



Product: [IEA006](#)

DataTuff® 6A, 4 Bonded-Pr #22 Sol BC, PO Ins, X-spline, PVC Jkt, OS, PVC Jkt, PLTC, CMR, CMX Outdoor

Product Description

Industrial Ethernet Cat 6A, 4 Bonded-Pair 22AWG (Solid) Bare Copper, PO Insulation, X-spline, PVC Inner Jacket, Overall Beldfoil® Shield, PVC Outer Jacket, PLTC, CMR, CMX Outdoor

Technical Specifications

Product Overview

|                        |  |
|------------------------|--|
| Suitable Applications: | Industrial Ethernet Cat 6, 4 Bonded-Pair 22AWG (Solid) Bare Copper, PO Insulation, X-spline, PVC Inner Jacket, Overall Beldfoil®+Tinned Copper Braid(80%) Shield, PVC Outer Jacket, PLTC, CMR, CMX Outdoor |
|------------------------|--|

Construction Details

Conductor

| Size   | Stranding | Material         | No. of Pairs |
|--------|-----------|------------------|--------------|
| 22 AWG | Solid     | BC - Bare Copper | 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 |
|--------------|-----|

Inner Jacket

| Separator                          | Material                 | Nom. Diameter      | Ripcord |
|------------------------------------|--------------------------|--------------------|---------|
|                                    | PVC - Polyvinyl Chloride | 0.305 in (7.75 mm) | Yes     |
| Center Member (Patented X-Spline®) |                          |                    |         |

Outer Shield

| Shield Type | Material                | Coverage | Drainwire Type   |
|-------------|-------------------------|----------|------------------|
| Tape        | Bi-Laminate (Alum+Poly) | 100%     | 24 AWG (7x32) TC |

Outer Jacket

| Material                 | Nom. Diameter      | Ripcord |
|--------------------------|--------------------|---------|
| PVC - Polyvinyl Chloride | 0.401 in (10.2 mm) | No      |

|                                   |                    |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.401 in (10.2 mm) |
|-----------------------------------|--------------------|

Electrical Characteristics

Electricals

| Max. Conductor DCR            | Max. Capacitance Unbalance |
|-------------------------------|----------------------------|
| 56.5 Ohm/km (17.2 Ohm/1000ft) | 330 pF/100m                |

Delay

| Frequency | Max. Delay    | Max. Delay Skew | Nom. Velocity of Prop. |
|-----------|---------------|-----------------|------------------------|
| 100 MHz   | 537.6 ns/100m | 45 ns/100m      | 68%                    |

High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) [dB/100m] | 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. PSANEXT [dB] | Min. PSAACRF [dB] | Min. TCL [dB] | Min. ELTCTL [dB] |
|-----------------|---|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|-------------------|-------------------|---------------|------------------|
| 1               | 2.1   | 74.3           | 72.3             | 72.3          | 70.3            | 67.8                    | 64.8                        | 20.0                       | 67.0              | 67.0              | 40.0          | 35.0             |
| 4               | 3.8   | 65.3           | 63.3             | 61.5          | 59.5            | 55.8                    | 52.8                        | 23.0                       | 67.0              | 66.2              | 40.0          | 23.0             |
| 8               | 5.3   | 60.8           | 58.8             | 55.4          | 53.4            | 49.7                    | 46.7                        | 24.5                       |                   |                   | 40            | 16.9             |
| 10              | 5.9   | 59.3           | 57.3             | 53.4          | 51.4            | 47.8                    | 44.8                        | 25.0                       | 67.0              | 58.2              | 40.0          | 15.0             |
| 16              | 7.5   | 56.2           | 54.2             | 48.8          | 46.8            | 43.7                    | 40.7                        | 25.0                       |                   |                   | 38.0          | 10.9             |
| 20              | 8.4   | 54.8           | 52.8             | 46.4          | 44.4            | 41.8                    | 38.8                        | 25.0                       | 67.0              | 52.2              | 37.0          | 9.0              |
| 25              | 9.4   | 53.3           | 51.3             | 44.0          | 42.0            | 39.8                    | 36.8                        | 24.3                       | 67.0              | 50.2              | 36.0          | 7.0              |
| 31.25           | 10.5  | 51.9           | 49.9             | 41.4          | 39.4            | 37.9                    | 34.9                        | 23.6                       | 67.0              | 48.3              | 35.1          | 5.1              |
| 62.5            | 15.0  | 47.4           | 45.4             | 32.4          | 30.4            | 31.9                    | 28.9                        | 21.5                       |                   |                   | 32.0          |                  |
| 100             | 19.1  | 44.3           | 42.3             | 25.2          | 23.2            | 27.8                    | 24.8                        | 20.1                       | 62.5              | 38.2              | 30.0          |                  |
| 200             | 27.6  | 39.8           | 37.8             | 12.2          | 10.2            | 21.8                    | 18.8                        | 18.0                       |                   |                   | 27.0          |                  |
| 250             | 31.1  | 38.3           | 36.3             | 7.3           | 5.3             | 19.8                    | 16.8                        | 17.3                       | 56.5              | 30.2              | 26.0          |                  |
| 300             | 34.3  | 37.1           | 35.1             | 2.9           | 0.9             | 18.3                    | 15.3                        | 16.8                       | 55.3              | 28.7              | 25.2          |                  |
| 350             | 37.2  | 36.1           | 34.1             |               |                 | 16.9                    | 13.9                        | 16.3                       | 54.3              | 27.3              | 24.6          |                  |
| 400             | 40.1  | 35.3           | 33.3             |               |                 | 15.8                    | 12.8                        | 15.9                       | 53.5              | 26.2              | 24.0          |                  |
| 450             | 42.7  | 34.5           | 32.5             |               |                 | 14.7                    | 11.7                        | 15.5                       | 52.7              | 25.1              | 23.5          |                  |
| 500             | 45.3  | 33.8           | 31.8             |               |                 | 13.8                    | 10.8                        | 15.2                       | 52.0              | 24.2              | 23.0          |                  |

Voltage

| UL Voltage Rating        |
|--------------------------|
| 300 V (CMR), 600 V (AWM) |

Mechanical Characteristics

Temperature

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

Bend Radius

| Installation Min. | Flexing Min.    |
|-------------------|-----------------|
| 2.4 in (61 mm)    | 4.8 in (120 mm) |

|                    |  |
|--------------------|--|
| Table Notes:       | Theses cable are rated for both indoor and outdoor applications. For outdoor installations, the continuous flexing bend radius must be applied for outdoor use. Outdoor installations are susceptible to frequent movement due to environmental factors. |
| Max. Pull Tension: | 40 lbs (18 kg)   |
| Bulk Cable Weight: | 70.3 lbs/1000ft (105 kg/km)  |

Standards and Compliance

|                                  |   |
|----------------------------------|---|
| Environmental Suitability:       | Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance  |
| Flammability / Reaction to Fire: | UL 1685 Flame only  |
| CPR Compliance:                  | CPR Euroclass: Fca  |
| NEC / UL Compliance:             | Article 800, Article 725, PLTC - CMR/CMX Outdoor  |
| AWM Compliance:                  | AWM 21047   |
| IEEE Compliance:                 | IEEE 802.3bt Type 1, Type 2, Type 3, Type 4   |
| NEMA Compliance:                 | ANSI/NEMA WC-66   |
| Data Category:                   | Category 6A   |
| TIA/EIA Compliance:              | ANSI/TIA-568.2-D Category 6A  |
| ISO/IEC Compliance:              | ISO/IEC 11801-1, IEC 61156-5  |
| 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 |
| APAC Compliance:                 | China RoHS II (GB/T 26572-2011)   |

Product Notes

|        |   |
|--------|---|
| Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical system. |
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History

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| Update and Revision: | Revision Number: 0.9 Revision Date: 07-02-2024 |
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