# **Detailed Specifications & Technical Data**

**METRIC MEASUREMENT VERSION** 



## 3107A Multi-Conductor - EIA Industrial RS-485 PLTC/CM



For more Information please call

1-800-Belden1



# **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.

# **Physical Characteristics (Overall)**

### Conductor

#### AWG:

| # Pairs | AWG | Stranding | <b>Conductor Material</b> | Dia. (mm) |
|---------|-----|-----------|---------------------------|-----------|
| 2       | 22  | 7x30      | TC - Tinned Copper        | 0.762     |

### Insulation

#### **Insulation Material:**

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

### **Outer Shield**

### **Outer Shield Material:**

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

# **Outer Shield Drain Wire AWG:**

| AWG | Stranding | <b>Drain Wire Conductor Material</b> |  |  |  |
|-----|-----------|--------------------------------------|--|--|--|
| 22  | 7x30      | TC - Tinned Copper                   |  |  |  |

Outer Shield Drain Wire Diameter: .030

### **Outer Jacket**

## **Outer Jacket Material:**

Outer Jacket Material
PVC - Polyvinyl Chloride

#### **Overall Cabling**

## **Overall Cabling Color Code Chart:**

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

Overall Nominal Diameter: 8.890 mm

# **Mechanical Characteristics (Overall)**

| Operating Temperature Range:           | -20°C To +60°C |
|--|----------------|
| Non-UL Temperature Rating:             | 60°C           |
| Bulk Cable Weight:                     | 108.639 Kg/Km  |
| Max. Recommended Pulling Tension:      | 355.856 N      |
| Min. Bend Radius (Install)/Minor Axis: | 88.900 mm      |

# **Applicable Specifications and Agency Compliance (Overall)**

**Applicable Standards & Environmental Programs** 

NEC/(UL) Specification: CM, PLTC OIL RES II

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| CEC/C(UL) Specification:              | CM                |  |  |  |
|---------------------------------------|-------------------|--|--|--|
| 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:

Impedance (Ohm) 120

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) 5.9058

Nom. Attenuation:

DescriptionFreq. (MHz)Start Freq. (MHz)Stop Freq. (MHz)Attenuation (dB/100m)11.6405

Max. Operating Voltage - UL:

Voltage 300 V RMS

Max. Recommended Current:

Current
2.7 Amps per conductor @ 25°C

Input/Unfitted Impedance:

Description Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)

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# **Notes (Overall)**

Notes: Oil Resistance: Passes Oil Res II Per UL1277, Table 10.17. For CPE jacketed version order YR46792.

### **Related Documents:**

No related documents are available for this product

## **Put Ups and Colors:**

| Item #        | Putup    | Ship Weight | Color | Notes | Item Desc             |
|---------------|----------|-------------|-------|-------|-----------------------|
| 3107A 0101000 | 305 MT   | 28.123 KG   | BLACK | С     | 2 PR #22 FHDPE SH PVC |
| 3107A 0104000 | 1,219 MT | 116.120 KG  | BLACK | С     | 2 PR #22 FHDPE SH PVC |
| 3107A 0105000 | 1,524 MT | 149.686 KG  | BLACK | CN    | 2 PR #22 FHDPE SH PVC |

#### Notes:

C = CRATE REEL PUT-UP

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

Revision Number: 1 Revision Date: 03-17-2009

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