# **Detailed Specifications & Technical Data**

### **ENGLISH MEASUREMENT VERSION**



### 3107A 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:

# Pairs	AWG	Stranding	<b>Conductor Material</b>	Dia. (in.)
2	22	7x30	TC - Tinned Copper	.030

Total Number of Conductors:

#### Insulation

#### **Insulation Material:**

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

#### **Outer Shield**

### **Outer Shield Material:**

Layer #	Layer # Outer Shield Trade Name  1 Beldfoil®		Outer Shield Material	Coverage (%)
1			Aluminum Foil-Polyester Tape	100.000
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:

N	umber	Color
1		White/Blue Stripe & Blue/White Stripe
2		White/Orange Stripe & Orange/White Stripe

Overall Nominal Diameter: 0.350 in.

## Pair

#### Pair Lay Length & Direction:

Lay Length (in.) 3.750

## **Mechanical Characteristics (Overall)**

Operating Temperature Range:	-20°C To +60°C
Non-UL Temperature Rating:	60°C
Bulk Cable Weight:	73 lbs/1000 ft.
Max. Recommended Pulling Tension:	80 lbs.

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Min. Bend Radius/Minor Axis: 3.500 in.

#### **Applicable Specifications and Agency Compliance (Overall) Applicable Standards & Environmental Programs** NEC/(UL) Specification: CM, PLTC CEC/C(UL) Specification: СМ 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 Oil Resistance: Yes - Oil Res II 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/ft)
11.0

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft) 20.9

**Nominal Velocity of Propagation:** 

**VP (%)** 78

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft) 14.7

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft) 2.800

Nom. Attenuation:

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Attenuation (dB/100 ft.)
	1			.5

Max. Operating Voltage - UL:

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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 YR46792.

## **Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
3107A 0101000	1,000 FT	62.000 LB	BLACK	С	2 PR #22 FHDPE SH PVC
3107A 0104000	4,000 FT	256.000 LB	BLACK	С	2 PR #22 FHDPE SH PVC
3107A 0105000	5,000 FT	330.000 LB	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: 2 Revision Date: 08-01-2013

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