



Part Number: 7938A

DataTuff® Cat 5e, (4 pr) 24 AWG (7x32) CA, PO/TPE/TPE, Foil+TC Braid Shld, Upjacketed, Weld Spatter Res, 10M Flex

[Request Sample](#)

Product Description

Four Cat 5e 24 AWG Bonded Pairs stranded (7x32) bare copper alloy conductors, polyolefin insulation, TPE inner jacket, Beldfoil® shield (100% coverage) plus tinned copper braid (85% coverage), weld spatter resistant TPE jacket, 10 million flex life cycles.

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 |
| Conductor Size: | 24 AWG |

Insulation

| Material |
|-----------------|
| PO - Polyolefin |

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, LSOH, Toxicity Testing

| | |
|---------------------|-----------------------------|
| C(UL) Flammability: | FT1 |
| UL Flammability: | UL1581 Vertical Tray (VW-1) |
| UL voltage rating: | 300 V RMS |

Plenum/Non-Plenum

Plenum (Y/N): No

Part Number

Variants

| Item # | Color | Footnote |
|---------------|--------------|----------|
| 7938A B59500 | Black, Matte | C |
| 7938A B591000 | Matte Black | C |

Footnote: C - CRATE REEL PUT-UP.

Patent:

© 2018 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.