## **Detailed Specifications & Technical Data**



### METRIC 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.

<b>Physical Characteristics (Ove</b>	rall)					
Conductor AWG:						
# Pairs AWG Stranding Conductor	Material Dia. (mm)					
4 22 7x30 TC - Tinned	d Copper 0.762					
Total Number of Conductors:	8					
Insulation Insulation Material:						
Insulation Trade Name Insulation Material						
Datalene® FHDPE - For	am High Density Polyethylene					
Outer Shield Outer Shield Material:						
Layer # Outer Shield Trade Name		Coverage (%)				
	Tape Aluminum Foil-Polyester Tape					
2	Braid TC - Tinned Copper	65.000				
Outer Shield Drain Wire AWG:						
AWG Stranding Drain Wire Conduct     22   7x30   TC - Tinned Copper     Outer Shield Drain Wire Diameter						
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:	11.379 mm					
Mechanical Characteristics (C	)verall)					
Operating Temperature Range:	-20°C To +6	30°C				
Non-UL Temperature Rating:	60°C					
Bulk Cable Weight:	143.462 Kg/	/Km				
Max. Recommended Pulling Ter	nsion: 444.820 N					
Min. Bend Radius/Minor Axis:	139.700 mm	n				

# **Detailed Specifications & Technical Data**



METRIC MEASUREMENT VERSION

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VARIAGE AND SPACIFICATIONS and Adapev Co		
Applicable Specifications and Agency Co		
Applicable Standards & Environmental Progr NEC/(UL) Specification:	CM, PLTC OIL RES II	
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	1 03555 OL 1301, 120 110015	
Plenum/Non-Plenum Plenum (Y/N):	No	
Capacitance (pF/m) 36.091 Nom. Capacitance Cond. to Other Conductor & Shi	eld:	
36.091   Nom. Capacitance Cond. to Other Conductor & Shi   Capacitance (pF/m)   68.5729	eld:	
Capacitance (pF/m) 36.091   Nom. Capacitance Cond. to Other Conductor & Shi   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) 4.5934	eld:	
Capacitance (pF/m) 36.091   Nom. Capacitance Cond. to Other Conductor & Shi   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) 4.5934   Nom. Attenuation:		
Capacitance (pF/m) 36.091   Nom. Capacitance Cond. to Other Conductor & Shi   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) 4.5934		
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Capacitance (pF/m) 36.091   Nom. Capacitance Cond. to Other Conductor & Shi   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) 4.5934   Nom. Attenuation:   Description Freq. (MHz) Start Freq. (MHz) Stop Freq. ( 1   Max. Operating Voltage - UL:   Voltage 300 V RMS   Max. Recommended Current:   Current	MHz) Attenuation (dB/100m)	
Capacitance (pF/m) 36.091   Nom. Capacitance Cond. to Other Conductor & Shi   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) 4.5934   Nom. Attenuation:   Description Freq. (MHz) Start Freq. (MHz) Stop Freq. (Inclusion)   Max. Operating Voltage - UL:   Voltage 300 V RMS   Max. Recommended Current:   Current 2.7 Amps per conductor @ 25°C	MHz) Attenuation (dB/100m)	
Capacitance (pF/m) 36.091   Nom. Capacitance Cond. to Other Conductor & Shi   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) 4.5934   Nom. Attenuation:   Description Freq. (MHz) Start Freq. (MHz) Stop Freq. ( 1   Max. Operating Voltage - UL:   Voltage 300 V RMS   Max. Recommended Current:   Current	MHz) Attenuation (dB/100m) 1.6405	



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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.

### **Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
3109A 0101000	305 MT	40.824 KG	BLACK	С	4 PR #22 FHDPE SH PVC
3109A 0102000	610 MT	81.647 KG	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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