



Product: [3109DB](#)

RS-485, 4 Pr, 22AWG, Str TC, PE Ins, OS+TC Brd, CPE Jkt, CM, PLTC, Sun Res, Dir Bur, Oil Resistant

Product Description

RS-485, 120 Ohm, 4 pair 22AWG (7x30) tinned copper Datalene® insulaton, Overall Foil + 65% Tinned Copper Braid, CPE jacket, CM, PLTC, SUN RES DIR BUR and oil-resistant

Technical Specifications

Product Overview

Suitable Applications:	direct burial, serial communication (RS-485 standard) comprising of PLCs, VFDs, HMIs, motors, RTU, SCADA, etc. within noisy environments over long distance, outdoor such as solar, lighting, etc.
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Construction Details

Conductor

Element	No. of Elements	Size	Stranding	Material
Pair(s)	4	22 AWG	7x30	TC - Tinned Copper

Insulation

Element	Material	Nom. Thickness	Nom. Insulation Diameter	Color Code	Notes
Pair(s)	PE - Polyethylene (Foam)	0.023 in (0.58 mm)	0.075 in (1.9 mm)	White/Blue Stripe & Blue/White Stripe, White/Orange Stripe & Orange/White Stripe, White/Green Stripe & Green/White Stripe, White/Brown Stripe & Brown/White Stripe	HDPE

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	22 AWG (7x30) TC
Braid	Tinned Copper (TC)	65%	

Waterblocking:	Waterblock Tape
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Outer Jacket

Material	Nom. Thickness	Nom. Diameter
CPE - Chlorinated Polyethylene	0.053 in (1.3 mm)	0.481 in (12.2 mm)

Overall Cable Diameter (Nominal):	0.481 in (12.2 mm)
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Electrical Characteristics

Electricals

Element	Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Other (Conds + Shield)	Nom. Characteristic Impedance	Nom. Velocity of Prop.	Max. Current
Pair(s)	14.7 Ohm/1000ft	11 pF/ft (36 pF/m)	20.9 pF/ft	120 Ohm	78%	2.7 Amps per Conductor at 25°C

Nom. Outer Shield DCR:	2.95 Ohm/1000ft (9.68 Ohm/km)
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High Frequency (Nominal/Typical)

Element	Frequency [MHz]	Nom. Insertion Loss (Attenuation)
Pair(s)	1	0.5 dB/100ft

Voltage

UL Voltage Rating

300 V (CM, PLTC)

Mechanical Characteristics

Temperature

UL Temperature	Operating
60°C	-20°C to +60°C

Bend Radius

Stationary Min.	Installation Min.
4.8 in (120 mm)	4.8 in (120 mm)

Max. Pull Tension:	80 lbs (36 kg)
Bulk Cable Weight:	86 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL 1685 UL Loading, FT1, IEC 60332-1-2
NEC / UL Compliance:	Article 725, Article 800, CM, PLTC
CEC / C(UL) Compliance:	CM
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE)
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Product Notes

Notes:	Oil Resistance: Passes Oil Res I & II Per UL1277, Table 10.17
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History

Update and Revision:	Revision Number: 0.208 Revision Date: 05-31-2024
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