

Part Number: 74002PU

DataTuff® Industrial Ethernet Cat 5e Moderate Flexing Cable



Product Description

DataTuff Industrial ETHERNET, CAT 5E 4P, 1 Gb/s, AWG 26(7), Stranded, Foil + 80% Braid, No Halogen Jacket PUR, UL AWM 20549

Technical Specifications

Physical Characteristics (Overall)

Conductor

| AWG | Stranding | Material | Construction n x D | No. of Pairs |
|-----|-----------|------------------|--------------------|--------------|
| 26 | Stranded | BC - Bare Copper | 7x0.16 mm | 4 |

| | |
|------------------------|---|
| Conductor Count: | 8 |
| Total Number of Pairs: | 4 |

Insulation

| Material | Nominal Diameter | Diameter +/- Tolerance |
|--------------------|------------------|------------------------|
| PP - Polypropylene | 0.98 mm | 0.05 mm |

| | |
|--------------|----|
| Bonded-Pair: | No |
|--------------|----|

Color Chart

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

Outer Shield Material

| Type | Material | Min. Coverage [%] |
|-------|--------------------|-------------------|
| Tape | Aluminum/Polyester | |
| Braid | TC - Tinned Copper | 80 % |

| | |
|--------------------------|------------------|
| Outer Shield Table Note: | Aluminum outside |
|--------------------------|------------------|

Outer Jacket Material

| Material | Nominal Diameter | Diameter +/- Tolerance |
|---------------------------------------|------------------|------------------------|
| PUR (Halogenfree and flame-retardant) | 6.5 mm | 0.2 mm |

Construction and Dimensions

| | |
|---------------------------------------|--------|
| Min Elongation at Breakof Conductors: | 10 % |
| Min Elongation at Breakof Insulation: | 100 % |
| Min Elongation at Breakof Jacket: | 100 % |
| Min Tensile Strength of Jacket: | 15 MPa |

Electrical Characteristics

Conductor DCR

| Max. Conductor DCR | Max. DCR Unbalanced Within Pair [%] |
|--------------------|-------------------------------------|
| 145 Ohm/km | 2 % |

Capacitance

| Max. Capacitance Unbalance | Max. Mutual Capacitance |
|----------------------------|-------------------------|
| 1.6 pF/m | 56 pF/m |

Impedance

| Nominal Characteristic Impedance | Nominal Characteristic Tolerance | Nominal Input Impedance |
|----------------------------------|----------------------------------|-------------------------|
| 100 Ohm | 5 Ohm | 100 +/- 15 Ohm |

Delay

| Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|-----------------|--|
| 40 ns/100m | 60 % |

High Freq

| 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] |
|-----------------|-----------------------------------|----------------|------------------|-------------------------|-----------------------------|----------------------------|
| 0.772 MHz | | 67 dB | 64 dB | | | 19.4 dB |
| 1 MHz | 3.2 dB/100m | 65.3 dB | 62.3 dB | 63.8 dB | 60.8 dB | 20 dB |
| 4 MHz | 6 dB/100m | 56.3 dB | 53.3 dB | 51.8 dB | 48.8 dB | 23 dB |
| 10 MHz | 9.5 dB/100m | 50.3 dB | 47.3 dB | 43.8 dB | 40.8 dB | 25 dB |
| 16 MHz | 12.1 dB/100m | 47.2 dB | 44.2 dB | 39.7 dB | 36.7 dB | 25 dB |
| 20 MHz | 13.6 dB/100m | 45.8 dB | 42.8 dB | 37.8 dB | 34.8 dB | 25 dB |
| 25 MHz | 15.3 dB/100m | 44.3 dB | 41.3 dB | 35.8 dB | 32.8 dB | 24.3 dB |
| 31.25 MHz | 17.1 dB/100m | 42.9 dB | 39.9 dB | 33.9 dB | 30.9 dB | 23.6 dB |
| 62.5 MHz | 24.8 dB/100m | 38.3 dB | 35.4 dB | 27.9 dB | 24.9 dB | 21.5 dB |
| 100 MHz | 32 dB/100m | 35.3 dB | 32.3 dB | 23.8 dB | 20.8 dB | 20.1 dB |

Current

| Element | Max. Recommended Current [A] |
|-----------|------------------------------|
| Conductor | 1 A |

Voltage

| Voltage Rating [V] |
|-----------------------|
| 450 V DC and 300 V AC |

Temperature Range

| | |
|--------------------------|----------------|
| Installation Temp Range: | -15°C To +60°C |
| Storage Temp Range: | -40°C To +80°C |
| Operating Temp Range: | -40°C To +80°C |

Mechanical Characteristics

| | |
|---|---------------|
| Oil Resistance: | IEC 60811-2-1 |
| Max Recommended Pulling Tension: | 80 N |
| Min Bend Radius (W/o Pulling Strength): | 70 mm |
| Min Setting Radius: | 35 mm |

Standards

| | |
|---------------------|--|
| UL AWM Style: | UL AWM 20549 |
| ISO/IEC Compliance: | ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011 and ISO/IEC 24702 |
| CENELEC Compliance: | EN 50173-1 Ed. 3:2011 |
| Data Category: | Category 5e |
| ANSI Compliance: | ANSI/TIA 568.2-D (2018) |

Applicable Environmental and Other Programs

| | |
|---------------------------------------|------------|
| Environmental Space: | Indoor |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2004-01-01 |

Flammability, LSOH, Toxicity Testing

| | |
|--|------|
| CSA Flammability: | FT2 |
| Amount of Halogen acc. to IEC 60754-1 & EN50267-1: | Zero |

Part Number

Variants

| Item # | Color | Length |
|----------------|-------|---------|
| 74002PU.011000 | Black | 1,000 m |
| 74002PU.01305 | Black | 305 m |
| 74002PU.01500 | Black | 500 m |

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

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| Update and Revision: | Revision Number: 0.170 Revision Date: 09-02-2019 |
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