BELDEN
SENDING ALL THE RIGHT SIGNALS



Part Number: 7938A

DataTuff® 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 AWM 20606

Technical Specifications

Product Overview

Suitable Applications:	Industrial Ethernet Cable, Harsh Environments, Robotic Applications, Flexible Applications, 100MHz Category 5e, Industrial Patch Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, CMX - Outdoor, RJ-45 Compatible*

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
24	7x32	CA - Copper Alloy	4

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Material
PO - Polyolefin

Bonded-Pair:	Yes

Color Chart

Number	Color
1	White/Blue Stripe and Blue
2	White/Orange Stripe and Orange
3	White/Green Stripe and Green
4	White/Brown Stripe and Brown

Inner Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness
TPE - Thermoplastic Elastomer	0.254 in	0.02 in

Outer Shield Material

Type	Material	Material Trade Name	Coverage [%]	Nominal Diameter
Tape	Aluminum/Polyester	Beldfoil®	100 %	
Braid	TC - Tinned Copper		85 %	0.282 in

Outer Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness	Ripcord	Separator Material
Industrial Grade TPE - Thermoplastic Elastomer	0.342 in	0.03 in	No	Polyester

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance

11 Ohm/1000ft	3 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
330 pF/ft	15 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]	Typical Delay Skew
510 ns/100m	45 ns/100m	69 %	12 ns/ft

High Freq

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

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temp Range:	-25°C To +75°C
UL Temp Rating:	60°C
Storage Temp Range:	-40°C To +80°C
Operating Temp Range:	-40°C To +80°C

Mechanical Characteristics

Bulk Cable Weight:	60 lbs/1000ft
Max Recommended Pulling Tension:	40 lbs
Min Bend Radius/Minor Axis:	3.5 in

Standards

ISO/IEC Compliance:	Other Standards
CPR Euroclass:	Eca
Data Category:	Category 5e

Applicable Environmental and Other Programs

EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes
Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

C(UL) Flammability:	FT1

UL Flammability:	UL1581 Vertical Tray (VW-1)
ISO/IEC Flammability:	IEC 60332-1-2
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No

Part Number

Variants

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

Footnote:	C - CRATE REEL PUT-UP.
Patent:	https://www.belden.com/resources/patents

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.

History

Update and Revision:	Revision Number: 0.305 Revision Date: 08-22-2019

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