Product: IEA007 [

## DataTuff® 6A, 4 Bonded-Pr \#22 Sol BC, PO Ins, X-spline, PVC Jkt, OS+TC Brd, 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(®+Tinned Copper Braid(80\%) 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

| Material | No. of Pairs | No. of Elements |
| :---: | :---: | :--- |
| BC - Bare Copper | BC - Bare Copper (v799780) | 4 |

Insulation

| Nom. Insulation Diameter |  | Color Code |
| :---: | :---: | :---: |
| PO - Polyolefin (687467) mm | White/Blue Stripe \& Blue, White/Orange Stripe \& Orange, White/Green Stripe \& Green, White/Brown Stripe \& Brown |  |

Inner Jacket

| Nom. Diameter |
| :---: |
| PVC - Polyvinyl Chloride (687384) |

Outer Shield

| Shield Type | Material | Coverage |
| :--- | :--- | :--- |
| Tape | Bi-Laminate (Alum+Poly) | $100 \%$ |
| Braid | Tinned Copper (TC) | $80 \%$ |

Outer Jacket

| Material | Nom. Diameter | Ripcord |
| :--- | :---: | :--- |

Electrical Characteristics
Electricals

| Max. Conductor DCR | Max. Capacitance Unbalance |
| :---: | :--- |
| 56.5 Ohm $/ \mathrm{km}(17.2$ Ohm $/ 1000 \mathrm{ft})$ | $330 \mathrm{pF} / 100 \mathrm{~m}$ |

## Delay

| Frequency | Max. Delay | Max. Delay Skew | Nom. Velocity of Prop. |
| :--- | :---: | :--- | :--- |
| 100 MHz | $537.6 \mathrm{~ns} / 100 \mathrm{~m}$ | $45 \mathrm{~ns} / 100 \mathrm{~m}$ | $68 \%$ |

## High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) [dB/100m] | Min. NEXT [dB] | $\begin{aligned} & \text { Min. } \\ & \text { PSNEXT } \\ & \text { [dB] } \end{aligned}$ | Min. ACR [dB] |  | $\begin{aligned} & \text { Min. ACRF } \\ & \text { (ELFEXT) [dB] } \end{aligned}$ | Min. PSACRF (PSELFEXT) [dB] | $\begin{gathered} \text { Min. RL } \\ \text { (Return Loss) } \\ \text { [dB] } \end{gathered}$ | $\begin{aligned} & \text { Min. } \\ & \text { PSANEXT } \\ & \text { [dB] } \end{aligned}$ | $\begin{aligned} & \text { Min. } \\ & \text { PSAACRF } \\ & \text { [dB] } \end{aligned}$ | Min. TCL [dB] | $\begin{gathered} \text { Min. } \\ \text { ELTCTL } \\ \text { [dB] } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| 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 |
| :--- | :---: | :---: | :---: |
| $75^{\circ} \mathrm{C}$ | $-40^{\circ} \mathrm{C} \mathrm{To}+75^{\circ} \mathrm{C}$ | $-25 \mathrm{C} \mathrm{To}+75^{\circ} \mathrm{C}$ | $-40^{\circ} \mathrm{C} \mathrm{To}+60^{\circ} \mathrm{C}$ |

Bend Radius

| Installation Min. | Flexing Min. |
| :--- | :---: |
| 2.6 in $(66 \mathrm{~mm})$ | 5.1 in $(130 \mathrm{~mm})$ |
| 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 <br> are susceptible to frequent movement due to environmental factors. |
| Bulk Cable Weight: | $87.5 \mathrm{lbs} / 1000 \mathrm{ft}(130 \mathrm{~kg} / \mathrm{km})$ |

Standards and Compliance

| Environmental Suitability: | Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance |
| :--- | :--- |
| Flammability / Reaction to <br> 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 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 <br> Compliance: China RoHS II (GB/T 26572-2011) <br> APAC Compliance:  |  |

Product Notes

| Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical system. |
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| History |  |
| Update and Revision: | Revision Number: 0.9 Revision Date: 07-02-2024 |

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 regulations based on their individual usage of the product.

