BELDEN



Product: 9841NH

RS-485, 1 Pr #24 Str TC, PO Ins, OS+TC Brd, LSZH Jkt, Dca

Request Sample

Product Description

RS-485, 1 Pair 24AWG (7x32) Tinned Copper, PO Insulation, Overall Beldfoil®+Tinned Copper Braid(90%) Shield, LSZH Outer Jacket, CPR Dca

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.

Construction Details

Conductor

Element	No. of Elements	Size	Stranding	Material
Pair(s)	1	24 AWG	7x32	TC - Tinned Copper

Insulation

Element	Material	Nom. Thickness	Nom. Insulation Diameter	Color Code
Pair(s)	PE - Polyethylene	0.56 mm (0.022 in)	1.73 mm (0.0681 in)	White/Blue & Blue/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
LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.9 mm (0.035 in)	6.10 mm (0.240 in)

Overall Cable Diameter (Nominal):	6.10 mm (0.240 in)

Electrical Characteristics

Electricals

Element	Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Other (Conds + Shield)	Nom. Characteristic Impedence	Nom. Velocity of Prop.	Max. Current
Pair(s)	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:	11.0 Ohm/km (3.35 Ohm/1000ft)

High Frequency (Nominal/Typical)

Element	Frequency [MHz]	Nom. Insertion Loss (Attenuation)
Pair(s)	1	1.97 dB/100m

Voltage

Voltage Rating
300 V

Mechanical Characteristics

Temperature

Operating	Installation	Storage
-45°C To +80°C	-15°C To +80°C	-45°C To +80°C

Bend Radius

Stationary Min.	Installation Min.
30 mm (1.2 in)	61 mm (2.4 in)

Max. Pull Tension:	328 N (73.7 lbf)
Bulk Cable Weight:	52 kg/km (35 lbs/1000ft)

Standards and Compliance

Environmental Suitability:	Indoor - Euroclass Dca, Indoor, Non-Halogenated, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	IEC 60332-3-22, IEC 60332-3-24
CPR Compliance:	CPR Euroclass: Dca-s2,d1,a1
ISO/IEC Compliance:	IEC 61034-2 - Smoke Density Min Transmittance = 60%
CENELEC Compliance:	EN 50290-2-20
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

History

Update and Revision:	Revision Number: 0.791 Revision Date: 04-07-2025

Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC/EAN	Footnote
9841NH.00152	Chrome	Reel	152 m	8719605022929	
9841NH.00305	Chrome	Reel	305 m	8719605022936	
9841NH.00500	Chrome	Reel	500 m	8719605022943	
9841NH 0601000	Chrome	Reel	1,000 ft	612825259497	C
9841NH 0601000	Chrome	Reel	1,000 ft	612825259497	C
9841NH.001000	Chrome	Reel	1,000 m	8719605022912	

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