Belden



Product: 9844NH

RS-485, 4 Pr #24 Str TC, PE Ins, OS+TC Brd, LSZH Jkt, Eca

Product Description

RS-485, 4 Pair, 24 AWG stranded (7x32) Tinned Copper conductors, Polyethylene insulation, twisted pairs, overall Beldfoil® (100% coverage) + Tinned Copper braid shield (90% coverage), 24 AWG stranded Tinned Copper drain wire, LSZH jacket, Flame resistance IEC 60332-3C

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)	4	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, White/Orange & Orange/White, White/Green & Green/White, White/Brown & Brown/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)	9.9 mm (0.39 in)

Overall Cable Diameter (Nominal):	9.90 mm (0.390 in)

Electrical Characteristics

Electricals

Element	Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Other (Conds + Shield)	Nom. Characteristic Impedence	Nom. Delay	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 (23.0 pF/ft)	120 Ohm	5.2 ns/m	66%	1.54 Amps per Conductor

Nom Outer Shield DCR:	6.9 Ohm/km (2.1 Ohm/1000ft)

High Frequency (Nominal/Typical)

Element	Frequency [MHz]	Nom. Insertion Loss (Attenuation)
Pair(s)	1	1.97 dB/100m (0.600 dB/100ft)

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.
50 mm (2.0 in)	99 mm (3.9 in)

Max. Pull Tension:	500 N (110 lbf)
Bulk Cable Weight:	112 kg/km (75.3 lbs/1000ft)

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor - Euroclass Eca, Indoor, Outdoor, Non-Halogenated, Sunlight Resistance - UL 1581 sec 1200 Black Only, Oil Resistance - IRM 902 70°Cx4h, Oil Resistance - IEC 60811-404
Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-3-24
CPR Compliance:	CPR Euroclass: Eca
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, IEC 61034-2 - Smoke Density Min. Transmittance = 60%
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2)
UK Regulation Compliance:	UKCA Mark
Other Standard Compliance(s):	DMX-512

History

Update and Revision:	Revision Number: 0.559 Revision Date: 07-23-2026

Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
9844NH.011000	Black	Reel	1,000 m	8719605155733
9844NH.012000	Black	Reel	2,000 m	8719605145284
9844NH.00305	Chrome	Reel	305 m	8719605023452
9844NH.00500	Chrome	Reel	500 m	8719605023469
9844NH.001000	Chrome	Reel	1,000 m	8719605023445

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