# **Detailed Specifications & Technical Data**

## **ENGLISH MEASUREMENT VERSION**



# 3109A 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. (in.)
4	22	7x30	TC - Tinned Copper	.030

#### 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 (%)
1	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000
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 Cable**

# **Overall Cabling Color Code Chart:**

Number	Color
1	White/Blue Stripe & Blue/White Stripe
2	White/Orange Stripe & Orange/White Stripe
3	White/Green Stripe & Green/White Stripe
4	White/Brown Stripe & Brown/White Stripe

Overall Nominal Diameter: 0.448 in.

# **Mechanical Characteristics (Overall)**

Operating Temperature Range:	-20°C To +60°C		
Non-UL Temperature Rating:	60°C		
Bulk Cable Weight:	96.400 lbs/1000 ft.		
Max. Recommended Pulling Tension:	100 lbs.		
Min. Bend Radius (Install)/Minor Axis:	5.500 in.		

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NEC/(UL) Specification:	rams CM, PLTC OIL RES II			
	<u>'</u>			
CEC/C(UL) Specification:	CM			
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:	Passes UL 1581, 720 Hours			
Plenum/Non-Plenum				
Plenum (Y/N):	No			

# **Electrical Characteristics (Overall)**

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) 1.4

Nom. Attenuation:

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

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)
	1			120

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## **Notes (Overall)**

Notes: Oil Resistance: Passes Oil Res II Per UL1277, Table 10.17. For CPE jacketed version order Part No. YR44768.

#### **Related Documents:**

No related documents are available for this product

## **Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
3109A 0101000	1,000 FT	90.000 LB	BLACK	С	4 PR #22 FHDPE SH PVC
3109A 0102000	2,000 FT	180.000 LB	BLACK	С	4 PR #22 FHDPE SH PVC

#### Notes:

C = CRATE REEL PUT-UP.

Revision Number: 1 Revision Date: 02-19-2009

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