Product: 7928A

DataTuff® Cat 5e, 4 Bonded-Pr #24 Sol BC, FEP Ins, FEP Jkt, CMP CMP-LC

Request Sample

Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, FEP Insulation, FEP Outer Jacket, CMP CMP-LC

Technical Specifications

Product Overview

Suitable Applications:	extreme temp, exposure to oil and gasoline, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc.
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/patents.

Construction Details

Conductor

Element	Size	Stranding	Material	Number of Pairs	Number of Element
Pair(s)	24 AWG	Solid	BC - Bare Copper	4	4

Insulation

Material	Color Code
FEP - Fluorinated Ethylene Propylene	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair:	Yes

Outer Jacket

Material	Nom. Diameter
FEP - Fluorinated Ethylene Propylene	0.183 in (4.65 mm)

Overall Cable Diameter (Nominal):	0.183 in (4.65 mm)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
93.8 Ohm/km (28.6 Ohm/1000ft)	66 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
510 ns/100m	25 ns/100m	72%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted) [Ohm]	Max./Min. Fitted Impedance [Ohm]
1	2.0 dB/100m	65.3	65.3	63.3	63.3	63.8	60.8	20	100 ± 12	95-110
4	4.0 dB/100m	56.3	56.3	52.3	52.3	51.7	48.7	23.6	100 ± 12	95-110
8	5.7 dB/100m	51.8	51.8	46.1	46.1	45.7	42.7	25.4	100 ± 12	95-107
10	6.4 dB/100m	50.3	50.3	43.9	43.9	43.8	40.8	26	100 ± 12	95-107
16	8.1 dB/100m	47.3	47.3	39.1	39.1	39.7	36.7	26	100 ± 12	95-107
20	9.2 dB/100m	45.8	45.8	35.2	35.2	37.7	34.7	26	100 ± 12	95-107
25	10.3 dB/100m	44.3	44.3	34.1	34.1	35.8	32.8	25.5	100 ± 15	95-107

31.25	11.6 dB/100m	42.9	42.9	31.3	31.3	33.9	30.9	25	100 ± 15	95-107
62.5	16.8 dB/100m	38.4	38.4	21.6	21.6	27.8	24.8	23.5	100 ± 15	95-107
100	21.7 dB/100m	35.3	35.3	17.1	17.1	23.8	20.8	22.5	100 ± 15	
155	27.7 dB/100m	32.5	32.5	4.7	4.7	19.9	16.9	19	100 ± 18	
200	32 dB/100m	30.8	30.8	3	3	17.7	14.7	19	100 ± 20	
250	36.4 dB/100m	29.3	29.3	0	0	15.8	12.8	18	100 ± 20	
300	40.5 dB/100m	28.2	28.2	0	0	14.2	11.2	18	100 ± 20	
310	41.3 dB/100m	27.9	27.9			13.9	10.9	18	100 ± 20	
350	44.3 dB/100m	27.2	27.2			12.9	9.9	17	100 ± 22	

Voltage

UL Voltage Rating
300 V (CMP)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
150°C	-70°C To +150°C	-55°C To +150°C	-70°C To +150°C

Bend Radius

Stationary Min.
0.25 in (6.4 mm)

Max. Pull Tension:	40 lbs (18 kg)
Bulk Cable Weight:	22 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Plenum, Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	NFPA 262 Plenum Flame Test (UL910),UL723 (NFPA 255), FT6, FT6, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca
NEC / UL Compliance:	Article 800, CMP
CEC / C(UL) Compliance:	CMP
ICEA Compliance:	S-90-661
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3
NEMA Compliance:	NEMA WC-63.1
Data Category:	Category 5e
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 5e
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
European Directive Compliance:	EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Other Standard Compliance(s):	Ethernet/IP™ Compliant

Product Notes

Notes:	EtherNet IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vendor Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -70C Cold Bend per UL 1581.

History

Update and Revision:	Revision Number: 0.498 Revision Date: 06-30-2022

Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC
7928A 0101000	Black	Reel	1,000 ft	612825191476
7928A 0105000	Black	Reel	5,000 ft	612825191483

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