



**Product:** [7938A](#) 

DataTuff® Cat 5e, 4 Bonded-Pr #24 Str Alloy, PO Ins, OS+TC Brd, TPE Jkt, TPE Jkt, High Flex AWM 20606

 [Request Sample](#)

## Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair, 24AWG (Stranded) Alloy, PO Insulation, Overall Beldfoil®+Tinned Copper Braid(85%) Shield, TPE Inner Jacket, TPE Outer Jacket, High Flex 10M cycles at 10xOD AWM 20606

## Technical Specifications

### Product Overview

Suitable Applications:	robotic, 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/patents">https://www.belden.com/patents</a> .

### Construction Details

#### Conductor

Element	Size	Stranding	Material	No. of Pairs
Pair(s)	24 AWG	7x32	BCA - Bare Copper Alloy	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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#### Inner Jacket

Separator	Material	Nom. Diameter	Ripcord
Central Filler	TPE - Thermoplastic Elastomer	0.254 in (6.45 mm)	No

#### Outer Shield

Shield Type	Material	Coverage
Tape	Bi-Laminate (Alum+Poly)	100%
Braid	Tinned Copper (TC)	85%

#### Outer Jacket

Separator	Material	Nom. Diameter	Ripcord
Polyester Tape	TPE - Thermoplastic Elastomer	0.342 in (8.69 mm)	Yes

Overall Cable Diameter (Nominal):	0.342 in (8.69 mm)
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### Electrical Characteristics

#### Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
93.8 Ohm/km (28.6 Ohm/1000ft)	330 pF/ft

#### Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.	Typical Delay Skew
510 ns/100m	45 ns/100m	69%	12 ns/ft

#### 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) [Ohm]	Max./Min. Fitted Impedance [Ohm]
1	2.5 dB/100m	65.3	62.3	62.8	59.8	63.8	60.8	20	23	100 ± 15	100 ± 15
4	4.9 dB/100m	56.3	53.3	51.4	48.4	51.7	48.7	23	23	100 ± 15	100 ± 15
8	6.9 dB/100m	51.8	48.8	44.9	41.9	45.7	42.7	24.5	24.5	100 ± 15	100 ± 15
10	7.8 dB/100m	50.3	47.3	42.5	39.5	43.8	40.8	25	25	100 ± 15	100 ± 15
16	9.9 dB/100m	47.3	44.3	37.4	34.4	39.7	36.7	25	25	100 ± 15	100 ± 15
20	11.1 dB/100m	45.8	42.8	34.7	31.7	37.7	34.7	25	25	100 ± 15	100 ± 15
25	12.5 dB/100m	44.3	41.3	21.8	28.8	35.8	32.8	24.3	24.3	100 ± 15	100 ± 15
31.25	14.1 dB/100m	42.9	39.9	28.8	25.8	33.9	30.9	23.6	23.6	100 ± 15	100 ± 15
62.5	20.4 dB/100m	38.4	35.4	18	15	27.8	24.8	21.5	21.5	100 ± 15	100 ± 15
100	26.4 dB/100m	35.3	32.3	8.9	5.9	23.8	20.8	20.1	20.1	100 ± 15	100 ± 15

Voltage

UL Voltage Rating
300 V

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
60°C	-40°C To +80°C	-25°C To +75°C	-40°C To +80°C

Bend Radius

Stationary Min.
3.5 in (89 mm)

Max. Pull Tension:	40 lbs (18 kg)
Bulk Cable Weight:	62 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL 1581 (Vertical Tray), (VW-1), FT1
CPR Compliance:	CPR Euroclass: Eca
Data Category:	Category 5e
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:	Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. AWM 20626 80C 300V. *Special RJ45 plugs required. See WWW.BELDEN.COM - Tools - Connector Cross Reference.
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History

Update and Revision:	Revision Number: 0.550 Revision Date: 09-07-2025
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Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC	Footnote
7938A B59500	Black, Matte	Reel	500 ft	612825191735	C
7938A B591000	Matte Black			612825406204	C

Footnote:	C - CRATE REEL PUT-UP.
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