

Part Number: 7928A



DataTuff® Cat 5e, (4 pr) 24 AWG Solid BC, FEP/FEP, Ethernet/IP, CMP, Extreme Temp., Gasoline Res

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Product Description

Four Cat 5e 24 AWG Bonded-Pairs solid bare copper conductors, FEP insulation, industrial grade oil- and gas-resistant FEP jacket.

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Suitable Applications: | Industrial Ethernet Cable, Harsh Environments, 350MHz Enhanced Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, RJ-45 Compatible, High and Low Temperature, Oil and Gasoline Exposure, Limited Combustible FHC 25/50 |
|------------------------|--|

Physical Characteristics (Overall)

Conductor

| AWG | Stranding | Material | Nominal Diameter | No. of Pairs |
|-----|-----------|------------------|------------------|--------------|
| 24 | Solid | BC - Bare Copper | 0.02 in | 4 |

| | |
|------------------------|--------|
| Conductor Count: | 8 |
| Total Number of Pairs: | 4 |
| Conductor Size: | 24 AWG |

Insulation

| Material | Nominal Diameter | Nominal Wall Thickness |
|--------------------------------------|------------------|------------------------|
| FEP - Fluorinated Ethylene Propylene | 0.036 in | 0.007 in |

Color Chart

| Number | Color |
|--------|------------------------------|
| 1 | White/Blue Stripe & Blue |
| 2 | White/Orange Stripe & Orange |
| 3 | White/Green Stripe & Green |
| 4 | White/Brown Stripe & Brown |

Outer Shield Material

| Material |
|------------|
| Unshielded |

Outer Jacket Material

| Material | Nominal Diameter | Ripcord |
|--------------------------------------|------------------|---------|
| FEP - Fluorinated Ethylene Propylene | 0.187 in | No |

Electrical Characteristics

Conductor DCR

| Max. Conductor DCR | Max. DCR Unbalance |
|--------------------|--------------------|
| 9 Ohm/1000ft | 3 % |

Capacitance

| Max. Capacitance Unbalance | Nom. Mutual Capacitance |
|----------------------------|-------------------------|
| 66 pF/ft | 15 pF/ft |

| | |
|------------|--------------------|
| Shielding: | U/UTP - Unshielded |
|------------|--------------------|

Delay

| Max. Delay | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|------------|-----------------|--|
| | | |

| | | |
|-------------|------------|------|
| 510 ns/100m | 25 ns/100m | 72 % |
|-------------|------------|------|

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] | Max./Min. Input Impedance (unFitted) | Max./Min. Fitted Impedance |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|--------------------------------------|----------------------------|
| 1 MHz | 2 dB/100m | 65.3 dB | 65.3 dB | 63.3 dB | 63.3 dB | 63.8 dB | 60.8 dB | 20 dB | 100 ± 12 Ohm | 95-110 Ohm |
| 4 MHz | 4 dB/100m | 56.3 dB | 56.3 dB | 52.3 dB | 52.3 dB | 51.7 dB | 48.7 dB | 23.6 dB | 100 ± 12 Ohm | 95-110 |
| 8 MHz | 5.7 dB/100m | 51.8 dB | 51.8 dB | 46.1 dB | 46.1 dB | 45.7 dB | 42.7 dB | 25.4 dB | 100 ± 12 Ohm | 95-107 |
| 10 MHz | 6.4 dB/100m | 50.3 dB | 50.3 dB | 43.9 dB | 43.9 dB | 43.8 dB | 40.8 dB | 26 dB | 100 ± 12 Ohm | 95-107 |
| 16 MHz | 8.1 dB/100m | 47.3 dB | 47.3 dB | 39.1 dB | 39.1 dB | 39.7 dB | 36.7 dB | 26 dB | 100 ± 12 Ohm | 95-107 |
| 20 MHz | 9.2 dB/100m | 45.8 dB | 45.8 dB | 35.2 dB | 35.2 dB | 37.7 dB | 34.7 dB | 26 dB | 100 ± 12 Ohm | 95-107 |
| 25 MHz | 10.3 dB/100m | 44.3 dB | 44.3 dB | 34.1 dB | 34.1 dB | 35.8 dB | 32.8 dB | 25.5 dB | 100 ± 15 Ohm | 95-107 |
| 31.25 MHz | 11.6 dB/100m | 42.9 dB | 42.9 dB | 31.3 dB | 31.3 dB | 33.9 dB | 30.9 dB | 25 dB | 100 ± 15 Ohm | 95-107 |
| 62.5 MHz | 16.8 dB/100m | 38.4 dB | 38.4 dB | 21.6 dB | 21.6 dB | 27.8 dB | 24.8 dB | 23.5 dB | 100 ± 15 Ohm | 95-107 |
| 100 MHz | 21.7 dB/100m | 35.3 dB | 35.3 dB | 17.1 dB | 17.1 dB | 23.8 dB | 20.8 dB | 22.5 dB | 100 ± 15 Ohm | |
| 155 MHz | 27.7 dB/100m | 32.5 dB | 32.5 dB | 4.7 dB | 4.7 dB | 19.9 dB | 16.9 dB | 19 dB | 100 ± 18 Ohm | |
| 200 MHz | 32 dB/100m | 30.8 dB | 30.8 dB | 3 dB | 3 dB | 17.7 dB | 14.7 dB | 19 dB | 100 ± 20 Ohm | |
| 250 MHz | 36.4 dB/100m | 29.3 dB | 29.3 dB | 0 dB | 0 dB | 15.8 dB | 12.8 dB | 18 dB | 100 ± 20 Ohm | |
| 300 MHz | 40.5 dB/100m | 28.2 dB | 28.2 dB | 0 dB | 0 dB | 14.2 dB | 11.2 dB | 18 dB | 100 ± 20 Ohm | |
| 310 MHz | 41.3 dB/100m | 27.9 dB | 27.9 dB | | | 13.9 dB | 10.9 dB | 18 dB | 100 ± 20 Ohm | |
| 350 MHz | 44.3 dB/100m | 27.2 dB | 27.2 dB | | | 12.9 dB | 9.9 dB | 17 dB | 100 ± 22 Ohm | |

Voltage

| |
|--------------------------|
| UL Voltage Rating |
| 300 V RMS |

Temperature Range

| | |
|--------------------------|-----------------|
| Installation Temp Range: | -55°C To +150°C |
| UL Temp Rating: | 150°C |
| Storage Temp Range: | -70°C To +150°C |
| Operating Temp Range: | -70°C To +150°C |

Mechanical Characteristics

| | |
|----------------------------------|---------------|
| Bulk Cable Weight: | 25 lbs/1000ft |
| Max Recommended Pulling Tension: | 40 lbs |
| Min Bend Radius/Minor Axis: | 0.25 in |

Standards

| | |
|-------------------------------|--|
| NEC/(UL) Specification: | CMP, FHC 25/50 |
| CEC/C(UL) Specification: | CMP |
| ISO/IEC Compliance: | ISO/IEC 11801 ed 2.1 (2008) Class D |
| CPR Euroclass: | Eca |
| Data Category: | Category 5e |
| Telecommunications Standards: | Category 5e - TIA 568.C.2 |
| Other Specification: | NEMA WC-63.1 Category 5e, UL verified to Category 5e, Ethernet/IP™ Compliant |

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 |

Flammability, LS0H, Toxicity Testing

| | |
|--------------------|---------------------------|
| UL Flammability: | NFPA 262,UL723 (NFPA 255) |
| CSA Flammability: | FT6 |
| UL voltage rating: | 300 V RMS |

Plenum/Non-Plenum

| | |
|---------------|-----|
| Plenum (Y/N): | Yes |
|---------------|-----|

Variants

| Item # | Color |
|---------------|-------|
| 7928A 0101000 | Black |
| 7928A 0105000 | Black |

| | |
|---------|---|
| Patent: | https://www.belden.com/resources/patents |
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