



Product: [7945A](#) 

DataTuff® Cat 6, 4 Bonded-Pr #23 Sol BC, PO Ins, OS, PVC Jkt, CMR, CMX-Outdoor

 [Request Sample](#)

Product Description

Industrial Ethernet Cat 6, 4 Bonded-Pair 23AWG (Solid) Bare Copper, PO Insulation, Overall Beldfoil® Shield, PVC Outer Jacket, CMR, CMX-Outdoor

Technical Specifications

Product Overview

Suitable Applications:	Outdoor, in cabinet, control center, mining, noisy environment, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, PoE++, PoE+, PoE, 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
Pair(s)	23 AWG	Solid	BC - Bare Copper

Insulation

Material	Color Code
PO - Polyolefin	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair:	Yes
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Outer Shield

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

Outer Jacket

Separator	Material	Nom. Diameter
Center Member (Patented X-Spline®)	PVC - Polyvinyl Chloride	0.313 in (7.95 mm)

Overall Cable Diameter (Nominal):	0.313 in (7.95 mm)
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Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
93 Ohm/km (28 Ohm/1000ft)	330 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
537 ns/100m	45 ns/100m	72%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation) [dB/100m]	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	74.3	72.3	72.3	70.3	67.8	64.8	20	100 ± 15	100 ± 15
4	3.8	65.3	63.3	61.5	59.5	55.8	52.7	23	100 ± 15	100 ± 15
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5	100 ± 15	100 ± 15
10	6	59.3	57.3	53.3	51.3	47.8	44.8	25	100 ± 15	100 ± 15

16	7.6	56.2	54.3	48.7	46.7	43.7	40.7	25	100 ± 15	100 ± 15
20	8.5	54.8	52.8	46.3	44.3	41.8	38.8	25	100 ± 15	100 ± 15
25	9.5	53.3	51.3	43.8	41.8	39.8	36.8	24.3	100 ± 15	100 ± 15
31.25	10.7	51.9	49.9	41.2	39.2	37.9	34.9	23.6	100 ± 15	100 ± 15
62.5	15.4	47.4	45.4	32	30	31.9	28.9	21.5	100 ± 15	100 ± 15
100	19.8	44.3	42.3	24.5	22.5	27.8	24.8	20.1	100 ± 15	
155	25.2	41.5	39.5	16.3	14.3	23.9	20.9	18.8	100 ± 22	
200	29.0	39.8	37.8	10.8	8.8	21.8	18.8	18	100 ± 22	
250	32.8	38.3	36.3	5.5	3.5	19.8	16.8	17.3	100 ± 32	

Voltage

UL Voltage Rating
300 V (CMR, CMX-Outdoor)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
75°C	-40°C To +75°C	-25°C To +75°C	-40°C To +80°C

Bend Radius

Stationary Min.
2.0 in (51 mm)

Max. Pull Tension:	25 lbs (11 kg)
Bulk Cable Weight:	36 lbs/1000ft (54 kg/km)

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance, Aerial
Flammability / Reaction to Fire:	UL 1666 Riser
CPR Compliance:	CPR Euroclass: Eca; CPR UKCA Class: Eca
NEC / UL Compliance:	Article 800, CMR, CMX-Outdoor
CEC / C(UL) Compliance:	CMR-CMX OUTDOOR
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
NEMA Compliance:	ANSI/NEMA WC-66
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
European Directive Compliance:	EU CE Mark, 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
UK Regulation Compliance:	UKCA Mark
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Product Notes

Notes:	Operating temperatures are subject to length de-rating. Not intended for 600 V electrical power delivery. T568A Plug Compatible Part Number: R301603. T568B Plug Compatible Part Number: R301604 T568B Plug Compatible.
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History

Update and Revision:	Revision Number: 0.92 Revision Date: 02-20-2026
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Part Numbers

Variants

Item #
7945A 0021000
7945A 0031000
7945A 0041000
7945A 0051000
7945A 0061000
7945A 0081000
7945A 0091000
7945A 0101000

7945A 0121000

7945A 1NH1000

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