



# **Product Description**

DataTuff® 5E, 4 Pair AWG 26 Bare Copper - Stranded, Polyethylene insulation, SF/UTP - Overall Braid + Foil shielding, PUR Halogen Free jacket , 2M flex Trailing

# **Technical Specifications**

### **Product Overview**

Suitable Applications:

harsh environment, IIoT, factory or process automation, video, audio, data communication, etc. Not rodent protected.

## **Physical Characteristics (Overall)**

#### Conductor

| AWG              | Stranding              | Material         | Construction n x D | No. of Pairs |
|------------------|------------------------|------------------|--------------------|--------------|
| 26               | Stranded               | BC - Bare Copper | 19x0.10 mm         | 4            |
| Conductor Count: |                        |                  | :                  | 3            |
| Total I          | Total Number of Pairs: |                  |                    | 4            |

Insulation

| Material          | Nominal Diameter | Diameter +/- Tolerance |
|-------------------|------------------|------------------------|
| PE - Polyethylene | 1 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   |  |

#### Cabling

| Description   |
|---|
| 4 pairs twisted to cable core covered with a polyester foil |

### **Outer Shield Material**

| Туре         | Material                | Min. Coverage [%] |
|--------------|-------------------------|-------------------|
| Таре         | Bi-Laminate (Alum+Poly) |                   |
| Braid        | Tinned Copper (TC)      | 80%               |
| Table Notes: |                         |                   |

#### **Outer Jacket Material**

|                                       |                             | Diameter +/- Tolerance         Nominal Wall Thickness         Separator Material           0.2 mm         0.6 mm         non-Woven Tape |  |  |              |  |
|---------------------------------------|-----------------------------|---|--|--|--------------|--|
|                                       |                             |   |  |  | Table Notes: |  |
| Construction and Dimension            | 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:       | 10.3 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<br>[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                 | 40.9 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. Pull Tension:                      | 80 N                           |  |  |
| Min Bend Radius (W/o Pulling Strength): | 70 mm                          |  |  |
| Min Setting Radius:                     | 35 mm                          |  |  |
| Min No. of Drag Chain Cycles:           | 2000000                        |  |  |
| Drag Chain Parameters:                  | a= 3m/s2 v= 3 m/s and r= 60 mm |  |  |

## **Standards**

| UL AWM Style Compliance: | UL AWM 20549    |  |  |  |
|--------------------------|-----------------|--|--|--|
| ISO/IEC Compliance:      | ISO/IEC 11801-1 |  |  |  |
| CENELEC Compliance:      | EN 50173-1      |  |  |  |
| 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 |
|                                       |            |

### Suitability

| Suitability - Burial:              | No               |  |  |  |
|------------------------------------|------------------|--|--|--|
| Suitability - Indoor:              | Yes              |  |  |  |
| Suitability - Outdoor:             | Yes - Black only |  |  |  |
| Suitability - Sunlight Resistance: | Yes              |  |  |  |

### Flammability, LS0H, Toxicity Testing

| CSA Flammability:                                | FT2  |
|--|------|
| IEC 60754-1 - Halogen Amount:                    | Zero |
| IEC 60754-2 - Halogen Acid Gas Amount - Min. pH: | 4.3  |

#### **Part Number**

#### Variants

| ltem #         | Color | Putup Type | Length | EAN           |
|----------------|-------|------------|--------|---------------|
| 74003PU.01B100 | Black | Flat Box   | 100 m  | 8719605013132 |
| 74003PU.01305  | Black | Reel       | 305 m  | 8719605013118 |
| 74003PU.01500  | Black | Reel       | 500 m  | 8719605013125 |

## History

Update and Revision:

Revision Number: 0.222 Revision Date: 06-30-2021

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