



Product: [IEA005](#)

DataTuff® 6A, High Flex, 4 Pr #26 Str TC, PO Ins, OS, TPE Jkt, CMR, CMX

Request Sample

Product Description

Industrial Ethernet Cat 6A, 4 Pair 26AWG (Stranded 7X34) Tinned Copper, PO Insulation, X-Spline, Beldfoil Shield, TPE Outer Jacket, UL CMR, CMX Outdoor, OIL RES II, SUN RES, AWM 600V

Technical Specifications

Product Overview

| | |
|------------------------|---|
| Suitable Applications: | High Flex, Automation, Robotics, exposure to oil and gasoline, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc. |
|------------------------|---|

Construction Details

Conductor

| Element | Size | Stranding | Material | No. of Pairs |
|---------|--------|-----------|--------------------|--------------|
| Pair(s) | 26 AWG | 7x34 | TC - Tinned Copper | 4 |

Insulation

| Element | Material | Nom. Insulation Diameter | Color Code |
|---------|-------------------|--------------------------|--|
| Pair(s) | PE - Polyethylene | 0.068 in (1.7 mm) | Blue & White/Blue, Orange & White/Orange, Green & White/Green, Brown & White/Brown |

Outer Shield

| Shield Type | Material | Coverage |
|-------------|-------------------------|----------|
| Tape | Bi-Laminate (Alum+Poly) | 100% |
| Braid | Tinned Copper (TC) | 75% |

Outer Jacket

| Material | Nom. Diameter |
|-------------------------------|------------------|
| TPE - Thermoplastic Elastomer | 0.29 in (7.4 mm) |

Overall Cable Diameter (Nominal): 0.29 in (7.4 mm)

Electrical Characteristics

Electricals

| Max. Conductor DCR |
|--------------------|
| 44.4 Ohm/1000ft |

Delay

| Max. Delay | Max. Delay Skew | Nom. Velocity of Prop. |
|-------------|-----------------|------------------------|
| 540 ns/100m | 45 ns/100m | 67% |

High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. NEXT [dB] | Min. PSNEXT [dB] | Min. ACRF (ELFEXT) [dB] | Min. PSACRF (PSELFEXT) [dB] | Min. RL (Return Loss) [dB] | Max./Min. Input Impedance (unFitted) [Ohm] | Max./Min. Fitted Impedance [Ohm] | Min. TCL [dB] | Min. ELTCTL [dB] | Max. Surface Transfer Impedance [mOhm/m] | Min. Coupling Attenuation [dB] |
|-----------------|-----------------------------------|----------------|------------------|-------------------------|-----------------------------|----------------------------|--|----------------------------------|---------------|------------------|--|--------------------------------|
| 1 | 3.1 dB/100m | 74.3 | 72.3 | 67.8 | 64.8 | 20.0 | 100 ± 15 | 100 +/- 10 | 40.0 | 35.0 | 50.0 | |
| 4 | 5.7 dB/100m | 65.3 | 63.3 | 55.8 | 52.8 | 23.0 | 100 ± 15 | 100 ± 15 | 40.0 | 23.0 | 75.9 | |
| 8 | 8.0 dB/100m | 60.8 | 58.8 | 49.7 | 46.7 | 24.5 | 100 ± 15 | 100 ± 15 | 40.0 | 16.9 | 93.5 | |
| 10 | 8.9 dB/100m | 59.3 | 57.3 | 47.8 | 44.8 | 25.0 | 100 ± 15 | 100 ± 15 | 40.0 | 15.0 | 100.0 | |

| | | | | | | | | | | | | |
|-------|--------------|------|------|------|------|------|----------|----------|------|------|-------|------|
| 16 | 11.2 dB/100m | 56.2 | 54.2 | 43.7 | 40.7 | 25.0 | 100 ± 15 | 100 ± 15 | 38.0 | 10.9 | 135.3 | |
| 20 | 12.6 dB/100m | 54.8 | 52.8 | 41.8 | 38.8 | 25.0 | 100 ± 15 | 100 ± 15 | 37.0 | 9.0 | 155.8 | |
| 25 | 14.1 dB/100m | 53.3 | 51.3 | 39.8 | 36.8 | 24.2 | 100 ± 15 | 100 ± 15 | 36.0 | 7.0 | 179.5 | |
| 31.25 | 15.8 dB/100m | 51.9 | 49.9 | 7.9 | 34.9 | 23.3 | 100 ± 15 | 100 ± 10 | 35.1 | 5.5 | | 85 |
| 62.5 | 22.5 dB/100m | 47.4 | 45.4 | 31.9 | 28.9 | 20.7 | 100 ± 15 | 100 ± 10 | 32 | | | 85 |
| 100 | 28.7 dB/100m | 44.3 | 42.3 | 27.8 | 24.8 | 19.0 | 100 ± 15 | 100 ± 10 | 30.0 | | | 85 |
| 200 | 41.4 dB/100m | 39.8 | 37.8 | 21.8 | 18.8 | 19.0 | 100 ± 15 | 100 ± 10 | 27.0 | | | 78.9 |
| 250 | 46.6 dB/100m | 38.3 | 36.3 | 19.8 | 16.8 | 15.6 | 100 ± 32 | 100 ± 10 | 26.0 | | | 77 |
| 300 | 51.4 dB/100m | 37.1 | 35.1 | 18.3 | 15.3 | 14.9 | 100 ± 32 | 100 ± 10 | 25.2 | | | 75.5 |
| 400 | 60.1 dB/100m | 35.3 | 33.3 | 15.8 | 12.8 | 13.8 | 100 ± 32 | 100 ± 10 | 24.0 | | | 72.9 |
| 500 | 67.9 dB/100m | 33.8 | 31.8 | 13.8 | 10.8 | 13.0 | 100 ± 32 | 100 ± 10 | 23.0 | | | 71.0 |

Voltage

| UL Voltage Rating |
|-------------------|
| 600 V (UL 2463) |

Mechanical Characteristics

Temperature

| UL Temperature | Operating | Installation | Storage |
|----------------|----------------|----------------|----------------|
| 75°C | -40°C To +75°C | -20°C To +80°C | -40°C To +80°C |

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 2.9 in (74 mm) | 2.9 in (74 mm) |

| | |
|--------------------|----------------|
| Max. Pull Tension: | 28 lbs (13 kg) |
| Bulk Cable Weight: | 40 lbs/1000ft |

Standards and Compliance

| | |
|----------------------------------|---|
| Environmental Suitability: | Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, UV Resistance, Oil Resistance |
| Flammability / Reaction to Fire: | UL 1666 - Riser, VW-1 |
| NEC / UL Compliance: | Article 800, CMX-Outdoor, CMR |
| AWM Compliance: | AWM 2463 |
| CEC / C(UL) Compliance: | CMR-CMX OUTDOOR |
| Data Category: | Category 6A |
| TIA/EIA Compliance: | ANSI/TIA-568.2-D Category 6A |
| European Directive Compliance: | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2) |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |

History

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| Update and Revision: | Revision Number: 0.151 Revision Date: 12-13-2023 |
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