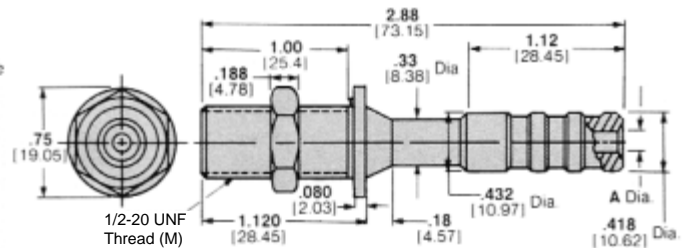


**Bulkhead-Mounted Receptacle Kits**

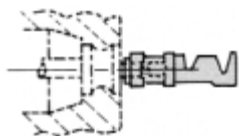


**Note:** If bulkhead and mounting hardware are metal at ground potential, the back end of the receptacle must be protected against arc-over and breakdown.

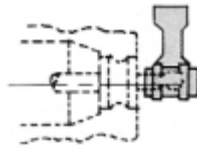
**Bulkhead-Mounted Receptacle Kits With Rear Insulation Collar**



**Recommended Panel Cutout for Bulkhead Mounting**



**Straight Socket**  
Part Number 60789-1



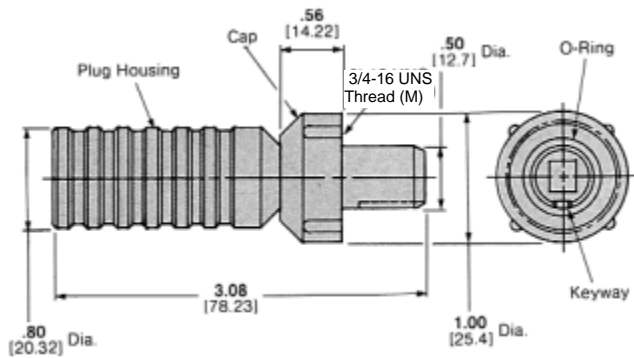
**Right-Angle Socket**  
Part Number 61276-2

Voltage Rating	Description	Wire Size		Max. Ins. Dia.	Contact Part Number	Kit Part Number	Tooling Part No.	
		AWG	mm <sup>2</sup>				Hand Tool	Extraction Tool
20 KVDC	Plug Kits*	22-20	0.3-0.6	<b>.185</b> 4.7	66399-1	861610-1	91523-1	861751-1
		18-16	0.8-1.4		66101-2	861610-3	91505-1	861751-1
		—	—		none	861610-5	—	861751-1
		22-20	0.3-0.6	<b>.302</b> 7.67	66399-1	861610-4	91523-1	861751-1
		18-16	0.8-1.4		66101-2	861610-2	91505-1	861751-1
		—	—		none	861610-6	—	861751-1
	Free-Hanging Receptacle Kits*	22-20	0.3-0.6	<b>.185</b> 4.7	66400-1	861753-1	91523-1	861751-1
		18-16	0.8-1.4		66099-2	861753-3	91505-1	861751-1
		22-20	0.3-0.6	<b>.302</b> 7.67	66400-1	861753-4	91523-1	861751-1
		18-16	0.8-1.4		66099-2	861753-2	91505-1	861751-1
	Bulkhead-Mounted Receptacle Kits*	—	—	—	60789-1 (Straight)**	861611-2	91507-1	—
		—	—	—	61276-2 (Right-Angle)**	861611-3	91507-1	—
	Bulkhead-Mounted Receptacle Kits* (with Rear Insulation Collar)	22-20	0.3-0.6	<b>.185</b> 4.7	66400-1	862197-1	91523-1	861751-1
		18-16	0.8-1.4		66099-2	862197-3	91505-1	861751-1
		—	—		none	862197-5	—	861751-1
		22-20	0.3-0.6	<b>.302</b> 7.67	66400-1	862197-4	91523-1	861751-1
		18-16	0.8-1.4		66099-2	862197-2	91505-1	861751-1
		—	—		none	862197-6	—	861751-1

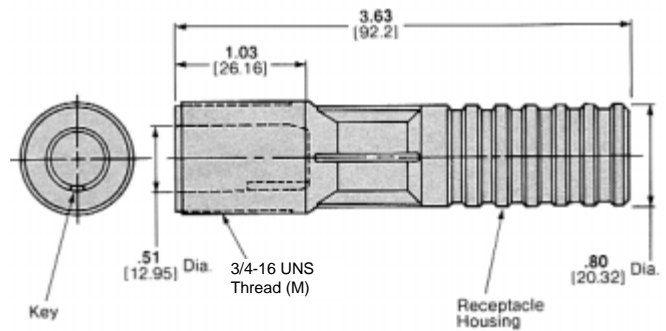
\* Contact included with kit.

\*\* Crimp-on Contacts.

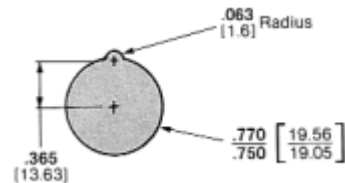
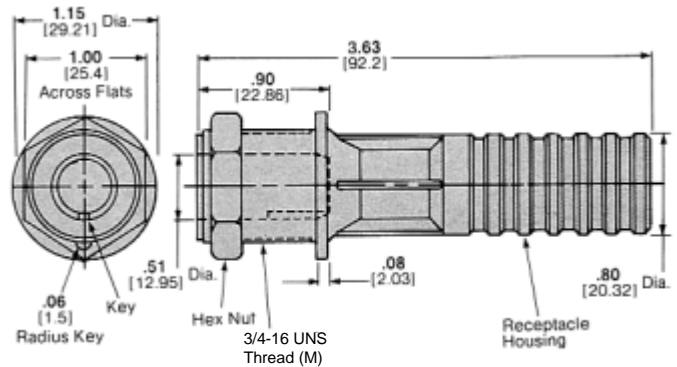
Plug Kits



Free-Hanging Receptacle Kit



Bulkhead-Mounted Receptacle Kits With Rear Insulation Collar



Recommended Panel Cutout for Bulkhead Mounting

Voltage Rating	Description	Wire Size		Max. Ins. Dia.	Contact Part Number	Kit Part Number	Tooling Part No.	
		AWG	mm <sup>2</sup>				Die Set**	Extraction Tool
30 KVDC	Plug Kits*	10	5-6	.50 12.7	66741-8 (Type XII)	863103-1	90140-1	863558-1
		14-12	2-3		66740-8 (Type XII)	863103-2	90145-1	863558-1
		16	1.4		66740-8 (Type XII)	863103-3	90145-2	863558-1
	Free Hanging Receptacle Kits*	10	5-6	.50 12.7	66259-1 (Type XII)	863104-1	90140-1	863558-1
		16	1.4		66261-1 (Type XII)	863104-3	90145-2	863558-1
		10	5-6		66259-1 (Type XII)	863350-1	90140-1	863558-1
	Bulkhead-Mounted Receptacle Kits*	14-12	2-3	.50 12.7	66261-1 (Type XII)	863350-2	90145-1	863558-1
		16	1.4		66261-1 (Type XII)	863350-3	90145-2	863558-1

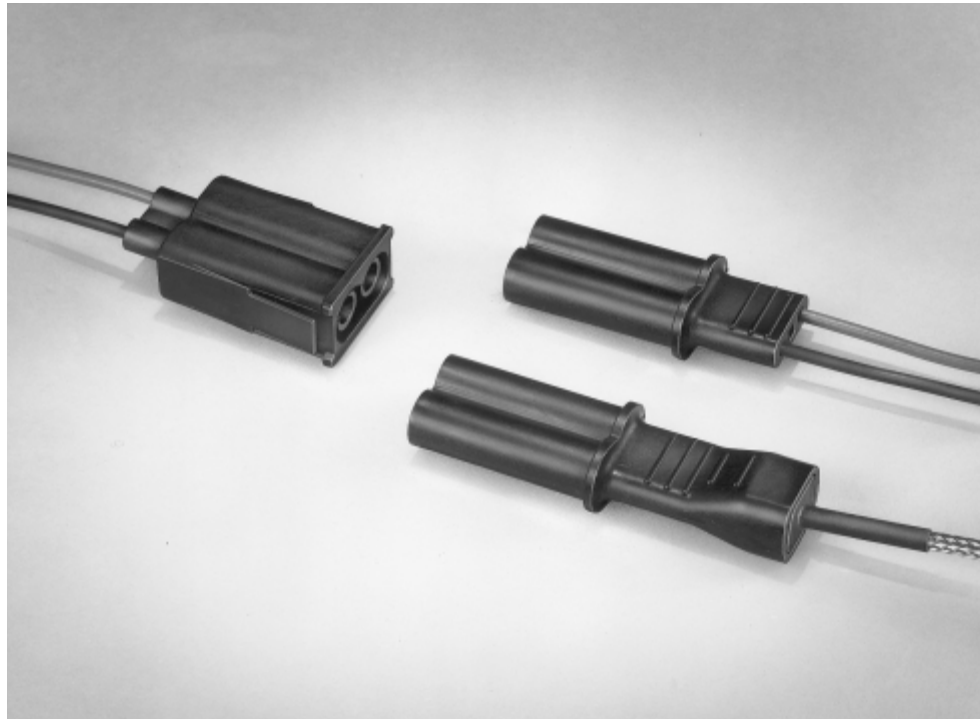
\* Contact included with kit.

\*\* Die Set for Hand Tool Part Number 69710-1 or 626 Pneumatic Tool System.

Two-Position Connectors, 10 KVDC

Product Facts

- UL recognized 94V-0 rated glass-filled polyester housing
- Standard housing color is black — other colors available
- Operates up to 10 KVDC
- Will withstand a 15 KVDC hipot 3-minute test
- Safe handling of high voltage — deeply recessed contacts and staggered pins
- Lightweight, compact design
- Preassembled connectors furnished with attached leads of virtually any color/length combination
- Connector kits for shielded and unshielded applications include plug, receptacle and contacts
- Crimp, snap-in contacts; pin diameter .062 [1.57]
- Snap-in panel mount receptacle housings — no mounting hardware required
- Temperature range: 5°F to 185°F [-15°C to +85°C]



The AMP Rectangular Two Position LGH connector is designed for high voltage applications where quick bulkhead mounting is desired; the receptacle half has molded wings which allow it to be snapped into a mounting hole. Operating voltage is 10 KVDC; however, increased voltage ratings and ac operating capabilities are possible for specific applications.

These connectors incorporate many outstanding design features for their complete electrical, mechanical and environmental integrity. Such features include: housings made of UL recognized

94V-0 glass-filled polyester; contacts with a 10-ampere rating which will accommodate wire sizes of No. 22–20 AWG [0.3–0.6 mm<sup>2</sup>] and No. 18–16 AWG [0.8–1.4 mm<sup>2</sup>]; polarized plugs and receptacles for proper connector mating; flanged receptacles to facilitate panel and bulkhead mounting; fully protected pins in the plug half and recessed sockets in the receptacle half for safe high-voltage handling; and quick connect/disconnect capability with ramp-type detent mating. Also for maximum handling safety, the pins in the plug housing are stagger-mounted so that the ground or return line

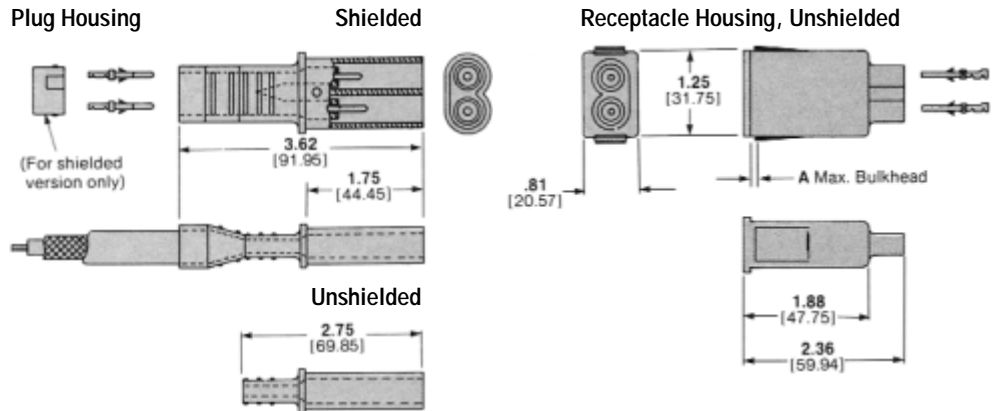
makes before and breaks after the hot line mates and unmates.

The connectors are supplied preassembled (with attached leads) and in kits for shielded or unshielded applications. Each conveniently packaged kit includes a plug, receptacle and pins and sockets that can be hand-tool or machine crimped or soldered to wire. Pre-assembled connectors can be furnished with leads of virtually any length and color. All are fully tested so that they are of the highest quality and meet all performance specifications.

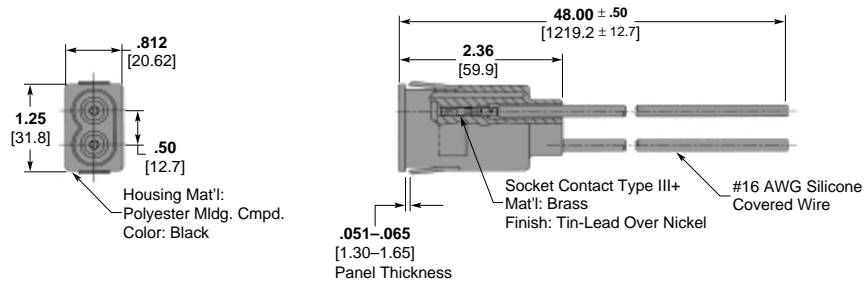
Connector Kits  
Shielded and Unshielded

**Material:**  
Housings and End Plate — Glass filled polyester  
Contacts — AMP Type III+, tin-plated brass

Two-Position Connectors, 10 KVDC (Continued)

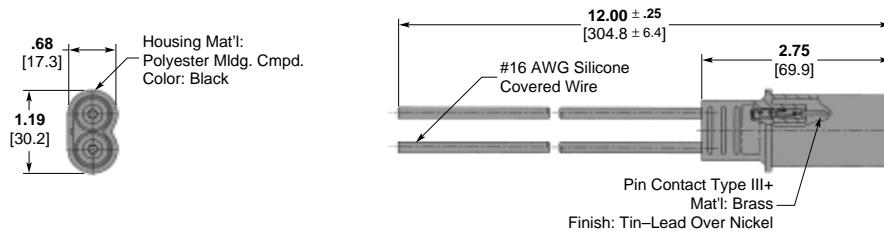


Receptacle Pre-Wired



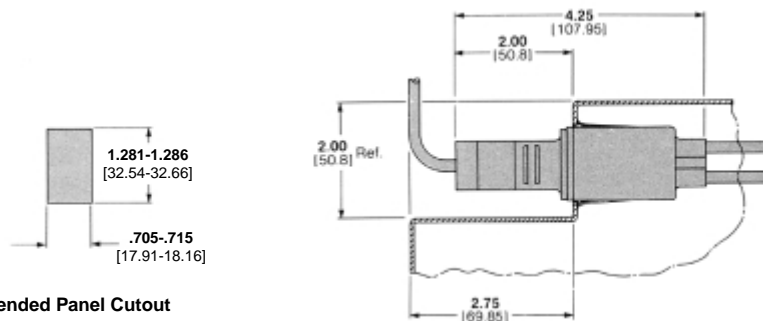
Part Number 443903-1 White Wire  
Part Number 443903-2 UL 3239 Wire, Black

Plug Pre-Wired



Part Number 443904-1 White Wire  
Part Number 443904-2 UL 3239 Wire, Black

Mated Dimensions



Recommended Panel Cutout

Connector Type	Bulkhead Thickness	Wire Range (AWG)	Insulation Diameter (Max.)	Plug Part Nos.			Receptacle Part Nos.			
				Assembly	Housing	Pin (Type III+) (2 required)	Assembly	Housing	Socket (Type III+) (2 required)	
Shielded	<b>.030</b> .762	18-16 [0.8-1.4]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862528-1 862528-2	862498-1 862498-1	66099-2 66099-2	1-862435-2 1-862435-0	862382-2 862382-5	66101-2 66101-2	
		22-20 [0.3-0.6]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862528-2 862528-2	862498-1 862498-1	66400-1 66400-1	1-862435-3 1-862435-1	862382-2 862382-5	66399-1 66399-1	
		18-16 [0.8-1.4]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862528-1 862528-1	862498-1 862498-1	66099-2 66099-2	862435-1 862435-3	862382-1 862382-4	66101-2 66101-2	
		22-20 [0.3-0.6]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862528-2 862528-2	862498-1 862498-1	66400-1 66400-1	862435-2 862435-4	862382-1 862382-4	66399-1 66399-1	
		18-16 [0.8-1.4]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862528-1 862528-1	862498-1 862498-1	66099-2 66099-2	862435-8 862435-6	862382-3 862382-6	66101-2 66101-2	
		22-20 [0.3-0.6]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862528-2 862528-2	862498-1 862498-1	66400-1 66400-1	862435-9 862435-7	862382-3 862382-6	66399-1 66399-1	
	Unshielded	<b>.030</b> .762	18-16 [0.8-1.4]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862434-1 862434-2	862383-1 862383-1	66099-2 66099-2	1-862435-2 1-862435-0	862382-2 862382-5	66101-2 66399-1
			22-20 [0.3-0.6]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862434-4 862434-4	862383-2 862383-2	66400-1 66400-1	1-862435-1 1-862435-1	862382-5 862382-5	66399-1 66399-1
			18-16 [0.8-1.4]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862434-1 862434-3	862383-1 862383-2	66099-2 66099-2	862435-1 862435-3	862382-1 862382-4	66101-2 66101-2
		<b>.062</b> 1.57	22-20 [0.3-0.6]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862434-2 862434-4	862383-1 862383-2	66400-1 66400-1	862435-2 862435-4	862382-1 862382-4	66399-1 66399-1
			18-16 [0.8-1.4]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862434-1 862434-3	862383-1 862383-2	66099-2 66099-2	862435-1 862435-3	862382-1 862382-4	66101-2 66101-2
			22-20 [0.3-0.6]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862434-2 862434-4	862383-1 862383-2	66400-1 66400-1	862435-2 862435-4	862382-1 862382-4	66399-1 66399-1
<b>.090</b> 2.29	18-16 [0.8-1.4]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862434-1 862434-3	862383-1 862383-2	66099-2 66099-2	862435-8 862435-6	862382-3 862382-6	66101-2 66101-2		
	22-20 [0.3-0.6]	<b>.125</b> [3.18] <b>.200</b> [5.08]	862434-2 862434-4	862383-1 862383-2	66400-1 66400-1	862435-9 862435-7	862382-3 862382-6	66399-1 66399-1		

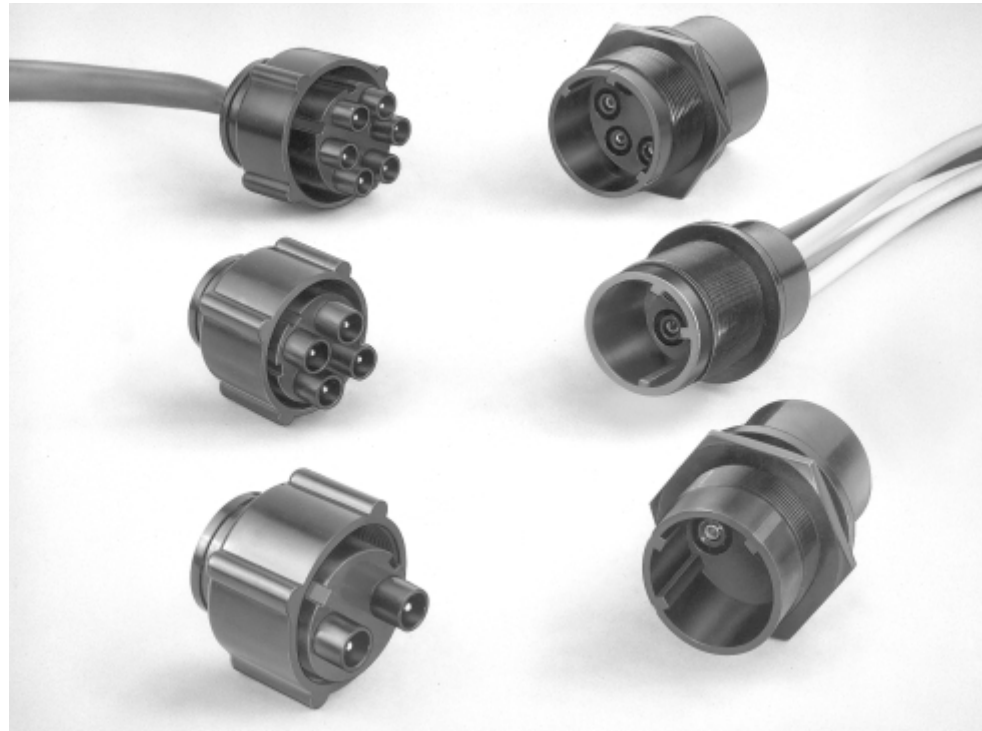
- Notes:** 1. Hand Tool Part Number 90067-2 and Extraction Tool Part Number 861751-1 are recommended for all contacts; contacts can be machine-applied.  
 2. Fully assembled connectors terminated on specified length leads are available. Consult Tyco Electronics.  
 3. Receptacle Housing Dim. (Typ.)—1.25 [31.75] L x 2.36 [59.94] W x .81 [20.57] H.



Multi-Pin Circular Commercial Connectors, 27 KVDC

Product Facts

- Housing made of UL recognized, 94V-0 rated, self-extinguishing polyester materials
- Standard housing color is black — other colors available
- Operating and storage temperature range: -55°C to +125°C [-67°F to +257°F]
- Operates up to 27 KVDC
- Will withstand a 35 KVDC hipot test
- Safe handling of high-voltage — no exposed contacts
- Lightweight, compact design
- Threaded coupling provides positive, quick connect/disconnect
- Resilient silicone rubber "O" rings provide positive sealing for mated connectors
- Can be panel or bulkhead mounted or used in free-hanging applications
- Size 16 gold-plated contacts with 13 ampere rating accommodate wide range of wire sizes — 24-20 AWG and 18-16-14 AWG — may be hand tool or machine crimped or soldered
- Two shell sizes available: smaller size offers 2-, 3- and 4-contact configurations; larger diameter shell contains 6 or 7 contacts



AMP Multi-Pin Circular Connectors provide reliable, safe, low cost means of connecting high voltages in critical applications and environments. They are lightweight, extremely compact and can be operated within a temperature range of -67°F to 257°F [-55°C to +125°C] and to 27 KVDC.

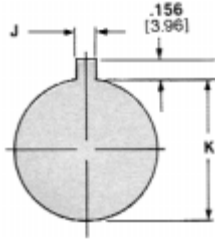
Circular multi-pin high voltage connectors are available in two basic shell sizes offering 2-, 3-, 4-, 6- and 7-

contact configurations. All are equipped with threaded couplings for positive, quick connect/disconnect capability and can be panel or bulkhead mounted or used as free-hanging connectors. They incorporate many outstanding design features to assure their complete electrical, mechanical and environmental integrity.

To satisfy customer requirements, the connectors are supplied pre-assembled

(with attached leads) or in kit form. Each kit includes a plug, receptacle and an appropriate number of pins and sockets that can be hand tool or machine crimped or soldered to wire. Pre-assembled connectors can be furnished with leads of virtually any length and color. All are fully potted and tested so that they are of high quality and meet performance specifications.

Multi-Pin Circular Commercial Connectors, 27 KVDC (Continued)



Recommended Panel Cutout for Bulkhead Mounting

Mounting Nut — maximum torque is 20 in.-lb. [.225 Nm].

Material

- Housing, Cap Nut and Strain Relief** — Glass-reinforced polyester
- O-Ring** — Silicone rubber
- Contacts** — AMP Type II, gold plated per MIL-G-45204
- Instruction Sheet** — IS 408-9169

Hand Tools

- 24-20 AWG [0.2-0.6 mm<sup>2</sup>]** — Part Number 58305-1
- 18-16 AWG [0.8-1.4 mm<sup>2</sup>]** — Part Number 45098
- 14 AWG [2 mm<sup>2</sup>]** — Part Number 45098

Extraction Tool

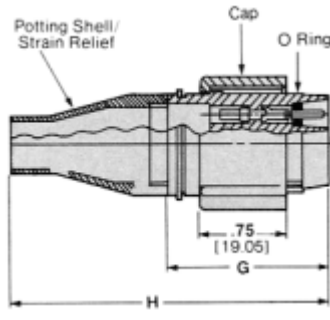
Part Number 861751-1

Component Parts

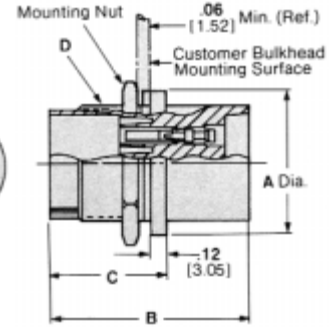
- Pin (loose piece)** — 24-20 AWG [0.2-0.6 mm<sup>2</sup>] Part Number 200679-1
- 18-16 AWG [0.8-1.4 mm<sup>2</sup>] Part Number 200681-1
- 14 AWG [2 mm<sup>2</sup>] Part Number 201645-1
- Socket (loose piece)** — 24-20 AWG [0.2-0.6 mm<sup>2</sup>] Part Number 201328-1
- 18-16 AWG [0.8-1.4 mm<sup>2</sup>] Part Number 200333-1
- 14 AWG [2 mm<sup>2</sup>] Part Number 201568-1
- O-ring (package of 50) Part Number 862798-1

- Potting shell/strain relief (2, 3 and 4 contact plugs)** — Part Number 862544-1
- Potting shell/strain relief (6 and 7 contact plugs)** — Part Number 862695-1
- Potting shell (short, for 6 and 7 contact plugs, 1.125 [28.58] long)** — Part Number 863995-1

Plug



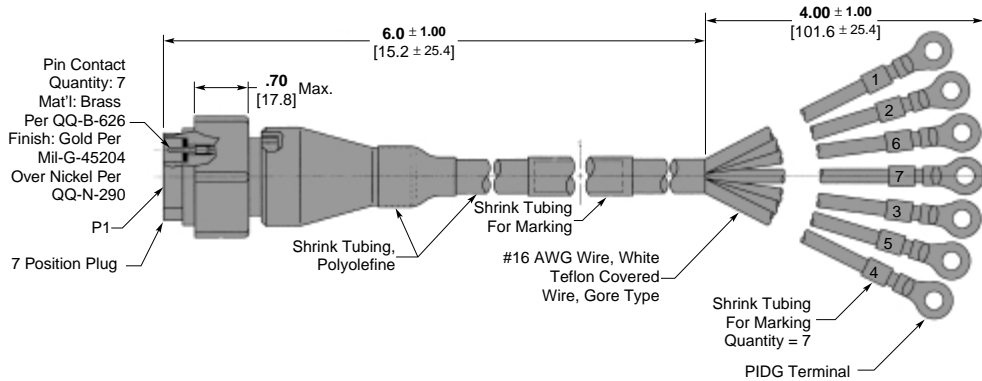
Receptacle



Dimensions

Contacts	A	B	C	D	E	F	G	H	J	K
2, 3, 4	1.25 31.75	1.75 44.45	1.00 25.4	1 (28 UN) 25.4	.125 3.18	1.31 33.27	1.38 35.05	2.00 50.8	1.56 3.96	1.015-1.031 25.78-26.19
6, 7	1.50 38.1	2.00 50.8	1.06 26.92	1.25 (20 UN) 31.75	.190 4.85	1.56 39.62	1.48 37.59	3.30 83.82	.203 5.16	1.260-1.270 32.00-32.26

Cable Assembly, 7 Pos. Plug



Part Number 447288-1

Note: 4-Pos. Receptacle Housing Dim. (Typ.)—1.75 [44.45] L x 1.25 [31.75] Dia.

Number of Contacts	Wire Range		Receptacle Kit (with sockets)	Plug Kit (with pins)	Plug (with Strain Relief) and Receptacle Kit
	AWG	mm <sup>2</sup>			
2	24-20	0.2-0.6	859529-4	860261-4	863015-1
	18-16	0.8-1.4	859529-5	860261-5	863015-2
	14*	2	859529-6	860261-6	863015-3
3	24-20	0.2-0.6	859528-4	860263-4	863016-1
	18-16	0.8-1.4	859528-5	860263-5	863016-2
	14*	2	859528-6	860263-6	863016-3
4	24-20	0.2-0.6	859526-4	860265-4	863017-1
	18-16	0.8-1.4	859526-5	860265-5	863017-2
	14*	2	859526-6	860265-6	863017-3
6	24-20	0.2-0.6	859527-4	860267-4	863018-1
	18-16	0.8-1.4	859527-5	860267-5	863018-2
	14*	2	859527-6	860267-6	863018-3
7	24-20	0.2-0.6	861647-7	861648-7	863019-1
	18-16	0.8-1.4	861647-8	861648-8	863019-2
	14*	2	861647-9	861648-9	863019-3

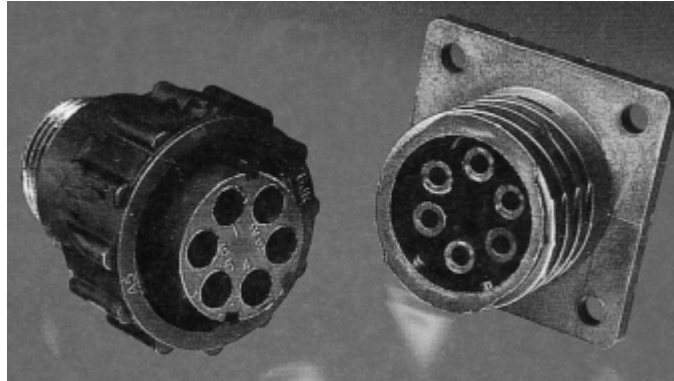
Note: Contacts are packaged separately within the connector kit for shipment. Connectors are available with leads attached.

\*Use Type II, Size 16 contacts, with a wire barrel sized to accept 14 AWG conductor.

Multi-Line High Voltage Connectors

Product Facts

- User configurable high voltage connector
- Cost effective, 6-position
- Operating voltage: 5,000 volts DC
- Operating current: 3 Amps max.
- Quick-turn threaded coupling
- Accepts AMP Type XI size 20 contacts



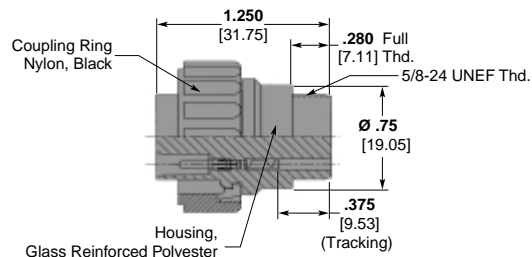
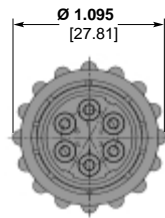
A cost effective approach in a plastic circular connector with crimp snap-in contacts. Wherever high voltage is required, this user friendly configuration can operate up to 5,000 volts DC. This 6 position connector can be selectively loaded for various high voltage applications such as:

- Materials Handling Equipment
- Medical Equipment
- Computer and Peripheral Equipment
- HV Power Supplies
- Automated Manufacturing Equipment
- Test Equipment

This LGH connector offers an economical solution for your high voltage requirements. This quick-turn coupling connector will also accommodate standard AMP Circular Plastic Connector backshell accessories.

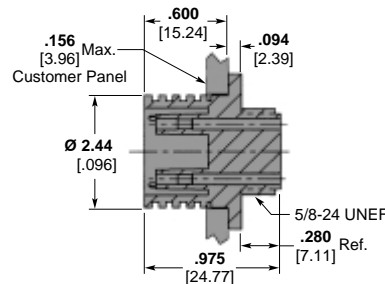
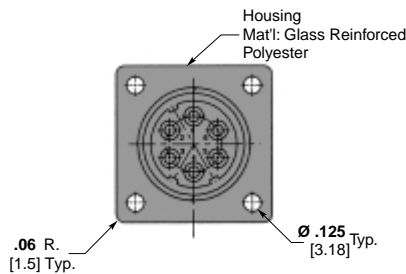
Material and Mechanical Characteristics

Housings — UL 94V-0  
 Operating Temperature —  
 -5°F to 185°F [-15° C to 85° C]



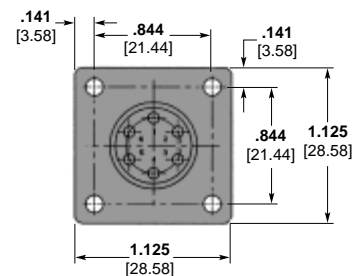
Part Number 867534-1

Accepts Pin Contact  
 Part Number 203816-6 for 20-24 AWG wire  
 (Not Supplied with Plug Kit)



Part Number 867535-1

Accepts Socket Contact  
 Part Number 203802-6 for 20-24 AWG wire  
 (Not Supplied with Receptacle)



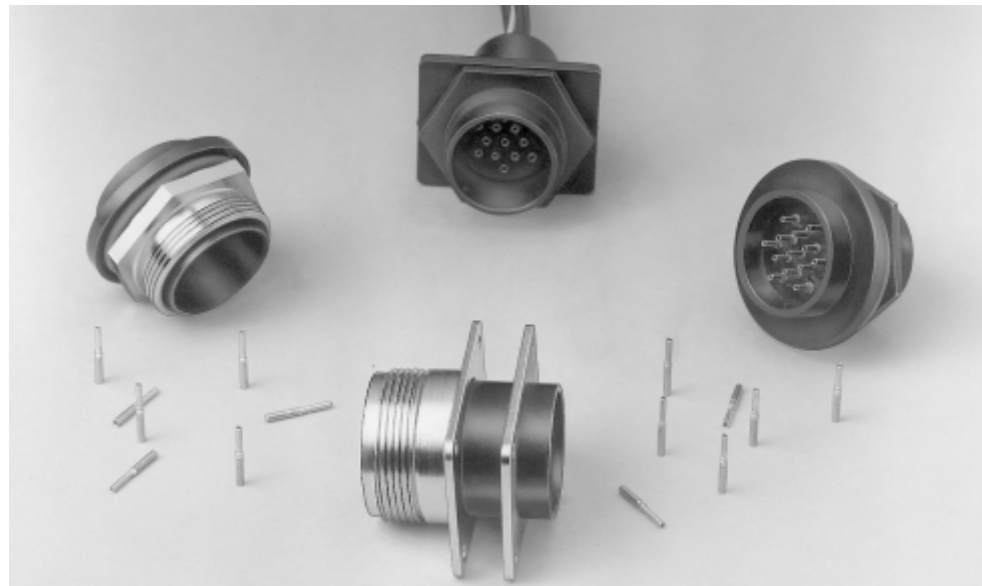
13-Pin Circular Connectors, 5 KVDC

Product Facts

- No exposed high voltage contacts
- Lightweight, compact design
- Polarized plug and receptacle
- Available as assembled units or in kit form
- Preassembled connectors furnished with attached leads of virtually any color/length combination
- Right-angle strain relief option available
- Threaded coupling provides positive, quick connect/disconnect
- Will withstand a 10 KVDC hipot test
- Metal shell available for complete shielding and rugged operation
- Pins and sockets are 22-gauge, gold-plated bronze
- UL Recognized, 94V-0 rated, self-extinguishing, glass reinforced polyester material, where specified
- Wire range — 28-22 AWG
- Operating temperature range — -67°F to +257°F [-55°C to +125°C]
- Voltage rating — 5 KVDC at 70,000 ft. [21,336 m]



Plugs



Receptacles

AMP LGH 13-Pin Circular High Voltage Connectors are suitable for a wide range of military and commercial applications. This highly reliable, lightweight connector series incorporates many features that promote electrical, mechanical and environmental integrity. In fact, properly mated, LGH

13-Pin Connectors safely carry 5 KVDC and a continuous current of 5 amperes up to an altitude of 70,000 feet [21,336 meters].

Plugs are available in straight and right-angle strain relief versions made from class 94V-0 polyester and in a metalized version with a straight or right-angle boot.

Four receptacle options, including round and rectangular flanges, provide versatility for a variety of mounting requirements.

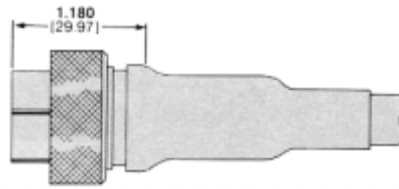
Connectors are available pre-assembled or in kit form.

13-Pin Metal Shell Connectors

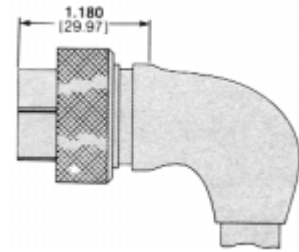
**Metalized Plugs**

Part Number 865799-1 (with right-angle boot)  
 Part Number 865799-2 (with straight boot)

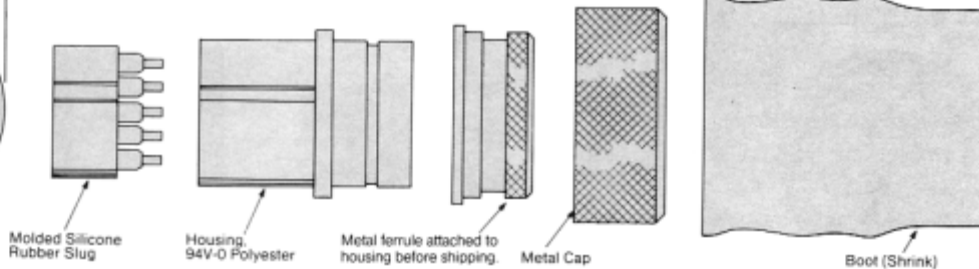
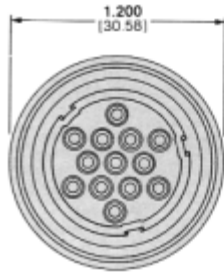
Mates with receptacles —  
 865574-1  
 863293-1



Straight Boot



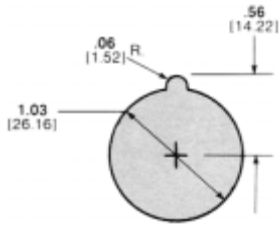
Right-Angle Boot



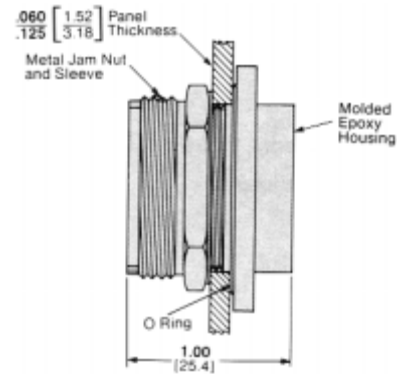
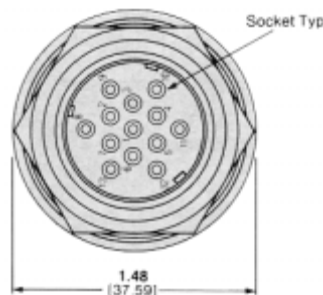
**Metal-Sleeve Receptacle**

Part Number 865574-1

Mates with plugs —  
 865799-1  
 865799-2



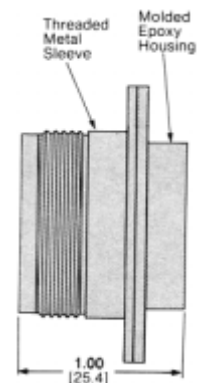
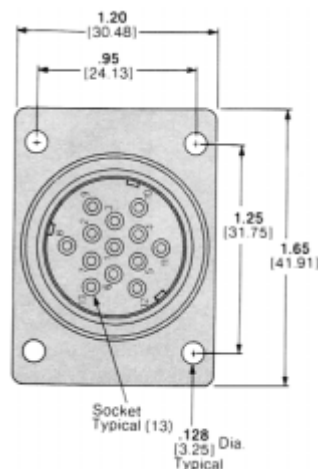
Recommended Panel Cutout



**Flange-Mount Receptacle, Metal Flange and Sleeve**

Part Number 863293-1

Mates with plugs —  
 865799-1  
 865799-2



13-Pin Plug Kits, Polyester\*

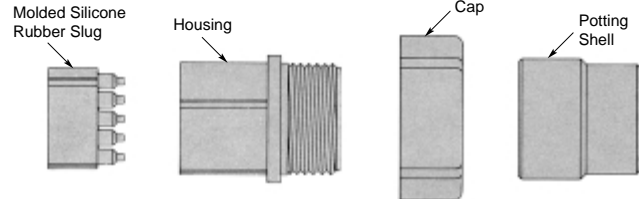
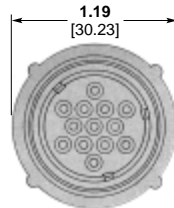
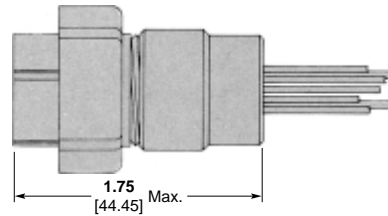
**Straight Plug,  
Polyester Material, 94V-0**

Part Number 865628-1

Mates with receptacles —

863612-1

863863-1, -2



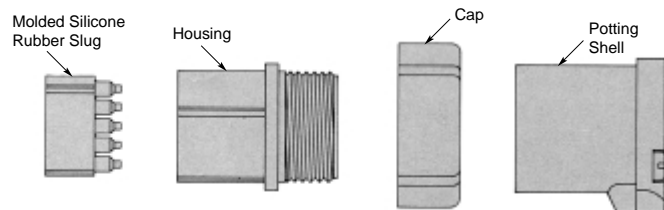
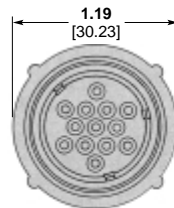
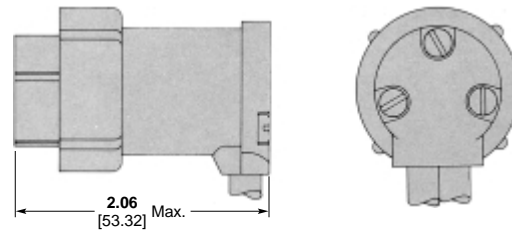
**Right-Angle Plug,  
Polyester Material, 94V-0**

Part Number 864840-1

Mates with receptacles —

863612-1

863863-1, -2



\*Also available preassembled. Contact Tyco Electronics for additional information.

13-Pin Receptacle Kits, Plastic

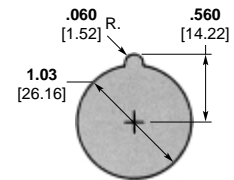
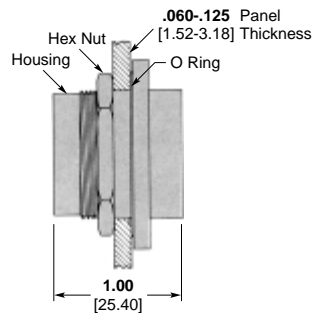
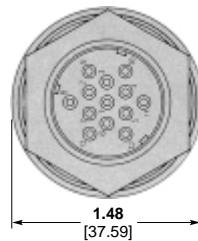
**Glass-Filled Epoxy  
Receptacle**

Part Number 863612-1

Mates with plugs —

865628-1

864840-1



Recommended Panel Cutout

**Channel-Mount Receptacle,  
94V-0 Polyester**

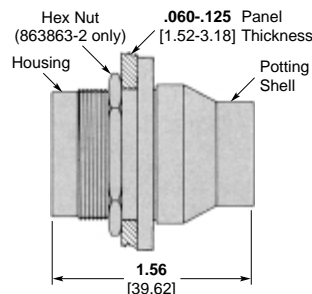
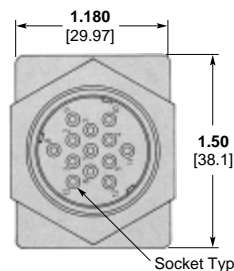
Part Number 863863-1 (without hex nut)

Part Number 863863-2 (with hex nut)

Mates with plugs —

865628-1

864840-1



5-Pin, Metal-Shell Circular Connectors, Military-Type

Product Facts

- Field installable and repairable
- Environmentally sealed
- Bayonet locking cap
- Single dot polarization helps prevent mismatching
- Accepts any MIL-C-38999 backshell arrangement
- Three insert polarizations available
- Rated for 10 KVDC and 10 amps
- Withstands 15 KVDC hipot test
- Safe handling of high voltage — no exposed contacts
- Lightweight, compact design
- Size 16 gold plated contacts with 10 ampere rating accommodates wire range 24-16 AWG [0.2-1.4 mm<sup>2</sup>] and may be hand tool crimped, machine crimped, or soldered
- Can be panel or bulkhead mounted or used in free-hanging applications
- Preassembled connectors furnished with attached leads of virtually any color/length combination
- Removable inserts interchangeable between shell halves
- Positions numbered for easy circuit identification
- Backshell available for bundle shielding
- Operating and storage temperature range: -67°F to +257°F [-55°C to +125°C]

Material and Finish

**Shells** — Aluminum chromate coating over nickel plating

**Inserts** — Glass reinforced polyester

**Bayonet Coupling Rings** — Glass reinforced polyester

**O Ring Seals** — Silicone rubber

**Pin and Socket Contacts** — Brass; .00050 [0.013] min. gold plated per MIL-G-45204

**Backshell** — Brass; plated chromate over nickel



AMP 5-Pin Metal Shell Connectors are designed for high voltage circuits, especially in critical applications and harsh environments, such as shipboard applications. The connector is exceptionally lightweight and compact and can be used within a temperature range of -67°F to +257°F [-55°C to +125°C].

The connector incorporates many features for electrical, mechanical and environ-

mental integrity. Such features include: flame retardant, glass-filled thermoplastic polyester inserts; two sets of gold plated size 16 contacts which have a 10 ampere rating and will accommodate a wire size range of 24-16 AWG [0.2-1.4mm<sup>2</sup>]; three insert polarizations; full protection of pins and sockets to permit safer high voltage handling; and resilient seals inside each pin shroud which provide positive sealing for the mated connector.

Tyco Electronics supplies the connector either pre-assembled or in kit form. Each conveniently packaged kit includes an appropriate number of pins and sockets that can be hand tool crimped, machine crimped or soldered to wire. Pre-assembled connectors can be furnished with leads of virtually any length. All are tested for highest quality and meets applicable performance specifications.

Kits

Description	Part Numbers	
	Kit with Contacts for 16 AWG [1.25-1.4 mm <sup>2</sup> ]	Kit with Contacts for 20 AWG [0.5-0.6 mm <sup>2</sup> ]
Receptacle, Flange-Mount with Socket Contacts	863754-1	864062-1
Plug with Pin Contacts	863753-1	864063-1
Receptacle, Flange-Mount with Pin Contacts	863755-1	864064-1
Plug with Socket Contacts	863752-1	864065-1

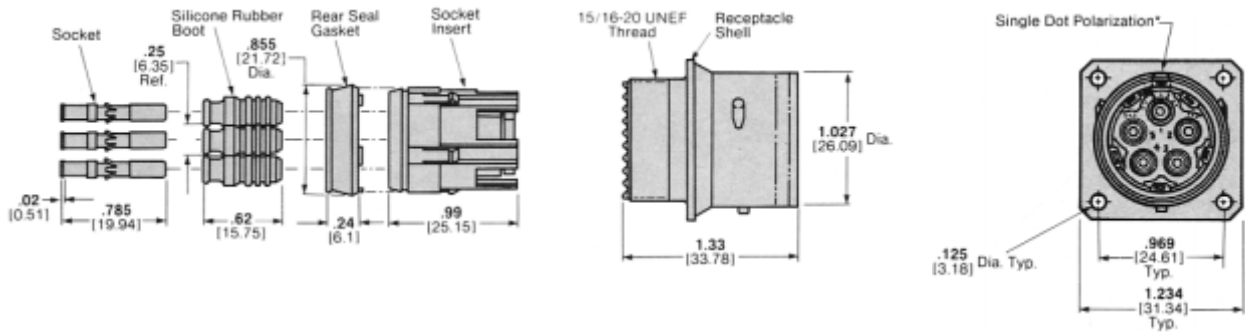
**Note:** Backshell is not included with any kits; any MIL-C-38999 backshell may be used or AMP Part Number 864639-2.

Tooling

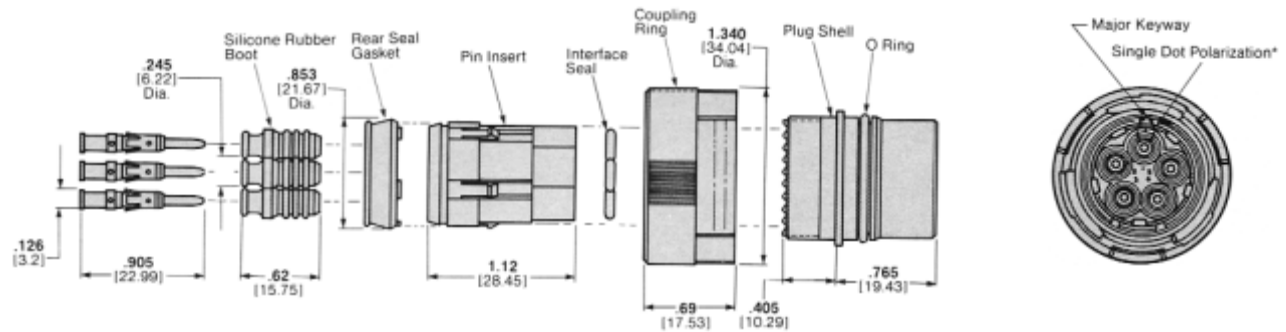
Tool Application	Manufacturer's Name	Part Numbers
Insert Removal	AMP	864437-1
Contact Removal	AMP	305183
Crimp Tool Contact Positioner	Daniels	TP-581
Crimp Tool	Daniels	M22520/1-01
Instruction Sheet	AMP	864886

For more information on 5-Pin Metal Shell Circular Connector to meet your specific requirements, consult Tyco Electronics.

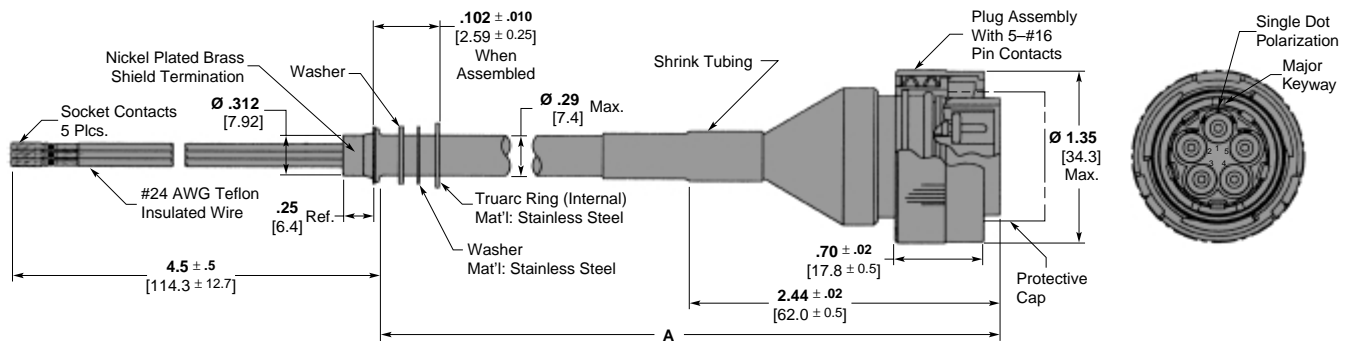
Receptacle



Plug



Shielded Cable Assembly



Dim. A	Part Number
12.60 ± .25 320.0 ± 6.4	864019-1
50.00 + 3.00 - 0.00 1270.0 + 76.2 - 0.0	864019-2
17.50 ± .50 444.5 ± 12.7	864019-3

Contact No.	Wire Color
1	Yellow
2	Black
3	Yellow
4	Brown
5	Red

7-Pin, Metal-Shell Circular Connectors, Military-Type

Product Facts

- 15 KVDC operating voltage, up to 70,000 feet [21,336 m]
- Current carrying capacity — 7.5 A continuous per line for 20 AWG wire
- Metal shell available for complete shielding and rugged operation
- Molded-in Size 20 contacts are fully shrouded
- Molded glass epoxy and silicone rubber interface for positive sealing
- Polarized plug and receptacle housings help prevent mismatching
- Designed to meet applicable specifications
- Hermetically sealed receptacles available
- Operating temperature range from -67°F to +257°F [-55°C to +125°C]
- Moisture resistant
- Corona resistant



Product Specification — 108-36030

AMP 7-Pin Miniature Circular Connectors, when properly assembled and mated, safely carry 15 KVDC (pin-to-pin and pin-to-ground) through a full range of military environmental requirements. The connectors can carry a continuous current of 7.5 amperes per line when terminated to 20 AWG wire. The receptacle

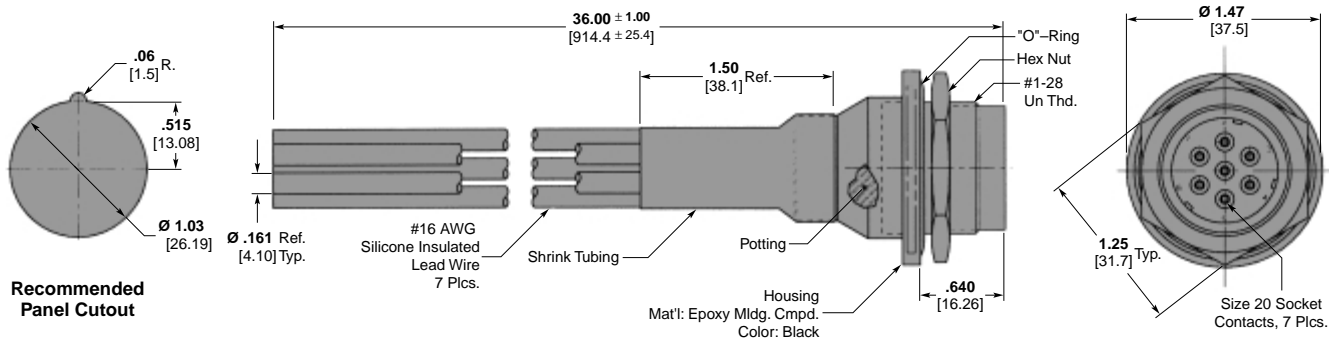
is hermetic and can be mounted with an O-ring flange or solder flange for various industrial and military applications.

This connector family features size 20 gold-plated pins and sockets which are fully shrouded for safe handling, polarized housings to assure proper mating, and

a molded glass epoxy and silicone rubber interface for positive sealing.

AMP 7-Pin Miniature Circular Connectors are available in a wide variety of configurations, including a metal shell version for RFI shielding and rugged handling.

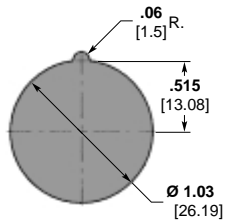
Receptacle Lead Assembly



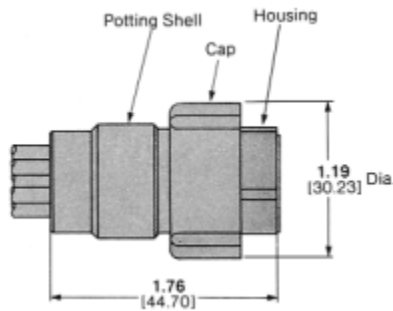
Recommended Panel Cutout

Part Number 867862-1

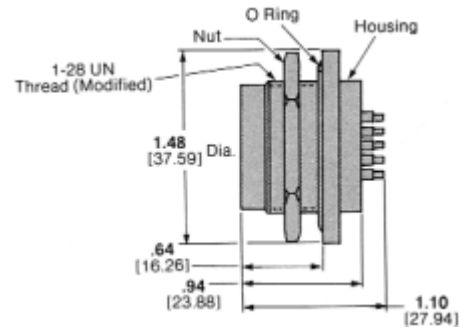
Plastic Shell



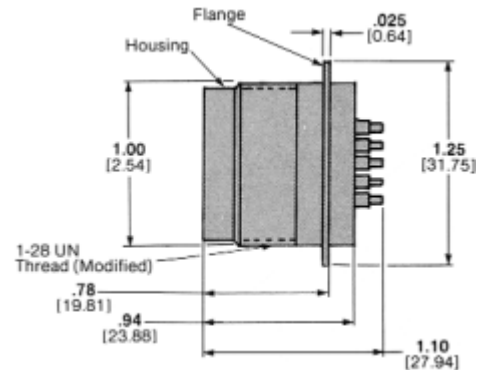
Panel Cutout for Receptacles



Potted Plug Kit  
Part Number 865594-1

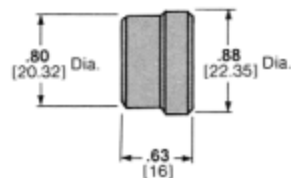


Potted Receptacle  
Part Number 861999-1 (Non-hermetic)  
Part Number 862794-1 (Hermetic Seal)

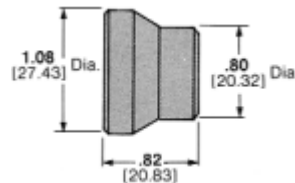


Receptacle for Hermetic Seal,  
Solder-Flange-Mount  
Part Number 862005-1

Potting Shells

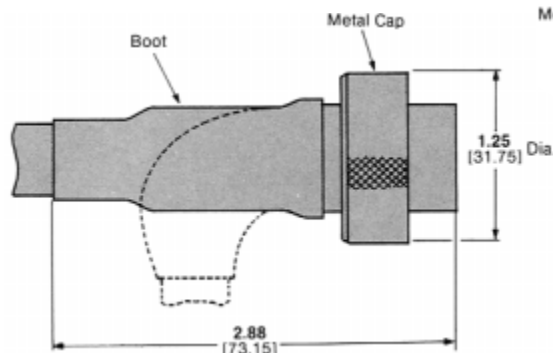


Plug Potting Shell  
Part Number 862544-1

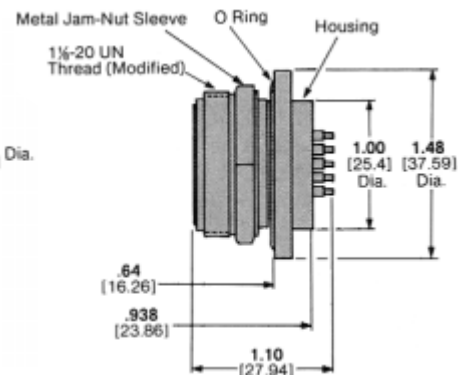


Receptacle Potting Shell  
Part Number 862256-1

Metal Shell



Plug Kit  
Part Number 865656-1 (Straight Boot)  
Part Number 865656-2 (Right-Angle Boot)  
Part Number 865656-3 (No Boot)

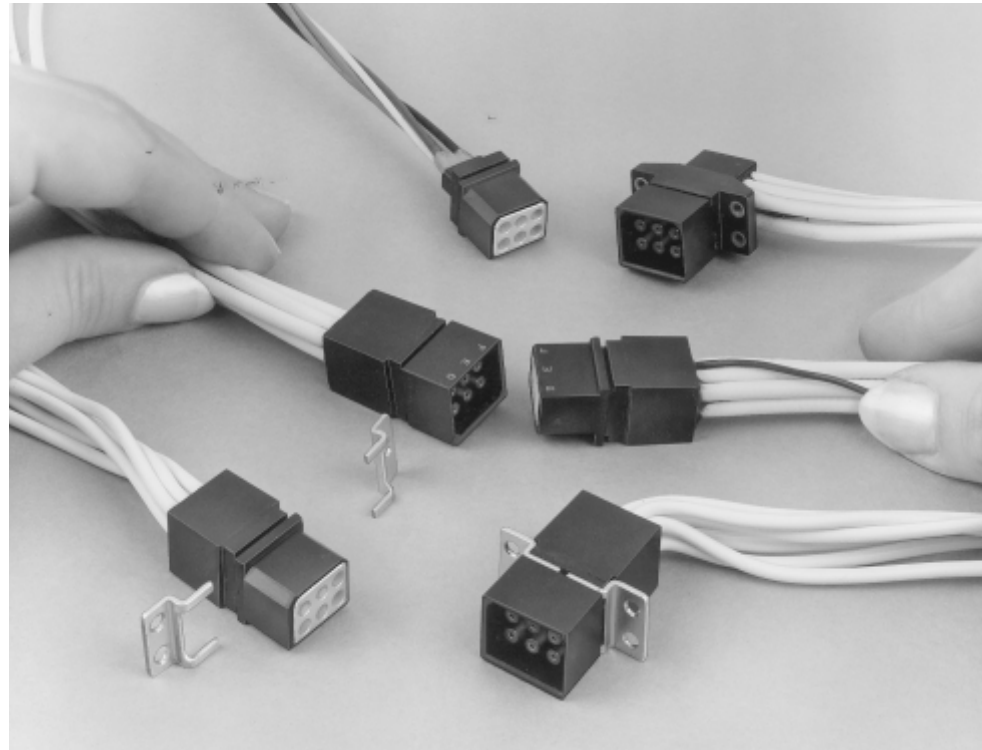


Receptacle  
Part Number 862004-1 (Non-hermetic)  
Part Number 866182-1 (Hermetic Seal)

6-Pin, Subminiature Rectangular Connectors

Product Facts

- Extremely lightweight — total weight of mated pair is less than 14 grams
- Compact design — requires less than .6 square inch [387 mm<sup>2</sup>] of mounting surface; occupies less than .750 cubic inch [.229 mm<sup>3</sup>] of volume per mated pair
- Quick connect/disconnect design
- Resilient silicone rubber insert in plug half provides positive interfacial seal for mated connector
- Withstands 10 KVDC hipot test
- Housing styles for potting, chassis slot (channel) mounting, panel mounting and free-hanging applications
- Lettered positions for easy circuit identification
- Size 22, gold plated contacts with 5 ampere rating accommodate 28 to 22 AWG [0.08 to 0.4 mm<sup>2</sup>] wire
- Connectors pre-assembled with leads, fully potted and tested
- 6 KVDC at 70,000 ft. [21,336m]; -67°F to +257°F [-55°C to +125°C] operating storage temperature
- Flame retardant, glass reinforced thermoplastic polyester housings standard color, black



AMP Subminiature High Voltage Connectors are designed for use in electronic high voltage circuits, especially in critical applications and harsh environments. It is exceptionally lightweight and compact. Can be operated within a temperature range of -67°F to 257°F [-55°C to +125°C] and up to 6 KVDC at an altitude of 70,000 feet [21,336 meters].

The connector incorporates many features for electrical, mechanical and environmental integrity.

Tyco Electronics supplies the Subminiature High Voltage Connector in a 6-position size, pre-

assembled with silicone or TEFLON insulation. For optimum versatility, connector housings are available for 180° (straight) or 90° (right-angle) rear-entry wiring and in a choice of styles for potting, chassis-slot (channel) mounting, panel mounting and free-hanging applications. Panel-mounted versions can be furnished either with separate "slip-on" metal mounting brackets or with a molded mounting flange that is an integral part of the connector. All connector styles are fully potted (and have been tested for environmental integrity and reliability of performance).

**Material and Finish**

**Housings and Potting Shells** — Thermoplastic polyester, glass-filled, flame retardant; standard color, black

**Contacts** — Beryllium copper; plated .000030 [0.00076] min. gold per MIL-G-45204, over .000030 [0.00076] min. nickel per QQ-N-290

**Mounting Brackets** — Carbon steel, nickel plated

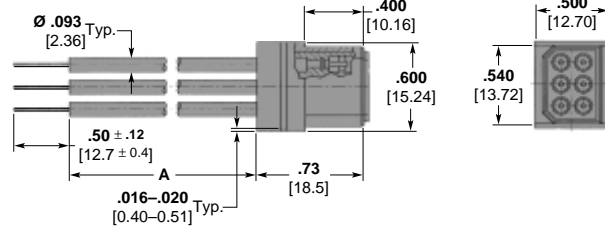
**Mounting Brackets, Slip-on (For Commercial or Military Assemblies with slotted housings)**

**Part Number 861214-2** — Two, .106 [2.69] Dia. Mounting Holes

**Part Number 861215-2** — One, .106 [2.69] Dia. Mounting Hole

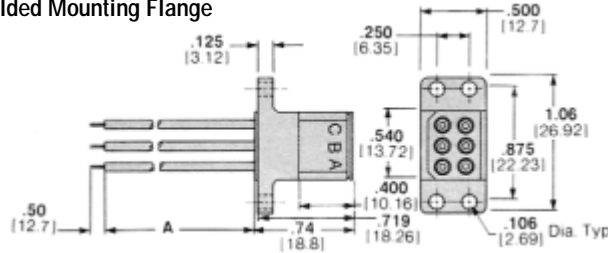
**Plug Assemblies and Kits**  
Flying Leads

Assembly A Lead Length	Assembly with 22 AWG Silicone
15.00 ± .50	867622-1
381.0 ± 12.7	
24.00 ± .50	867622-2
609.6 ± 12.7	



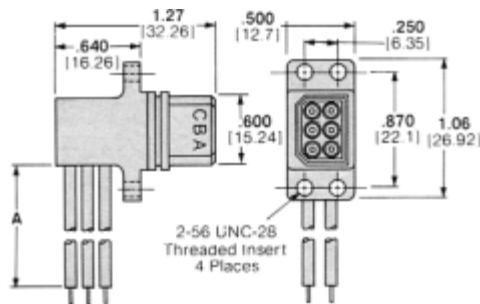
Pin No.	Wire Color
A	Yellow
B	Red
C	Brown
D	Blue
E	Green
F	Black

**Molded Mounting Flange**



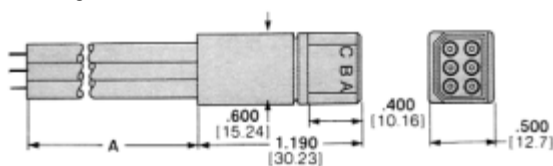
Assembly Lead Length A	Assembly with 22 AWG Silicone	Assembly with 24 AWG TEFLON
12	867465-1	867464-1
304.8		
24	867465-2	867464-2
609.6		
36	867465-3	867464-3
914.4		

**Right-Angle**



Kit Part Number	Assembly Lead Length A	Assembly with 22 AWG Silicone	Assembly with 24 AWG TEFLON
448479-1 Kit with Flange	12	867467-1	867466-1
	304.8		
	24	867467-2	867466-2
	609.6		
	36	867467-3	867466-3
	914.4		

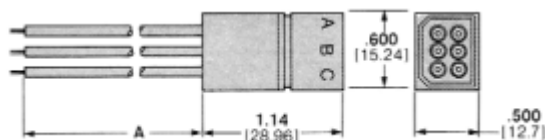
**Slotted Version with Potting Shell**



Kit Part Number	Assembly Lead Length A	Assembly with 22 AWG Silicone	Assembly with 24 AWG TEFLON
867482-1	12	867463-1	867462-1
	304.8		
	24	867463-2	867462-2
	609.6		
	36	867463-3	867462-3
	914.4		

**Receptacle Assemblies and Kits**

**Slotted**



Kit Part Number	Assembly Lead Length A	Assembly with 22 AWG Silicone	Assembly with 24 AWG TEFLON
867483-1	12	867469-1	867468-1
	304.8		
	24	867469-2	867468-2
	609.6		
	36	867469-3	867468-3
	914.4		

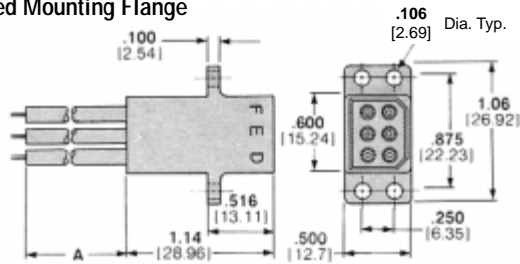
**Color Coding**

Leads are color coded as tabulated here. Other color leads can be used in custom assemblies.

Pin No.	Wire Color
A	Brown
B	Red
C	Green
D	Blue
E	Black
F	White

Receptacle Assemblies and Kits (Continued)

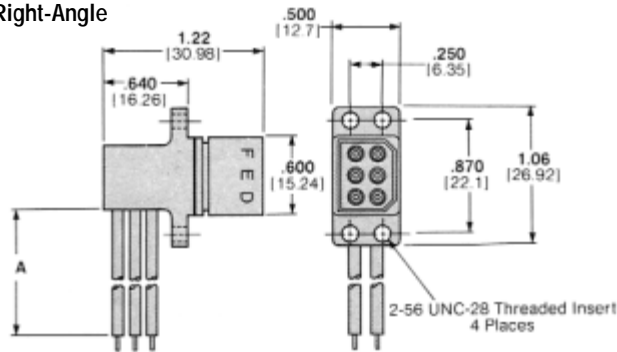
Molded Mounting Flange



Flange can be placed elsewhere on housing. Consult Tyco Electronics.

Kit Part Number	Assembly Lead Length A	Assembly with 22 AWG Silicone	Assembly with 24 AWG TEFLON
867484-1	12 304.8	867473-1	867472-1
	24 609.6	867473-2	867472-2
	36 914.4	867473-3	867472-3

Right-Angle



Kit Part Number	Assembly Lead Length A	Assembly with 22 AWG Silicone
866047-1	12 304.8	867477-1
	24 609.6	867477-2
	36 914.4	867477-3

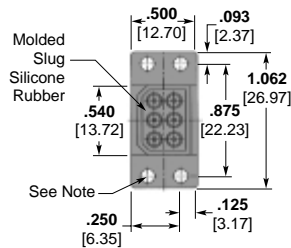
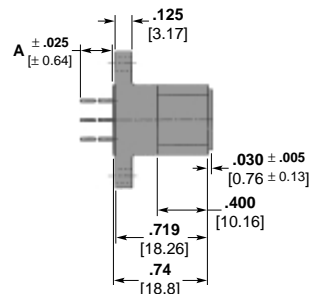
Color Coding

Leads are color coded as tabulated here. Other color leads can be used in custom assemblies.

Pin No.	Wire Color
A	Brown
B	Red
C	Green
D	Blue
E	Black
F	White

Plug Assemblies

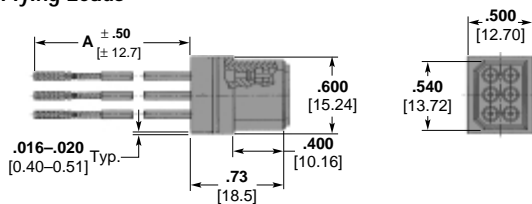
Posts Dia. .025 [0.64]



Dim. A	Part Number
.245 6.22	449810-1
.245 6.22	449810-2
.750 19.05	449810-3

Note: 449810-1 Dia. .106 [2.69], -2 and -3 inserts are #2-56.

Plug Assemblies with Flying Leads



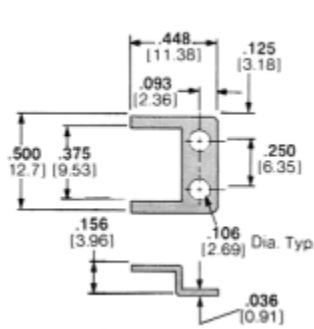
Dim. A	Lead Color	Letter Cavity	Part Number
4.00 101.6	Yellow	A	868021-1
4.00 101.6	Red	B	
4.00 101.6	Brown	C	
4.00 101.6	Blue	D	
4.00 101.6	Green	E	
13.00 330.2	Black	F	

6-Pin, Subminiature Rectangular Connectors (Continued)

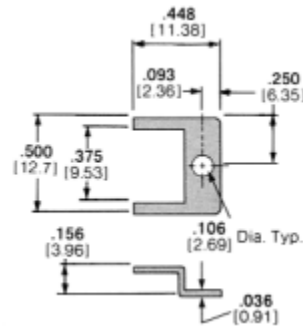
Plug Assemblies (Continued)

Mounting Brackets

These brackets are for mounting commercial or military assemblies with slotted housings. They are not included in connector kits, nor with assemblies, and they must be ordered separately.

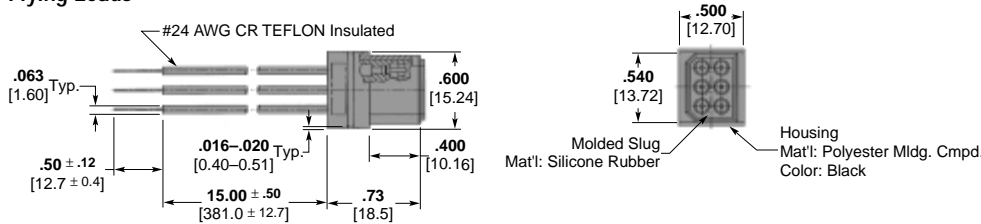


Part Number 861214-2



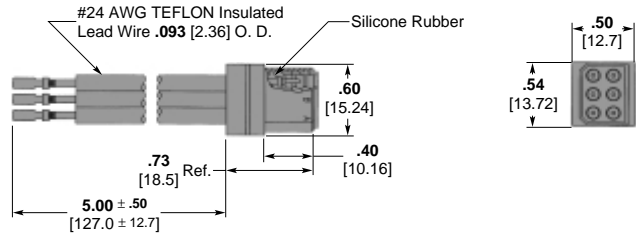
Part Number 861215-2

Flying Leads



Part Number 867761-1

Pin No.	Wire Color
A	Yellow
B	Red
C	Brown
D	Blue
E	Green
F	Black

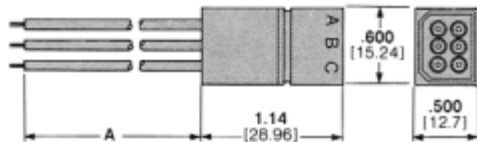


Part Number 445181-1

Socket No.	Wire Color
A	Black
B	Red
C	Brown
D	No Lead
E	Yellow
F	Green

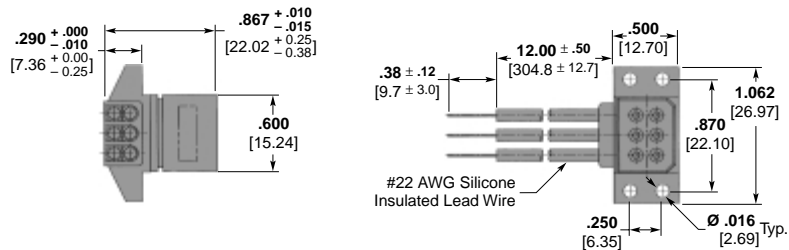
Receptacle Assemblies

Slotted



Assembly Lead Length A	Assembly with 22 AWG Silicone	Assembly with 24 AWG TEFLON
12	867471-1	867470-1
24	867471-2	867470-2
36	867471-3	867470-3

Right-Angle

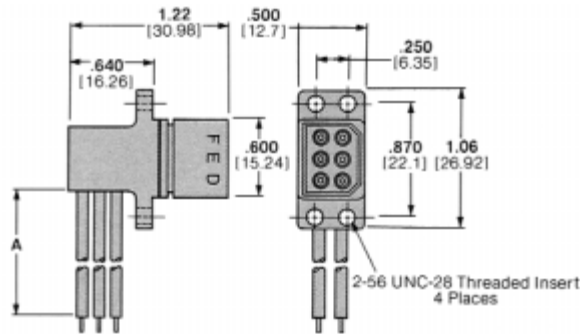


Part Number 443832-1

Receptacle Assemblies

(Continued)

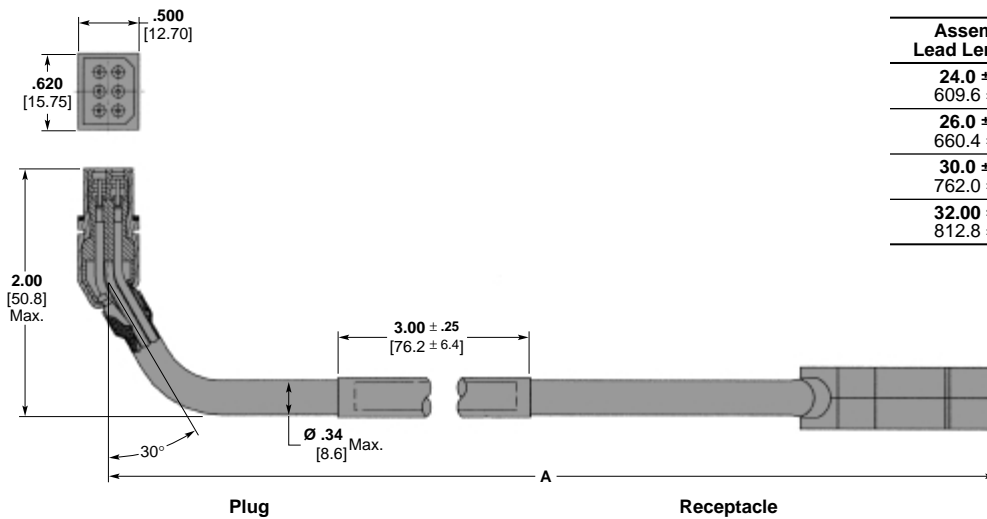
Right-Angle (Continued)



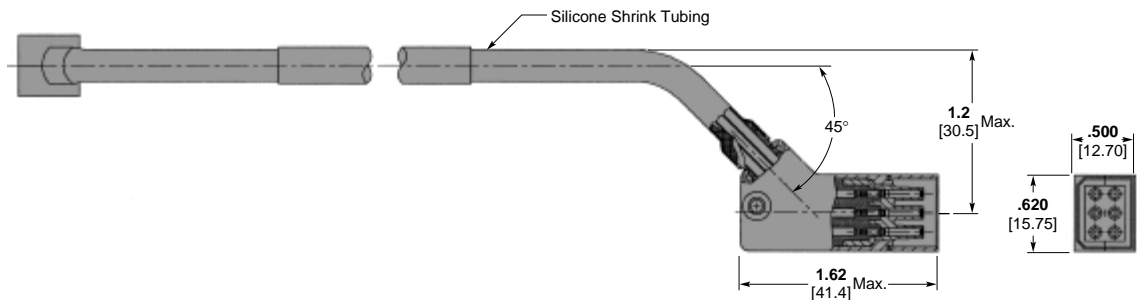
Assembly Lead Length A	Assembly with 22 AWG Silicone	Assembly with 24 AWG TEFLON
12 304.8	867479-1	867478-1
24 609.6	867479-2	867478-2
36 914.4	867479-3	867478-3

6-Pin, Subminiature Metal-Shell Rectangular Connectors

Cable Assemblies

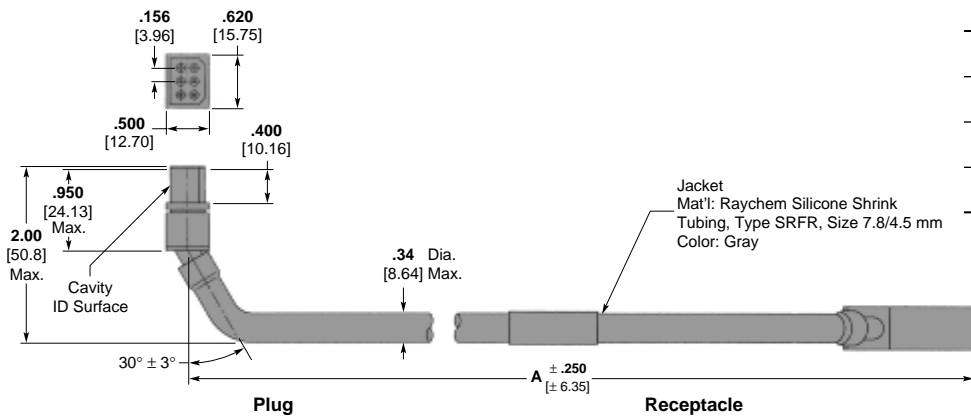


Assembly Lead Length A	Part Number
24.0 ± .25 609.6 ± 6.4	869093-1
26.0 ± .25 660.4 ± 6.4	869093-2
30.0 ± .25 762.0 ± 6.4	869093-3
32.00 ± .25 812.8 ± 6.4	869093-4



Part Number 869093

Shielded Cable Assemblies

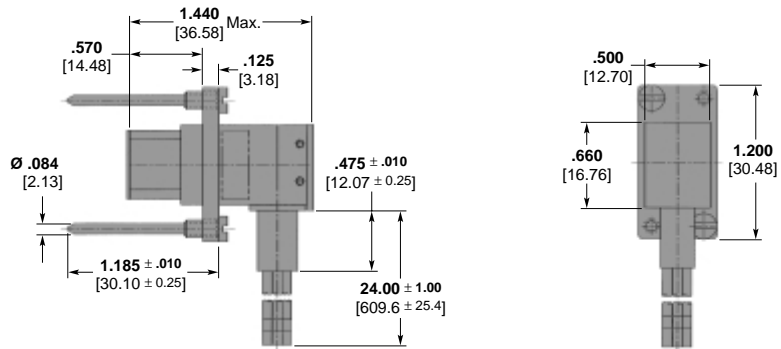


Assembly Lead Length A	Part Number
24.0 609.6	448155-1
26.0 660.4	448155-2
30.0 762.0	448155-3
32.00 812.8	448155-4



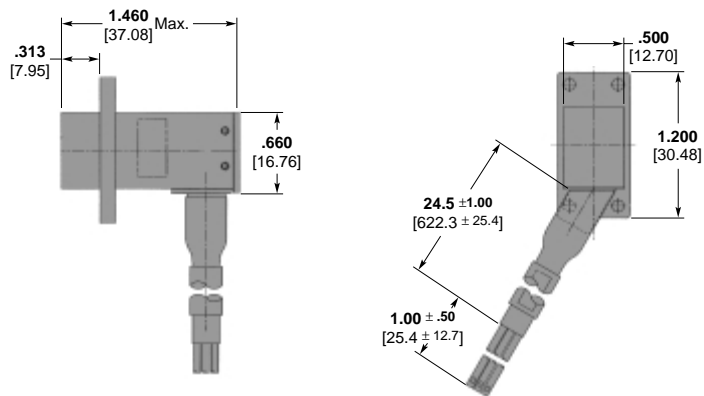
Part Number 448155

Plug Assembly  
Module Side



Part Number 449574-1

Receptacle Assembly



Part Number 449573-1

**Product Facts**

- LGH leads and receptacles find wide application where high voltage is used in harsh environments
- Small high voltage power supplies
- Back lighting for LCD flat panel displays
- High voltage for flat panel FED (Field Emissive Displays)
- Small CRT's (Cathode Ray Tubes)
- Commercial and Military Avionics
- A series of miniature high voltage connectors for applications where space is limited
- HV performance in a small lightweight connector
- Operating voltages up to 12 KVDC
- Operation to 100,000 ft. [30,480 m] altitude
- Lead wire remains flexible to -67°F [-55°C]
- Color coded for easy identification
- Leads are available with silicone, TEFLON or silicone coated TEFLON
- Connector is fully insulated
- Connectors are available with 26 thru 22 AWG wire



**Materials**

Molded silicone rubber  
 Thermoset and thermoplastic polymers  
 Socket contacts size 22 per MIL-C-39029 size 22

**Electrical Characteristics**

**Operating Voltage** — up to 12 KVDC  
**Current Rating** — 5 amps max. with 22 GA wire

**Mechanical Characteristics**

Small size outside Dia. of .135 [3.43]  
 Leads are preassembled  
 Quick disconnect, push/pull mating

**Operating Temperature** —  
 -67°F to +257°F [-55°C to +125°C]

**Approvals**

Meets applicable military specifications  
 AMP product specifications listed below

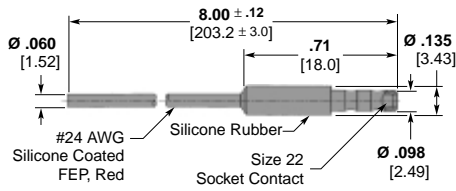
**Technical Documents**

- 135 Series (.135 [3.43] Dia.)** — 108-1788
- 170 Series (.179 [4.55] Dia.)** — 108-1802
- 240 Series (.240 [6.10] Dia.)** — 108-1853
- Surface Mount/Plug Assembly** — 108-1880
- 1, 2, and 3 Position** — 108-1812

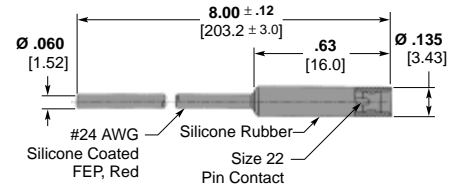
LGH Micro-Miniature Connectors and Cable Assemblies (Continued)

135 Series

**Product Specification** — 108-1788  
**Operating Voltage** — 6 KVDC  
**Test Voltage** — 10 KVDC at 10,000 feet [3,046 m] and -13°F [-25°C] and at +185°F [+85°C]



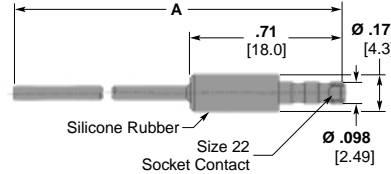
**Plug**  
**Part Number 443957-1**



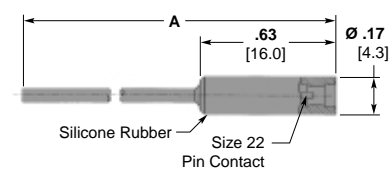
**Receptacle**  
**Part Number 443958-1**

170 Series

**Product Specification** — 108-1802  
**Operating Voltage** — 6 KVDC  
**Test Voltage** — 10 KVDC at 10,000 feet [3,046 m] and -67°F to +257°F [-55°C to +125°C]  
**Durability** — 50 matings and unmating



**Plug**

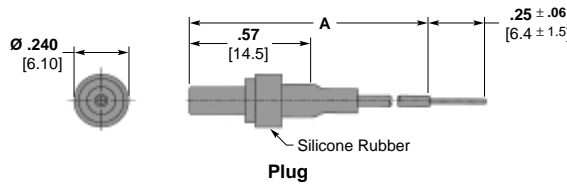


**Receptacle**

Wire Description	Wire Color	Plug		Receptacle	
		Dim. A	Part Number	Dim. A	Part Number
24 AWG Silicone Coated TEFLON	Red	12.5 ± .12	1218147-1	12.0 ± .12	1218148-1
		317.5 ± 3.0		48.0 ± .48	
24 AWG Corona Resistant TEFLON	Yellow	18.5 ± .12	1218149-1	18.5 ± .12	1218150-1
		469.9 ± 3.0		469.9 ± 3.0	

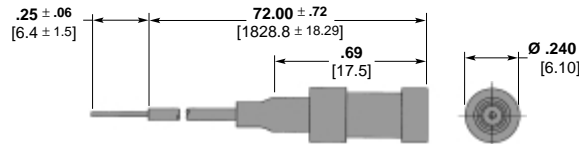
240 Series

**Product Specification** — 108-1853  
**Operating Voltage** — 12 KVDC  
**Test Voltage** — 18 KVDC at sea level 70,000 feet [21,336 m] and -67°F to +257°F [-55°C to +125°C]

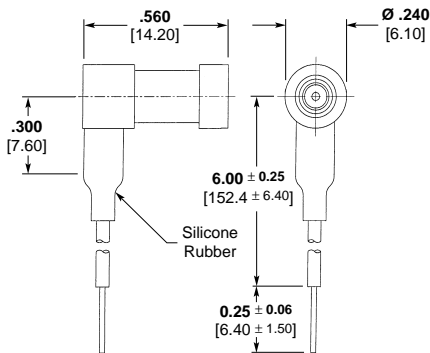


**Plug**

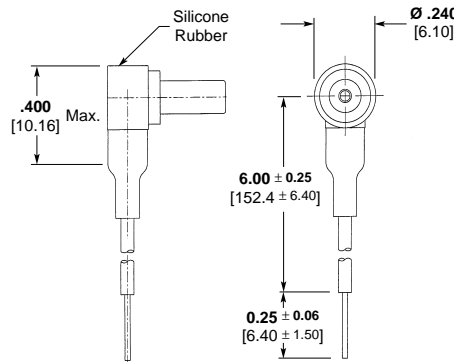
Dim. A	Plug Part Number
7.0 ± .025	448660-1 (straight)
177.8 ± 6.4	448660-2 (straight)
72.0 ± 1.0	448660-2 (straight)
1828.8 ± 25.4	448660-2 (straight)



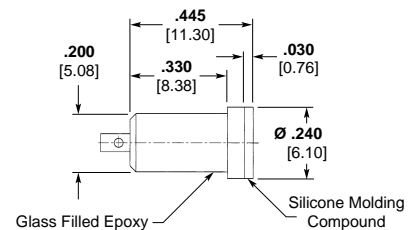
**Receptacle**  
**Part Number 448658-1**



**Receptacle (Right-Angle)**  
**Part Number 448659-1**



**Plug (Right-Angle)**  
**Part Number 448661-1**



**Receptacle Housing**  
**Part Number 1484882-1**

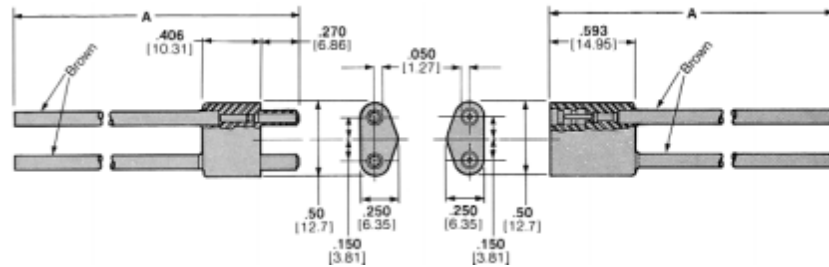


LGH Micro-Miniature Connectors and Cable Assemblies (Continued)

1, 2 and 3 Position (Continued)

Product Specification — 108-1812  
 Operating Voltage — 7.5 KVDC  
 Test Voltage — 12 KVDC at 10,000 feet [3,048 m] and -5°F to +185°F [-15°C to +85°C]

2-Position Connectors



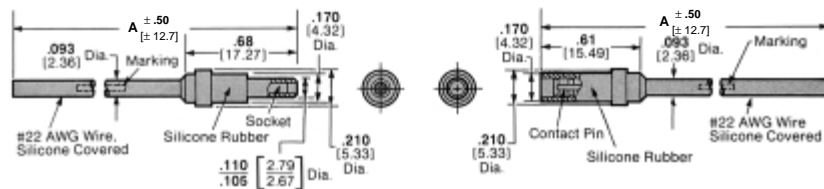
Plug

Dim. A	Part Number
12 305	866559-1
16 406	866559-5
18 457	866559-2
24 610	866559-3
48 1219	866559-4

Receptacle

Dim. A	Part Number
12 305	866196-1
16 406	866196-5
18 457	866196-2
24 610	866196-3
48 1219	866196-4

1-Position Connectors



Plug

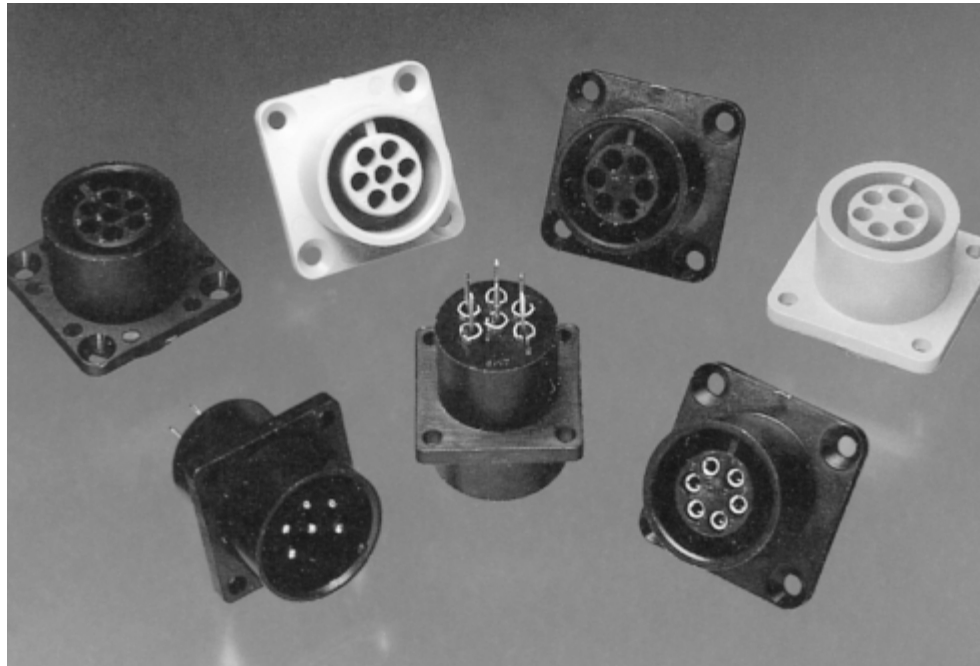
Dim. A	Wire Color	Part Number
15 381	White	867823-1
30 762	White	867823-2
36 914	Green	867823-3
36 914	White	867823-4
6 152	White	867823-5

Receptacle

Dim. A	Wire Color	Part Number
24 610	White	867824-1
24 610	Green	867824-2
6 152	White	867824-3

**Medical Receptacles (Used Primarily for Patient Monitoring)****Product Facts**

- Quick connect/disconnect
- 6 and 7 position connector
- Mates to standard medical cable interface
- Operating Voltage — up to 5,000 volts DC
- Operating Temperature — -5°F to 185°F [-15°C to 85°C]
- Operating Current — 10 Amps max.
- Accepts AMP Multi-Mate Pins and Sockets (size 16)
- Four hole flange mount
- Housings made from UL 94V-0 polyester material
- Different colors available
- Polarized for proper mating of connector halves
- Tyco Electronics does not manufacture mating plugs or cable assemblies for these receptacles



The AMP line of LGH high voltage products is meeting today's need for medical instrumentation connectors and is prepared for tomorrow's medical breakthroughs.

In use today in a wide variety of medical monitoring equipment, this versatile LGH circular connector offers the industry a wide choice of application options.

**Typical Applications**

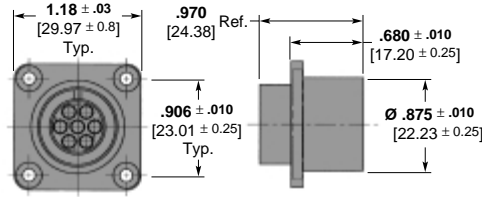
- Medical monitoring equipment
- Mates with "standard" medical cable assemblies

**Versatility**

- Choice of crimp or posted, size 16 gold over nickel plated contacts
- Flange mounted for easy installation
- Polarized for safe, positive mating
- Housings available in choice of colors to meet your application

Medical Receptacles (Used Primarily for Patient Monitoring) (Continued)

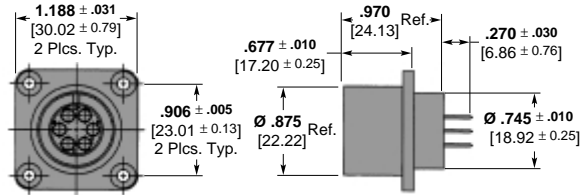
7 Position  
Housing only no contacts



Housing Color	Part Number
Black	443065-1
Special Aqua Blue*	443065-3

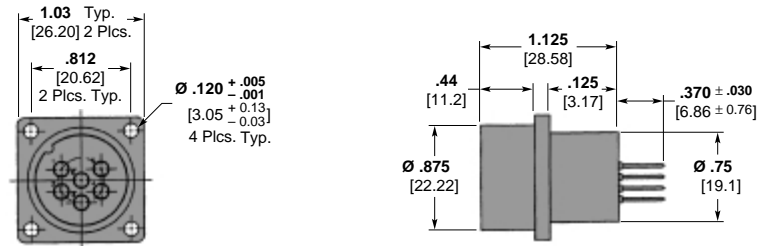
\*PMS (Pantone Matching System) #3145 Uncoated.

6 Position  
Socket contacts with  
.025 [0.63] Square Posts



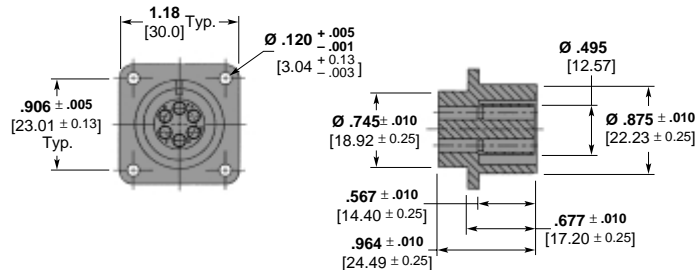
Part Number 447913-1

6 Position  
Pin contacts with  
.025 [0.63] Square Posts



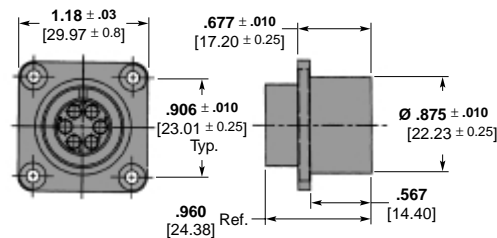
Part Number 447914-1

6 Position  
14S-6S



Part Number 449652-1

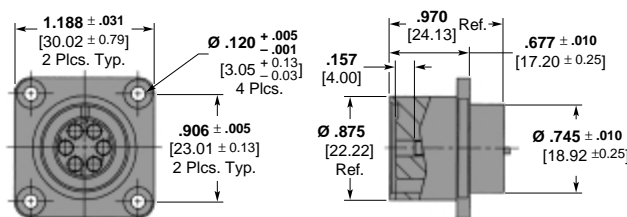
6 Position  
MS3102A-14S-6S  
Configuration



Part Number 864900-1  
(Supplied with Contacts)

Part Number 864900-2  
(Supplied without Contacts)

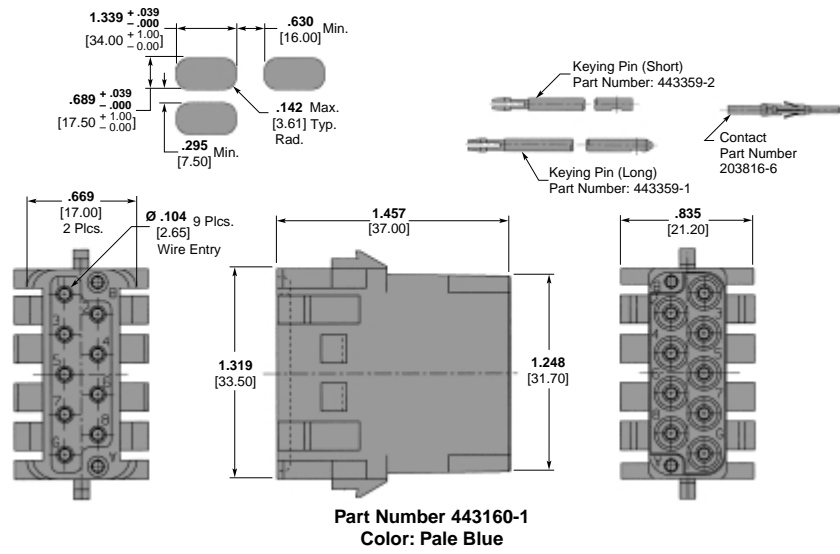
6 Position  
Special 4mm Recess



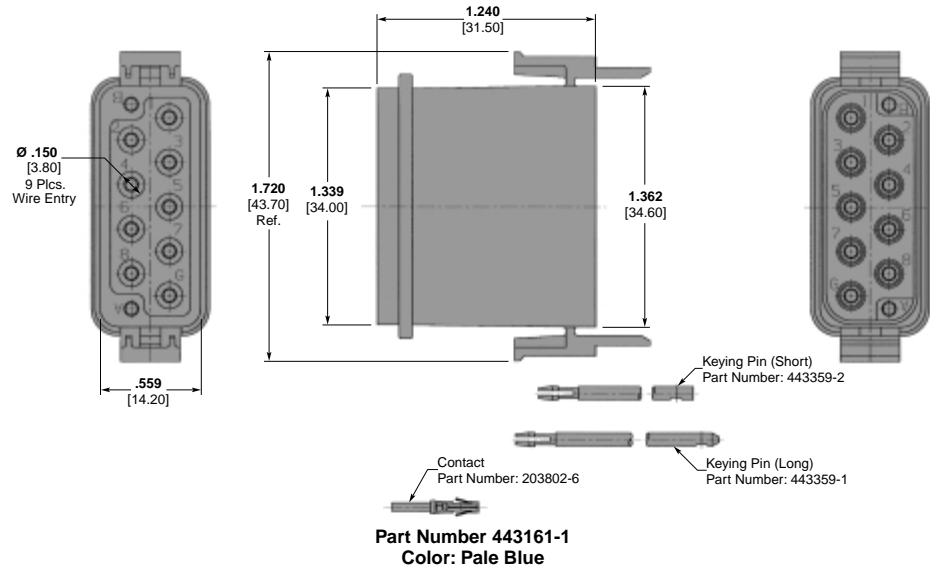
Part Number 1218081-1

9 Position LGH MATE-N-LOK Style Connectors

Receptacle Kit



Plug Kit



Technical Documents

Instruction Sheets —

- 408-3382
- 408-4436
- 408-4368

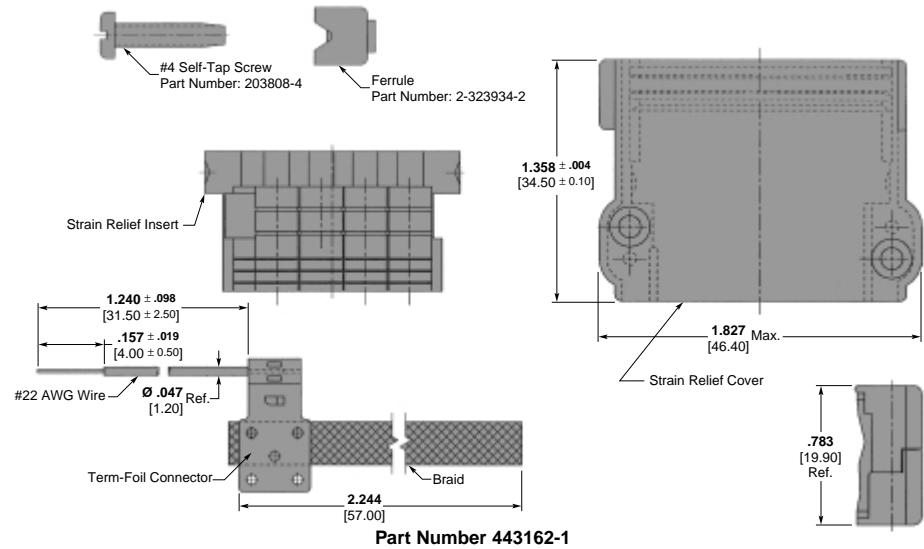
Design Objective —

108-1711

Application Specification —

114-1110

Strain Relief Kit

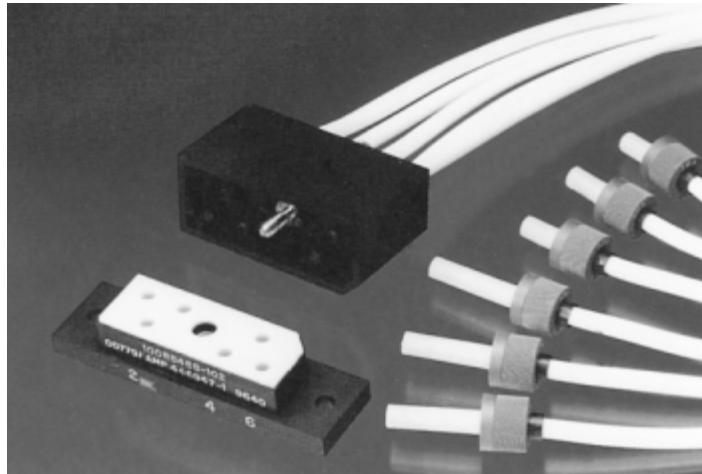


Various Specials

Product Facts

6 Position LGH Connector

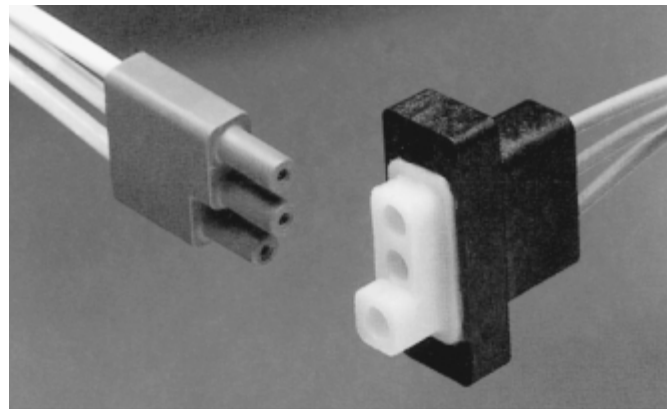
- Laser gyro inertial reference systems application
- Extremely rugged construction
- High flexibility silicone leads
- Size 22 contacts
- No adhesives or potting materials used
- 10,000 volts DC max. operating voltage



6 Position LGH Connector

3 Position LGH Compact Flange Mounted Connector

- Military counter measure systems application
- Missile guidance systems application
- Ultra small diameter silicone coated TEFLON wire insulation
- Size 22 contacts
- Plug is available as a kit or with flying leads
- 5,000 volts DC max. operating voltage



3 Position LGH Connector

6 Position LGH Connector brings high voltage to the circuit board

6 LGH leads, insert molded into a glass epoxy housing with a sturdy, center male screwlock form the plug of this extraordinary printed circuit connector system.

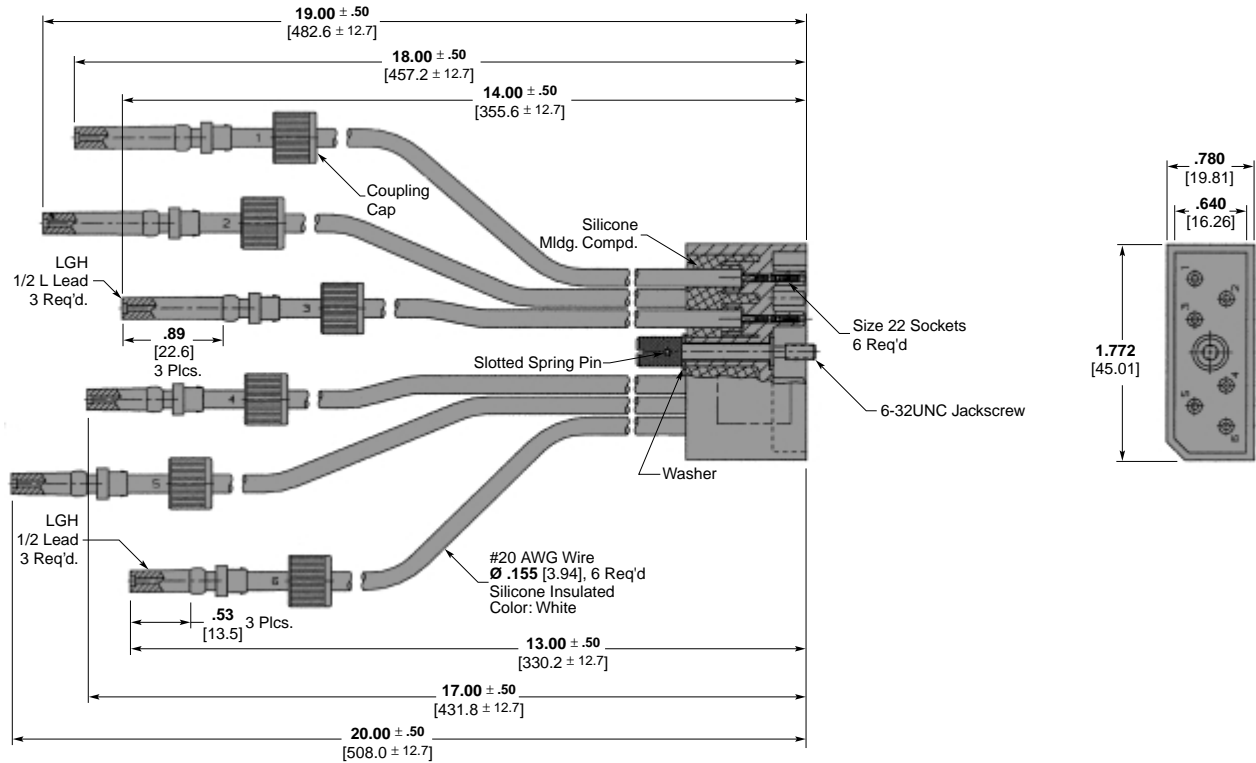
3 Position LGH Compact Flange Mounted Connector

Three molded in flying leads in an extremely tough liquid crystal polymer flanged housing make up the receptacle of this compact high performance high voltage connector.

Performance Specifications

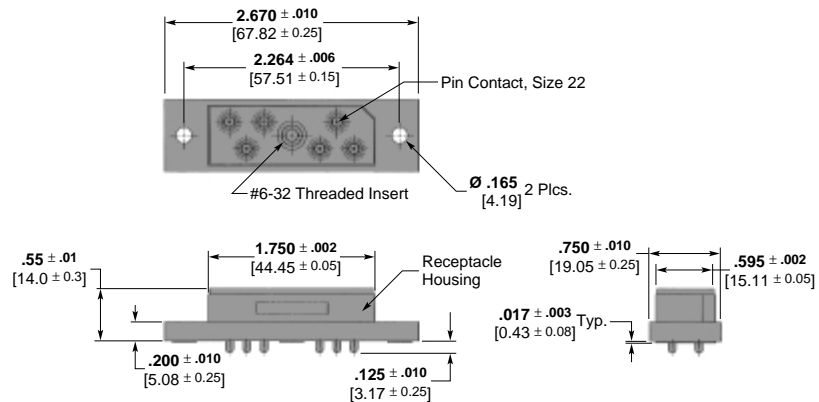
- Operating Temperature Range** — -67°F to +257°F [-55°C to +125°C]
- Operating Altitude Range** — Sea level to 70,000 ft [21336 m].
- Operating Current** — 5 amps max. Polarized interface to assure correct mating

**6 Position, 10 KVDC Receptacle, with LGH 1/2 L and LGH 1/2 Positive Stop Leads**



Part Number 446775-1

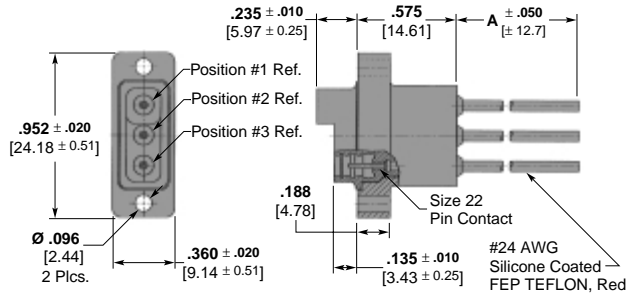
**6 Position, Rectangular Receptacle**



Part Number 446947-1

Various Specials (Continued)

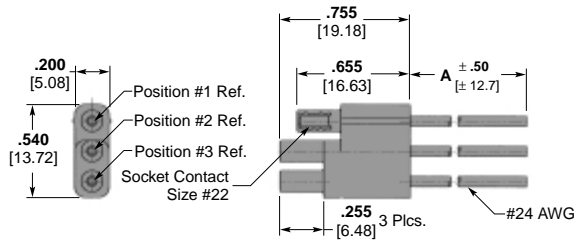
3 Position Receptacles



Dim. A	Part Number
24.00	443915-1
609.6	
18.50	443915-2
469.9	

Part Numbers 443915-1, -2

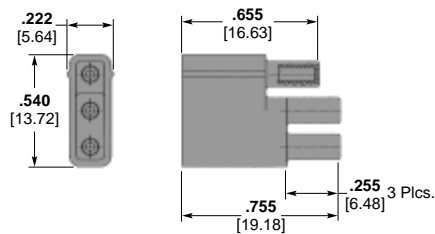
3 Position Plug



Dim. A	Part Number
24.00	443916-1
609.6	
48.00	443916-2
1219.2	

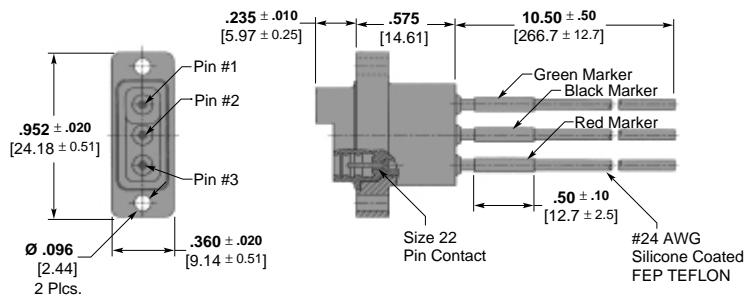
Part Numbers 443916-1, -2

3 Position Plug Kit with 3 Size 22 Socket Contacts



Part Numbers 446900-1 and 446900-2 with Slot

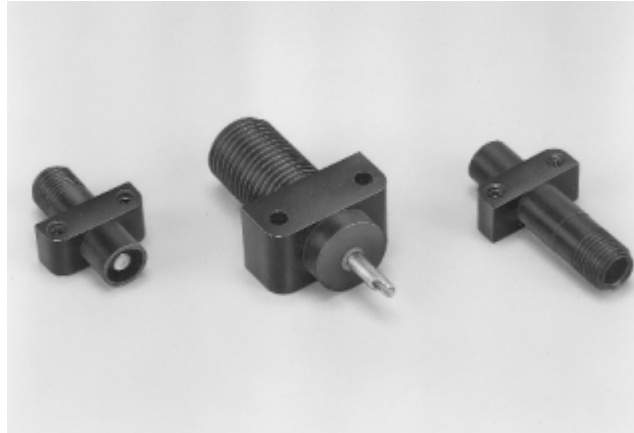
3 Position Receptacle



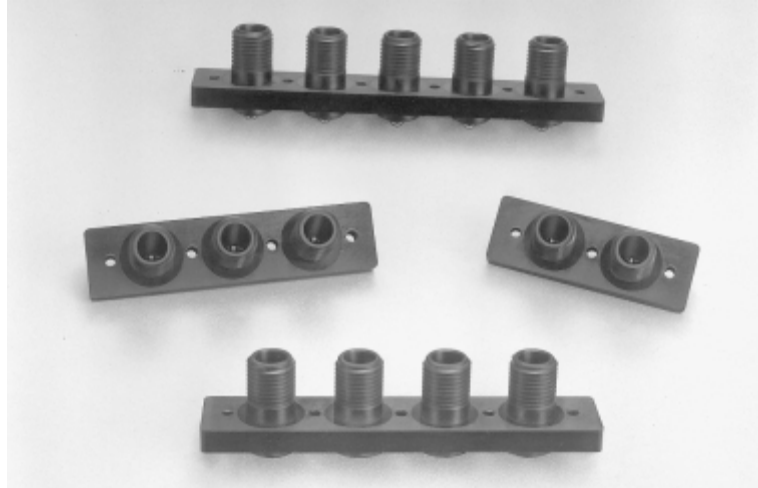
Part Number 443815-1

**Various Specials (Continued)****Printed Circuit Board  
Receptacles****Product Facts**

- Molded epoxy housings per MIL-M-24357 (GEI-5)
- Small, lightweight, leakproof
- 10 KV, LGH 1/2  
Part Number 866803-1 (with mounting holes)  
Part Number 866804-1 (with threaded mounting holes and potting shell)
- 15 KV, LGH 1/2L  
Part Number 866806-1 (with mounting holes)  
Part Number 866805-1 (with threaded mounting holes and potting shell)
- 20 KV, LGH 1  
Part Number 830632-3 (with mounting holes)

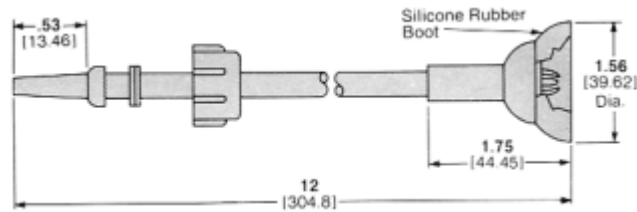
**Multiple Receptacle with  
Integral, Molded Flange for  
Bulkhead Applications  
(Gold Pins)**

- Single, Part Number 867606-4
- Dual, Part Number 861662-4
- Triple, Part Number 861660-4
- Quadruple,  
Part Number 861658-4
- Quintuple,  
Part Number 861657-4



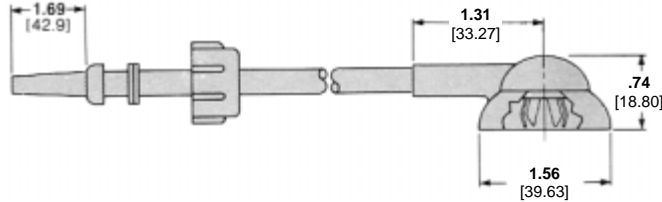
Various Specials (Continued)

CRT Lead Assemblies  
J1-21, 10 KV, LGH 1/2



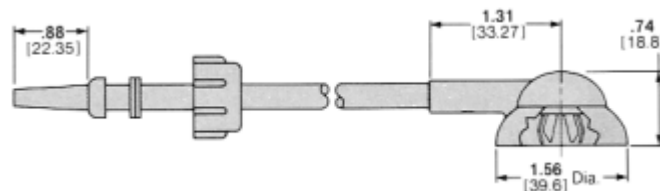
Part Number 848816-2

J1-21, 25 KV, LGH 1L



Assembly Length	Part Number
12 304.8	846977-8
18 457.2	1-846977-1

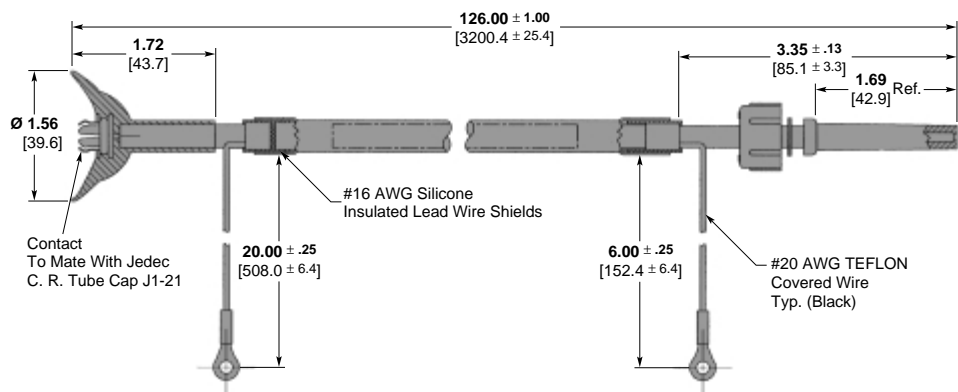
J1-21, 20 KV, LGH 1



Part Number 848588

Assembly Length	Part Number
6 152.4	848588-7
12 304.8	848588-1
18 457.2	848588-4
24 609.6	848588-2
36 914.4	848588-3
48 1219.2	848588-8

J1-21, CRT, LGH 1L



Part Number 867615-2

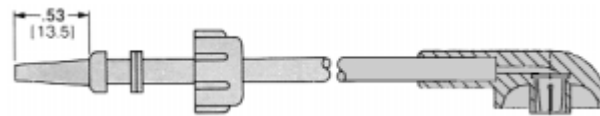
**Note:** Standard length leads are tabulated here. Tyco Electronics can make available numerous variations in lengths and material to suit almost any application. Choices of insulation materials include TEFLON, UL listed silicone and UL listed PVC. Other materials, colors, wire and configurations can be used in manufacture. For more information, consult Tyco

Various Specials (Continued)

CRT Lead Assemblies

(Continued)

J1-22, 10 KV, LGH 1/2  
Right-Angle



Part Number 846556

Assembly Length	Part Number
12 304.8	846556-3
18 457.2	846556-5
24 609.6	846556-4

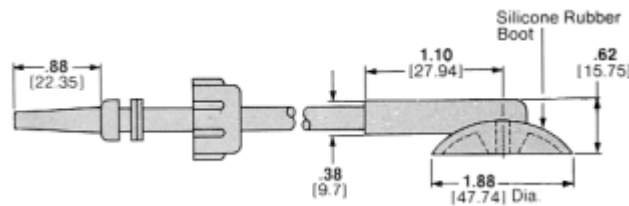
J1-22, 15 KV, LGH 1/2L



Part Number 862345

Assembly Length	Part Number
12 304.8	862345-2
18 457.2	862345-1

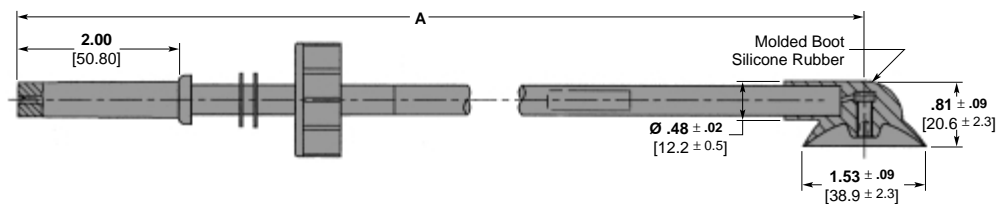
J1-22, 20 KV, LGH 1



Part Number 849424

Assembly Length	Part Number
12 304.8	849424-7
18 457.2	849424-4

J1-22, 50 KV, LGH 4



Part Numbers 868373-1, -2

Assembly Length	Part Number
36.0 ± .36 914.4 ± 9.1	868373-1
24.0 ± .36 609.6 ± 9.1	868373-2

**Note:** Standard length leads are tabulated here. Tyco Electronics can make available numerous variations in lengths and material to suit almost any application. Choices of insulation materials include TEFLON, UL listed silicone and UL listed PVC. Other materials, colors, wire and configurations can be used in manufacture. For more information, consult Tyco

Various Specials (Continued)

CRT-Base Connectors

Product Facts

- Base connections without potting
- Right-angle and straight connections available
- One-piece molded construction
- Environmentally sealed for trouble-free performance
- Operates at rated DC voltages at 70,000 ft. [21,336 m]
- Operating temperature range: -67°F to +257°F [-55°C to +125°C]
- Withstands shock tests per MIL-STD-202, Test Method 102, Condition C
- Excellent system serviceability
- High reliability
- Fully tested harnesses
- Lower applied cost



AMP molded silicone rubber CRT-base connectors are designed to better eliminate the hand wiring approach for CRT-base connections. These connectors offer greater system serviceability and feature highly reliable performance with complete versatility. They have integrally molded high and low voltage leads, as dictated

by particular applications, and a molded boot design which promotes dust and moisture resistance over a long operational life span.

The versatility of the connector design allows customers to purchase either fully wired connectors, or connectors which can be terminated and potted at

their plant. Currently, LGH molded silicone rubber CRT-base connectors are available for a variety of standard 9, 12 and 14 pin tubes. Options include a choice of wire, both low and high voltage, as well as the direction of wire exiting from the connector. Each harness is fully tested prior to shipment.

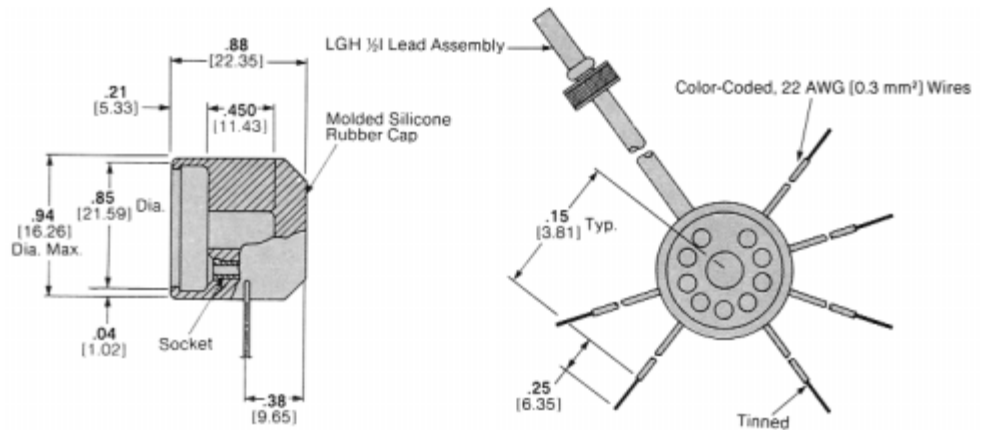
80 High Voltage Connectors

In addition to the connectors listed here, Tyco Electronics can furnish a wide variety of CRT-base connectors. Consult Tyco Electronics for details.

**CRT-Base Connectors**

(Continued)

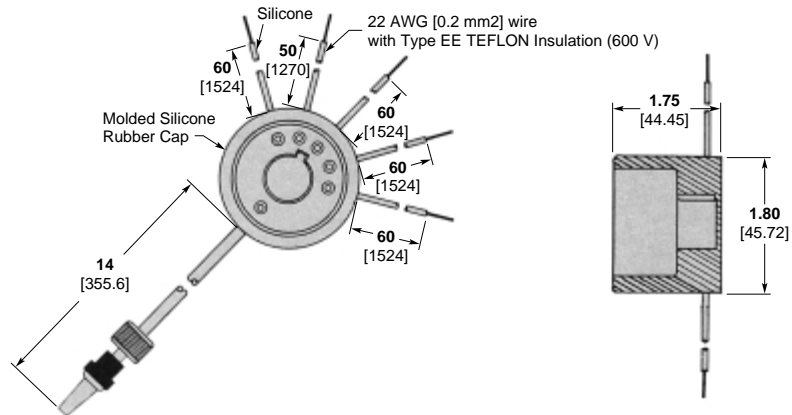
**9 Position CRT-Base Connector**



**Part Number 862481-1**

This connector is one of many available from Tyco Electronics for mating with standard JEDEC tube base E9-37.

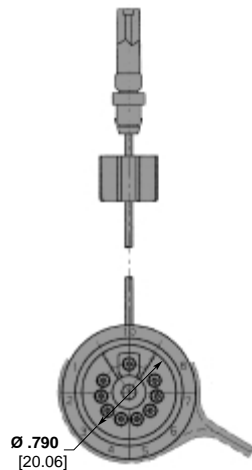
**Typical Right-Angle Lead Exit CRT-Base Connector**



**B6-63 —  
Part Number 867121-1**

This connector is typical of those available from Tyco Electronics for mating with standard JEDEC tube base B5-57, B6-63, B7-51, B10-75, and B12-43.

**11 Position CRT-Base Connector**



**Part Number 443118-2**

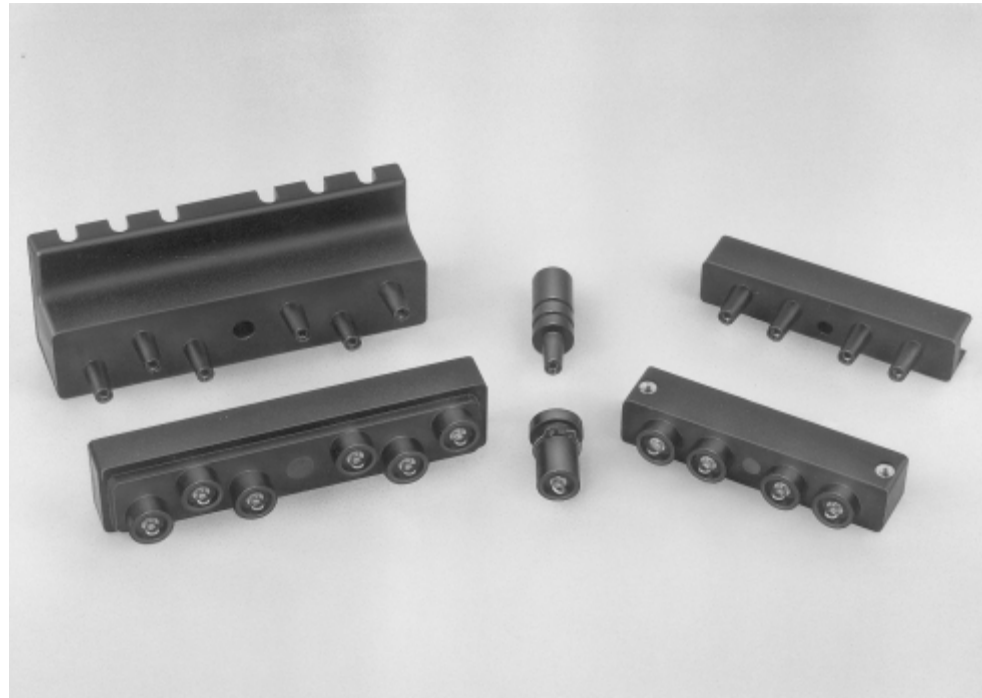
This connector is one of several available from Tyco Electronics for mating with standard JEDEC tube base B9-290. In addition to the connectors listed here, Tyco Electronics can furnish a wide variety of CRT-base connectors. Consult Tyco Electronics for details.

Various Specials (Continued)

Rack and Panel Connectors

Product Facts

- 10 KVDC rating up to 10,000 feet [3,048 m] (continuous)
- Extremely compact
- All plastic design
- Housings can be molded from a variety of materials
- Provides highly reliable drawer-type connections
- Low insertion and extraction forces
- Hipot — 20 KVDC at sea level, two minutes
- Pins and sockets (10-amp rating) are recessed for maximum safety; will accept conductor sizes to 16 AWG [1.25 mm<sup>2</sup>]
- Hermetically sealed version available for soldering to metal bulkhead on single pin connector
- Available with or without leads
- No tools required for field use
- Can be readily adapted for in-line splice applications



This AMP High Voltage Connector family is specifically designed for military applications. It is extremely compact and has a continuous 15 KVDC rating from sea level to an altitude of up to 10,000 feet [3,048 m].

The connector assembly is a rack and panel type especially suited for drawer mounting or free-hanging plug applications. It incorporates many design features for electrical, mechanical and environmental integrity. Such features include: use of a tapered plug to make exact alignment unnecessary; recessed pin and socket contacts to better prevent high voltage exposure; and a resilient silicone rubber

"O" ring in the receptacle for an interfacial seal for the mated connector.

Plug and receptacle housings are molded from durable glass epoxy; pin and socket contacts are made of fine grade brass, gold plated in the mating areas for maximum conductivity. The solder eyelets are capable of accommodating leads with conductor sizes up to 16 AWG [1.25 mm<sup>2</sup>].

To meet customer's exact requirements, we can supply the High Voltage Rack and Panel Connectors with or without leads. Also, because of the basic design of the connectors, slight modifications can be made for in-line space applications.

**Materials**

- Housings** — Molded glass epoxy per MIL-M-24325 (Ships), GEI-5
- Pin and Socket Contacts** — Brass; gold plated per MIL-G-45204
- Solder Eyelets** — Pre-tinned per MIL-T-10727
- "O" Ring (Receptacle Only)** — Silicone Rubber
- Retaining Ring (Receptacle Only)** — Stainless steel per MS 16624

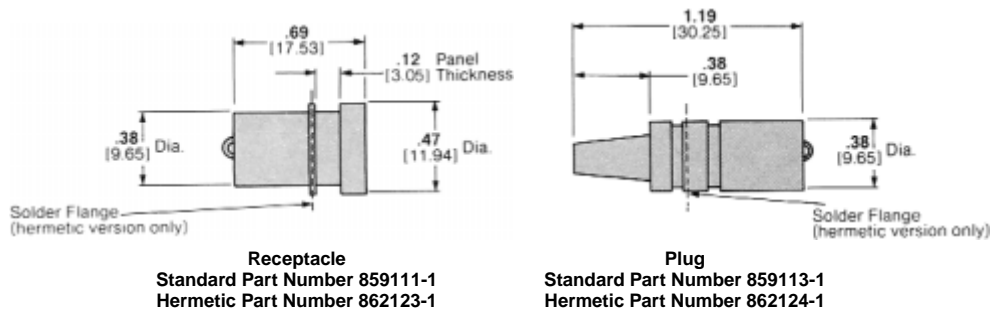


Various Specials (Continued)

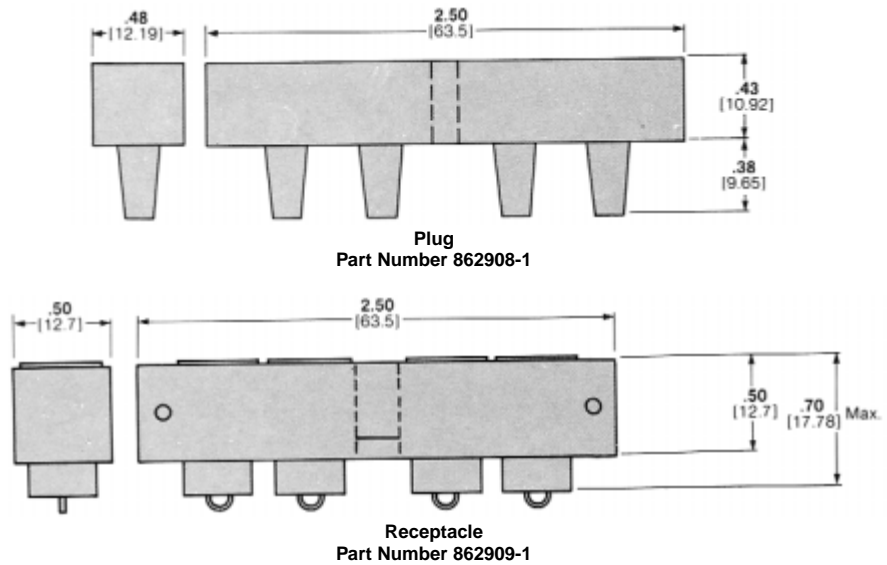
Rack and Panel Connectors

(Continued)

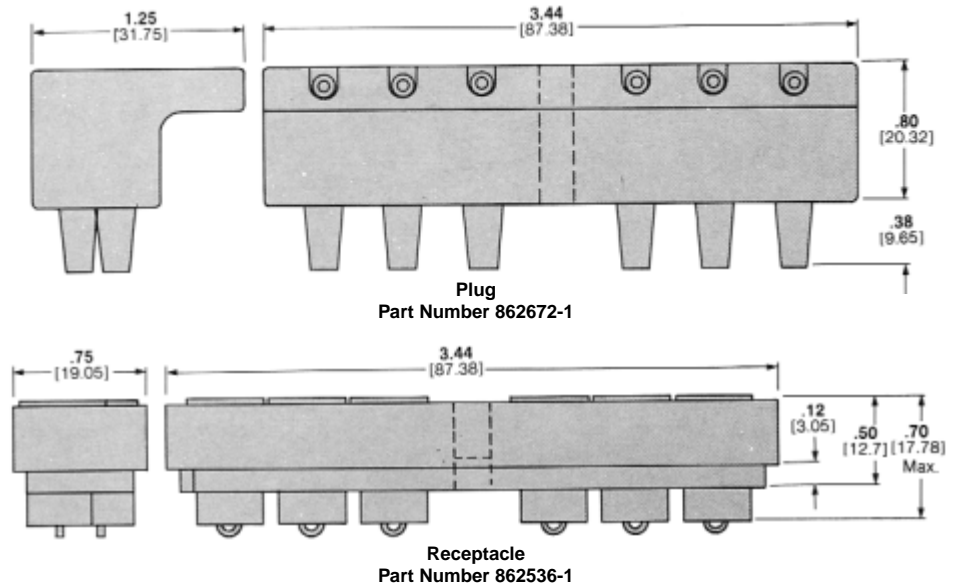
Single Pin



Four Pin



Six Pin



- Notes:**
1. If bulkhead and mounting hardware are metallic and at ground potential, provisions must be made to protect the back end of the receptacle against arc-over and breakdown.
  2. Connectors are available with or without leads. Leads can be furnished in virtually any length, with various insulation materials, in either standard white or a variety of optional colors, and with conductor sizes to 16 AWG [1.25 mm<sup>2</sup>].
- For the High Voltage Rack and Panel Connector to meet your specific requirements, consult Tyco Electronics.

Various Specials (Continued)

Heavy Duty (VRL)  
RFI-Shielded Lead  
Assemblies and  
Receptacles

Product Facts

- Extremely rugged design
- Fully shielded against RFI
- Operating and storage temperature range: -67°F to +257°F [-55°C to +125°C]
- Meets wide range of military requirements
- Metal housings can be readily altered to meet a wide variety of mounting and operational requirements



Versatile ruggedized LGH High Voltage Lead Assemblies and Receptacles are designed specifically for use where vibration, shock and handling conditions exist and are ideally suited for both industrial and military applications. This line of lead assemblies and receptacles carries the same voltage, current and altitude

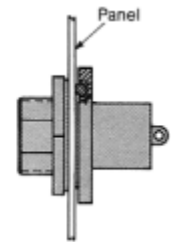
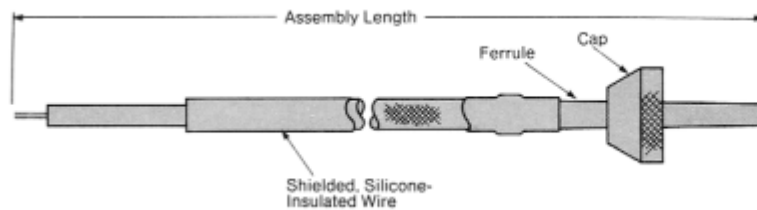
ratings as the corresponding standard LGH connector series when properly mated.

VRL cable assemblies feature the integrally molded end to provide positive mating and an excellent seal. They are completely shielded for RFI when mated with the appropriate receptacle.

The receptacles are of the molded glass epoxy type

with a protective metal shroud that is hermetically sealed between plastic and metal. These receptacles mate with the single-end ruggedized lead assemblies shown in the same series.

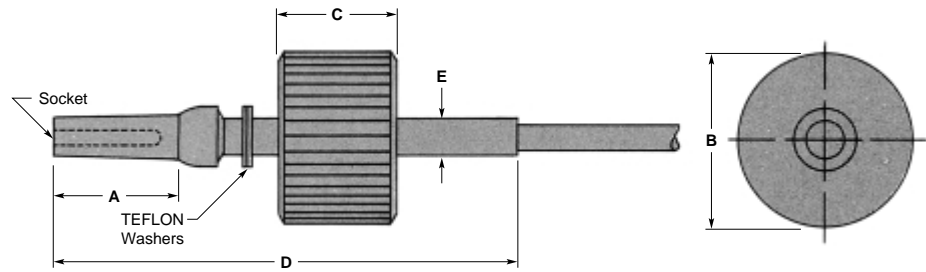
Special designs also are available upon request if the standard VRL lead assembly and receptacle designs will not fulfill your immediate needs.



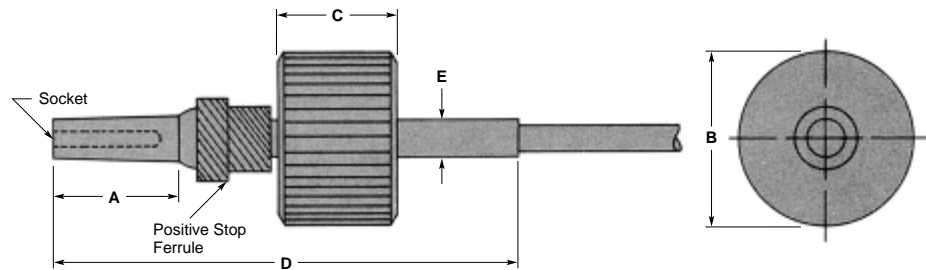
LGH Connector Series	Lead Assemblies			Receptacles		
	Length	Single End	Double End	Jam Nut	Square Flange	Dimensions
1/2 L 15 KVDC	6 152.4	862485-8	—	862295-1	862363-1	1/2-28 UNEF Thread .60 [15.24] Behind Panel .98 [24.89] Overall Length
	12 304.6	862485-3	862294-4			
	18 457.2	—	862294-3			
	36 914.4	—	1-862294-0			
1 L 25 KVDC	12 304.6	862484-7	862444-3	862443-1	862362-1	5/8-18 UNEF Thread 1.10 [27.94] Behind Panel 1.84 [46.74] Overall Length
	24 609.6	862484-4	—			
	36 914.4	862484-8	—			
4 50 KVDC	12 304.6	863124-1	863254-1	863125-1	863253-1	1-3/16-18 UNEF Thread 1.55 [39.37] Behind Panel 2.15 [54.61] Overall Length
	24 609.6	863124-2	863254-3			
	36 914.4	863124-3	—			
	48 1219.2	—	863254-4			

Various Specials (Continued)

Field Installable Connectors  
Kits for TEFLON Insulated Wire



Standard Molded End



Positive Stop Molded End

Connector Description	Dimensions					Wire Diameter	Part Numbers	
	A	B	C	D	E		Molded End	Positive Stop
LGH 1/2 I	.53 13.5	.49 12.5	.38 9.7	2.00 50.8	.160 40.6	.107-.113 2.72-3.37	861076-1	—
						.081-.087 2.06-2.21	861076-2	—
LGH 1/2 LI	.89 22.6	.49 12.5	.38 9.7	2.00 50.8	.160 40.6	.107-.113 2.72-3.37	—	862514-1
						.107-.113 2.72-3.37	—	862515-1
LGH 1 I	.88 22.4	.81 20.57	.50 12.7	3.00 76.2	.280 71.1	.155-.165 3.94-4.19	—	862128-1
						.200-.210 5.08-5.33	—	862128-2
						.122-.132 3.10-3.35	—	862128-3
LGH 1 LI	1.69 42.9	.81 20.57	.50 12.7	3.38 85.9	.280 71.1	.155-.165 3.94-4.19	—	862518-1

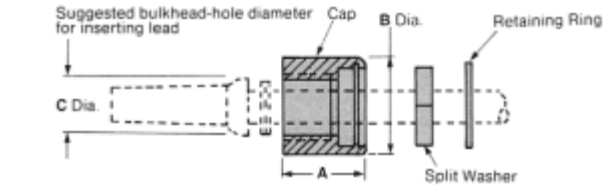
**Note:** These connectors mate with standard LGH receptacles. Recommended cable is W.L. Gore High Voltage Wire or equivalent.

Accessories

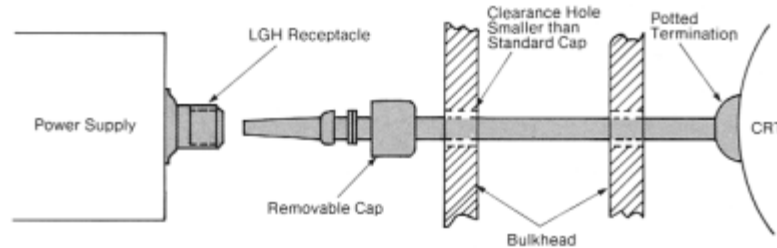
**Removable Cap Kits**

These kits provide a quick and easy means of replacing damaged caps on standard LGH molded-end lead assemblies. Removing leads from bulkheads, enlarging holes in bulkheads or disconnecting leads from potted connections is unnecessary. Simple disconnection of the lead with the damaged cap is the only required step before installing the replacement. These cap kits also can be useful for applications which require threading leads through small openings in bulkheads, as illustrated at right.

**Removable Caps**



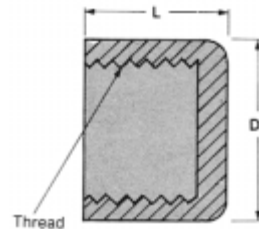
LGH Series	Dimensions			Kit Part Number
	A	B	C	
1/2 I	.50	.50	.28	849275-1
1/2 LI	12.7	12.7	7.11	
1 I	.62	.75	.44	849267-1
1 LI	15.75	19.05	11.18	



**Dirt-Protective Caps**

These caps protect LGH receptacles against damage to the threads and provide protection against accumulation of foreign matter on the insulator barrel and male contact. They are especially useful when receptacles are being shipped or stored.

**Glass-Epoxy Cap**

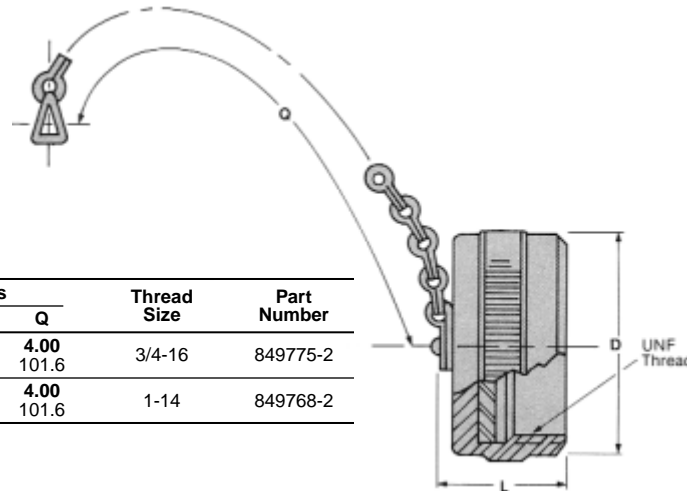


LGH Series	Dimensions		Thread Size	Part Number
	L	D		
1/2 I	.25	.44	5/16-32 (M)	850512-1
1/2 LI	6.35	11.18		
1 I	.50	.63	1/2-20 (M)	850513-1
1 LI	12.7	16		
2 I	.56	1.12	3/4-16 (M)	850514-1
	14.22	28.45		
4 I	.56	1.37	1-14 (M)	850515-1
	14.22	34.8		

Molded glass-epoxy caps meet specifications for MIL-M-24325 (Ships), GEI-5.

**Aluminum Cap**

Aluminum caps, anodized black per MIL-A-8625, Type I, has an attached retaining chain. A silicone rubber gasket within provides a moisture and dust-proof seal.

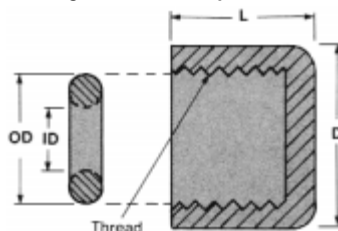


LGH Series	Dimensions			Thread Size	Part Number
	L	D	Q		
2 I	.71	.91	4.00	3/4-16	849775-2
	18.03	23.11	101.6		
4 I	.76	1.21	4.00	1-14	849768-2
	19.3	30.73	101.6		

**Arcing-Protective Caps**

A multiple output power supply with vacant receptacles can be operated safely at high altitudes without fear of breakdown if floating receptacles are sealed with protective caps shown here.

**Arcing-Protective Cap**



LGH Series	Dimensions				Thread Size	Part Number
	L	D	O.D.	I.D.		
1/2 I	.25	.44	.28	.14	5/16-32	849055-1
1/2 LI	6.35	11.18	7.11	3.56		
1 I	.50	.62	.44	.23	1/2-20	849252-1
1 LI	12.7	15.75	11.18	5.84		
2 I	.56	1.12	.69	.50	3/4-16	849253-1
	14.22	28.45	17.53	12.7		
4 I	.56	1.37	.94	.75	1-14	849254-1
	14.22	34.8	23.88	19.05		

1. Customer name and location \_\_\_\_\_
2. Military application? \_\_\_\_\_ Commercial application? \_\_\_\_\_
3. Voltage: Working \_\_\_\_\_ DC \_\_\_\_\_ AC \_\_\_\_\_  
Test (High Potential) \_\_\_\_\_ DC \_\_\_\_\_ AC \_\_\_\_\_  
If AC, what frequency? \_\_\_\_\_ Hz.  
If pulsed DC, what repetition rate and duty cycle? \_\_\_\_\_
4. Current \_\_\_\_\_
5. Temperature: Operating \_\_\_\_\_ °C min. \_\_\_\_\_ °C max.  
Storage \_\_\_\_\_ °C min. \_\_\_\_\_ °C max.
6. Environment: Air \_\_\_\_\_ Oil (specify type) \_\_\_\_\_  
Water/humidity \_\_\_\_\_ Chemical \_\_\_\_\_  
Other (explain) \_\_\_\_\_
7. Altitude: Operating \_\_\_\_\_  
Storage \_\_\_\_\_
8. Hermetic seal required? \_\_\_\_\_ If yes, specify leakage rate: \_\_\_\_\_ ppm
9. What other mechanical or electrical features are required? \_\_\_\_\_
10. Plating desired? \_\_\_\_\_
11. Is a customer specification or drawing attached? \_\_\_\_\_  
If not, what dimensional restrictions apply? \_\_\_\_\_
12. Number of mating cycles needed: \_\_\_\_\_
13. For quoting purposes, what is the initial order quantity? \_\_\_\_\_  
Quantity for first year? \_\_\_\_\_  
Quantity for second year? \_\_\_\_\_
14. When are initial parts required? \_\_\_\_\_