



Product: [9842PE](#)

Life Cycle Status: Capability

RS-485, 2 Pr #24 Str TC, PO Ins, OS+TC Brd, PE Jkt

Product Description

RS-485, 2 Pair 24AWG (7x32) Tinned Copper, PO Insulation, Overall Beldfoil®+Tinned Copper Braid(90%) Shield, PE Outer Jacket

Technical Specifications

Product Overview

Suitable Applications:	RS-485, POS; Computer communications; Low Voltage Analog Signals (4-20ma, 0-10v, ...); Low Voltage Digital Control (24v, ...); Line Level Audio; Panel Wiring; serial communication (RS-485 standard) comprising of PLCs, VFDs, HMIs, motors, RTU, SCADA, etc. within noisy environments over long distance, etc.
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Construction Details

Conductor

Size	Stranding	Material
24	7x32	TC - Tinned Copper

Insulation

Material	Nom. Insulation Diameter	Color Code
PE - Polyethylene	1.73 mm (0.0681 in)	White/Blue & Blue/White, White/Orange & Orange/White

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC
Braid	Tinned Copper (TC)	90%	

Outer Jacket

Material	Nom. Thickness	Nom. Diameter
PE - Polyethylene	0.9 mm (0.035 in)	8.65 mm (0.341 in)

Table Notes: UV Stabilised

Overall Cable Diameter (Nominal): 8.65 mm (0.341 in)

Electrical Characteristics

Electricals

Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Other (Conds + Shield)	Nom. Characteristic Impedance	Nom. Velocity of Prop.	Max. Current
78.7 Ohm/km (24.0 Ohm/1000ft)	42 pF/m (13 pF/ft)	75.5 pF/m	120 Ohm	66%	2.1 Amps per Conductor
Nom. Outer Shield DCR:	7.2 Ohm/km (2.2 Ohm/1000ft)				

High Frequency (Nominal/Typical)

Frequency [MHz]
1

Voltage

Voltage Rating
300 V

Mechanical Characteristics

Temperature

Operating	Installation	Storage
-45°C To +70°C	-15°C To +70°C	-45°C To +70°C

Bend Radius

Stationary Min.	Installation Min.
43 mm (1.7 in)	86 mm (3.4 in)

Max. Pull Tension: 395 N (88.8 lbf)

Standards and Compliance

Environmental Suitability:	Water Exposure/Below-Grade Conduit, Indoor, Outdoor, Non-Halogenated, Sunlight Resistance
European Halogen Free Standards:	IEC 62821-1 Halogen Free Compliance = Yes, IEC 60754-1 - Halogen Amount = Zero, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 2.5 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
European Directive Compliance:	EU CE Mark
UK Regulation Compliance:	UKCA Mark
Other Standard Compliance(s):	DMX-512

Product Notes

Notes:	This is a preliminary Technical Design Specification (TDS). The minimum business quantity to offer is 3km for the first order. This product will have Black as standard color and 305mt as standard put-ups. Additional options for colors and put-ups are available on special request. The estimated production lead time for the first order will be similar to the production lead time of 9842NH. Please liaise with your Belden representative for confirmation.
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History

Update and Revision: Revision Number: 0.4 Revision Date: 03-19-2025

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