Detailed Specifications & Technical Data

METRIC MEASUREMENT VERSION



3106A Multi-Conductor - EIA Industrial RS-485 PLTC/CM



For more Information please call

1-800-Belden1



General Description:

22 AWG stranded (7x30) tinned copper conductors, Datalene® insulation, twisted pairs, overall Beldfoil® shield (100% coverage) plus a tinned copper braid (65% coverage), drain wire, UV resistant PVC jacket.

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Physical Characteristics (Overall)

Conductor

AWG:

| # Conductors | # Pairs | AWG | Stranding | Conductor Material | Dia. (mm) |
|--------------|---------|-----|-----------|---------------------------|-----------|
| 1 | 1 | 22 | 7x30 | TC - Tinned Copper | 0.762 |

Total Number of Conductors:

Insulation

Insulation Material:

| Insulation Trade Name | Insulation Material |
|-----------------------|--|
| Datalene® | FHDPE - Foam High Density Polyethylene |

Outer Shield

Outer Shield Material:

| 1 | Layer # Outer Shield Trade Name | | Type | Outer Shield Material Coverag | | |
|---|---------------------------------|-----------|-------|-------------------------------|---------|--|
| 1 | 1 | Beldfoil® | Tape | Aluminum Foil-Polyester Tape | 100.000 | |
| 1 | 2 | | Braid | TC - Tinned Copper | 65.000 | |

Outer Shield Drain Wire AWG:

| AWG | Stranding | Drain Wire Conductor Material |
|-----|-----------|-------------------------------|
| 22 | 7x30 | TC - Tinned Copper |

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cable

Overall Cabling Color Code Chart:

| Number | Color |
|--------|---------------------|
| 1 | White/Orange Stripe |
| 2 | Orange/White Stripe |
| 3 | Blue/White Stripe |

Overall Nominal Diameter: 7.620 mm

Pair

Pair Lay Length & Direction:

Lay Length (mm) 76.2

Mechanical Characteristics (Overall)

| Operating Temperature Range: | -20°C To +60°C | |
|-----------------------------------|----------------|--|
| Non-UL Temperature Rating: | 60°C | |
| Bulk Cable Weight: | 78.875 Kg/Km | |
| Max. Recommended Pulling Tension: | 289.133 N | |

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| Min. Bend Radius/Minor Axis: | 76.200 mm | | | | |
|---|-------------------|--|--|--|--|
| TO.EGO TIME | | | | | |
| Applicable Specifications and Agency Compliance (Overall) | | | | | |
| Applicable Standards & Environmental Programs | | | | | |
| NEC/(UL) Specification: | CM, PLTC | | | | |
| CEC/C(UL) Specification: | CM | | | | |
| EU Directive 2011/65/EU (ROHS II): | Yes | | | | |
| EU CE Mark: | Yes | | | | |
| EU Directive 2000/53/EC (ELV): | Yes | | | | |
| EU Directive 2002/95/EC (RoHS): | Yes | | | | |
| EU RoHS Compliance Date (mm/dd/yyyy): | 10/01/2005 | | | | |
| EU Directive 2002/96/EC (WEEE): | Yes | | | | |
| EU Directive 2003/11/EC (BFR): | Yes | | | | |
| CA Prop 65 (CJ for Wire & Cable): | Yes | | | | |
| MII Order #39 (China RoHS): | Yes | | | | |
| Flame Test | | | | | |
| UL Flame Test: | UL1685 UL Loading | | | | |
| CSA Flame Test: | FT1 | | | | |
| Suitability | | | | | |
| Sunlight Resistance: | Yes | | | | |
| Plenum/Non-Plenum | | | | | |
| Plenum (Y/N): | No | | | | |
| Surface Printing (Overall) | | | | | |
| | | | | | |

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Description 120

Nom. Inductance:

Inductance (µH/m) 0.666043

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m) 36.091

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/m) 68.5729

Nominal Velocity of Propagation:

VP (%) 78

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km) 48.2307

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km) 9.1868

Nom. Attenuation:

Description Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Attenuation (dB/100m)

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1.6405

Max. Operating Voltage - UL:

Voltage

300 V RMS (NEC Type PLTC) 300 V RMS (NEC Type CM)

Max. Recommended Current:

Current

2.7 Amps per conductor @ 25°C

Other Electrical Characteristic 1:

Input Impedance/Unfitted Impedance .5 - 10 MHZ, 120 +-12 Ohms

Notes (Overall)

Notes: Oil Resistance: Passes Oil Res II Per UL1277, Table 10.17. For CPE jacketed version order YR46721.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-------|-------|-------------------------|
| 3106A 0101000 | 305 MT | 21.319 KG | BLACK | С | #22 FS PR,1#22PVCBRDPVC |
| 3106A 010500 | 152 MT | 11.340 KG | BLACK | С | #22 FS PR,1#22PVCBRDPVC |
| 3106A 0105000 | 1,524 MT | 104.327 KG | BLACK | CN | #22 FS PR,1#22PVCBRDPVC |

Notes:

C = CRATE REEL PUT-UP.

N = FINAL PUT-UP LENGTH MAY VARY -0% TO +10% FROM LENGTH SHOWN.

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