



**Product:** [7958A](#)

DataTuff® Cat 5e, 4 Bonded-Pr #23 Sol BC, PO Ins, OS, PVC Jkt, CMR AWM 21047

[Request Sample](#)

## Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, Overall Beldfoil® Shield, PVC Outer Jacket, CMR 600V AWM 21047

## Technical Specifications

### Product Overview

Suitable Applications:	noisy environment, mining, in cabinet with high volt devices, such as motor control center, 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 <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> .

### Construction Details

#### Conductor

Size	Stranding	Material	Number of Pairs
24 AWG	Solid	BC - Bare Copper	4

#### 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	Polyester + Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC

#### Outer Jacket

Material	Nom. Diameter
PVC - Polyvinyl Chloride	0.275 in (6.99 mm)

Overall Cable Diameter (Nominal):	0.275 in (6.99 mm)
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### Electrical Characteristics

#### Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
93.8 Ohm/km	150 pF/ft

#### Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
538 ns/100m	45 ns/100m	70%

#### 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]	Min. SRL (Structural Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1	2.0 dB/100m	65.3	62.3	63	60	63.8	60.8	20	20	100 ± 15 Ohm	100 ± 15 Ohm
4	4.1 dB/100m	56.3	53.3	51	49	51.7	48.7	23.6	23.6	100 ± 15 Ohm	100 ± 15 Ohm
8	5.8 dB/100m	51.8	48.8	46	43	45.7	42.7	25.4	25.4	100 ± 15 Ohm	100 ± 15 Ohm

10	6.5 dB/100m	50.3	47.3	43	41	43.8	40.8	26	26	100 ± 15 Ohm	100 ± 15 Ohm
16	8.2 dB/100m	47.3	44.3	39	36	39.7	36.7	26	26	100 ± 15 Ohm	100 ± 15 Ohm
20	9.3 dB/100m	45.8	42.8	36.5	33.5	37.7	34.7	26	26	100 ± 15 Ohm	100 ± 15 Ohm
25	10.4 dB/100m	44.3	41.3	33.9	30.9	35.8	32.8	25.5	25.5	100 ± 15 Ohm	100 ± 15 Ohm
31.25	11.7 dB/100m	42.9	39.9	31	28	33.9	30.9	25	25	100 ± 15 Ohm	100 ± 15 Ohm
62.5	17.0 dB/100m	38.4	35.4	22	19	27.8	24.8	23.5	23.5	100 ± 15 Ohm	100 ± 15 Ohm
100	22.0 dB/100m	35.3	32.3	14	11	23.8	20.8	22.5	22.5	100 ± 15 Ohm	
200	32.4 dB/100m		27.8		1		14.7			100 ± 25 Ohm	

#### Voltage

UL Voltage Rating
300 V (CMR, CMX-Outdoor), 600 V (AWM 21047)

#### Mechanical Characteristics

##### Temperature

UL Temperature	Operating	Installation	Storage
60°C	-40°C To +75°C	-25°C To +75°C	-40°C To +75°C

##### Bend Radius

Stationary Min.
0.5 in (13 mm)

Max. Pull Tension:	35 lbs (16 kg)
Bulk Cable Weight:	32 lbs/1000ft

#### Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL1666 Riser, FT4, FT4, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca; CPR UKCA Class: Eca
NEC / UL Compliance:	Article 800, CMR, CMX-Outdoor
AWM Compliance:	AWM 21047
CEC / C(UL) Compliance:	CMR
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
UK Regulation Compliance:	UKCA Mark
APAC Compliance:	China RoHS II (GB/T 26572-2011)

#### Product Notes

Notes:	EtherNet/IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vender Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. *Special RJ45 plug required. See WWW. BELDEN.COM - Tools - Connector Cross Reference. Not intended for 600 V electrical power delivery.
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#### History

Update and Revision:	Revision Number: 0.489 Revision Date: 02-16-2022
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#### Variants

Item #	Color	Putup Type	Length	UPC
7958A 0101000	Black	Reel	1,000 ft	612825192084
7958A 0102000	Black	Reel	2,000 ft	612825192091
7958A 0061000	Blue			612825192060
7958A 0061000	Blue	Reel	1,000 ft	612825192060
7958A 0081000	Gray	Reel	1,000 ft	612825192077
7958A 0021000	Red	Reel	1,000 ft	612825192053
7958A 1NH1000	Teal	Reel	1,000 ft	612825192107

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