



Part Number: 123092A

ControlNet™, (1) 18 AWG Solid BCCS, FPE/PVC/PVC, Foil+TC Braid Shld, Alum Armor, CM

Product Description

One 18 AWG solid bare copper-covered steel conductor, foam polyethylene insulation, Duobond IV® quad shield (100% coverage), PVC inner jacket, aluminum interlocked armor, PVC outer jacket.

Technical Specifications

Product Overview

| | |
|------------------------|---|
| Suitable Applications: | ControlNet™, Modbus II, Industrial Coax |
|------------------------|---|

Physical Characteristics (Overall)

Conductor

| AWG | Stranding | Material | Nominal Diameter | No. of Coax |
|-----|-----------|----------------------------------|------------------|-------------|
| 18 | Solid | BCCS - Bare Copper Covered Steel | 0.0403 in | 1 |

| | |
|------------------|----|
| Conductor Count: | 1 |
| AWG Size: | 18 |

Insulation

| Material | Nominal Diameter |
|---------------------------|------------------|
| FPE - Foamed Polyethylene | 0.178 in |

Inner Jacket Material

| Material | Nominal Diameter |
|--------------------------|------------------|
| PVC - Polyvinyl Chloride | 0.298 in |

Outer Shield Material

| Type | Layer | Material | Material Trade Name | Coverage [%] |
|-------|-------|---|---------------------|--------------|
| Tape | 1 | Bonded Aluminum Foil-Polyester Tape-Aluminum Foil | Bonded Duofoil® | 100 % |
| Braid | 2 | AL - Aluminum | | 60 % |
| Tape | 3 | Aluminum Foil-Polyester Tape-Aluminum Foil | Duofoil® | 100 % |
| Braid | 4 | AL - Aluminum | | 40 % |

Outer Jacket Material

| Material | Nominal Diameter | Nominal Wall Thickness |
|--------------------------|------------------|------------------------|
| PVC - Polyvinyl Chloride | 0.591 in | 0.045 in |

Construction and Dimensions

Armor

| Type of Armor | Material |
|-------------------|----------|
| Interlocked Armor | Aluminum |

Electrical Characteristics

Conductor DCR

| Nominal Conductor DCR | Nominal Outer Shield DCR | Outer Conductor DCR |
|-----------------------|--------------------------|---------------------|
| 28 Ohm/1000ft | 3.6 Ohm/1000ft | 3.6 Ohm/1000ft |

Capacitance

| Nom. Capacitance Conductor to Shield |
|--------------------------------------|
| |

16.2 pF/ft

Inductance

Nominal Inductance

0.097 μ H/ft

Impedance

Nominal Characteristic Impedance

100 Ohm

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 1 MHz | 0.35 dB/100ft |
| 2 MHz | 0.38 dB/100ft |
| 5 MHz | 0.45 dB/100ft |
| 10 MHz | 0.59 dB/100ft |
| 20 MHz | 0.86 dB/100ft |
| 50 MHz | 1.37 dB/100ft |
| 100 MHz | 1.97 dB/100ft |
| 200 MHz | 2.82 dB/100ft |
| 300 MHz | 3.48 dB/100ft |
| 400 MHz | 4.04 dB/100ft |

Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|--|
| 1.28 ns/ft | 82 % |

High Freq

| Frequency [MHz] | Min. SRL (Structural Return Loss) |
|-----------------|-----------------------------------|
| 1 MHz | 23 dB |
| 2 MHz | |
| 5 MHz | |
| 10 MHz | |
| 20 MHz | |
| 50 MHz | |
| 100 MHz | |
| 200 MHz | |
| 300 MHz | |
| 400 MHz | |

Voltage

UL Voltage Rating

300V RMS

Electrical Characteristics Notes: SRL Minimum 23dB (5MHz - 50MHz)

Temperature Range

| | |
|-----------------------|----------------|
| UL Temp Rating: | 75°C |
| Operating Temp Range: | -40°C To +75°C |

Mechanical Characteristics

| | |
|----------------------------------|----------------|
| Bulk Cable Weight: | 142 lbs/1000ft |
| Max Recommended Pulling Tension: | 200 lbs |
| Min Bend Radius/Minor Axis: | 7.1 in |

Standards

| | |
|--------------------------|-------------|
| NEC Articles: | 800 |
| NEC/(UL) Specification: | CL2, CM |
| CEC/C(UL) Specification: | CMG, HL |
| RG Type: | RG-6/U Type |

Applicable Environmental and Other Programs

| | |
|--------------------------------|-----|
| EU Directive 2000/53/EC (ELV): | Yes |
|--------------------------------|-----|

| | |
|---------------------------------------|-------------------------------|
| EU Directive 2011/65/EU (ROHS II): | Yes |
| EU Directive 2012/19/EU (WEEE): | Yes |
| EU Directive 2015/863/EU: | Yes |
| EU Directive Compliance: | EU Directive 2003/11/EC (BFR) |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2005-10-01 |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |

Suitability

| | |
|------------------------------------|-----|
| Suitability - Hazardous Locations: | Yes |
| Suitability - Indoor: | Yes |
| Suitability - Outdoor: | Yes |
| Suitability - Sunlight Resistance: | Yes |

Flammability, LSOH, Toxicity Testing

| | |
|-------------------|-------------------|
| UL Flammability: | UL1685 UL Loading |
| CSA Flammability: | FT4 |

Part Number

| | |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Variants

| Item # | Color |
|-----------------|--------------|
| 123092A 0101000 | BLACK |
| 123092A 0102000 | BLACK |
| 123092A J221000 | BLUE, STRONG |
| 123092A J225000 | BLUE, STRONG |

Product Notes

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| Notes: | ControlNet is a ControlNet International trademark. |
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