



Product: [70006PU](#)

DataTuff® 5E, 1Q #22 Sol BC, PO ins, F/B, PUR jkt, PROFINET Type A

Product Description

DataTuff® 5E, 1 Quad AWG 22 Bare Copper - Solid, Polyolefin (PO, PE, PP) insulation, SF/UTP - Overall Braid + Foil shielding, PUR jacket , PROFINET Type A

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 | Nominal Diameter | No. of Conductors |
|-----|-----------|------------------|------------------|-------------------|
| 22 | Solid | BC - Bare Copper | 0.65 mm | 4 |

| | |
|------------------------|---|
| Conductor Count: | 4 |
| Total Number of Pairs: | 2 |

Insulation

| Material | Nominal Diameter | Diameter +/- Tolerance |
|-----------------|------------------|------------------------|
| PO - Polyolefin | 1.5 mm | 0.05 mm |

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

Color Chart

| Number | Color |
|--------|--------------------------------|
| Quad 1 | White & Blue & Yellow & Orange |

Inner Jacket Material

| Material | Nominal Diameter |
|---|------------------|
| LSZH - Low Smoke Zero Halogen (Flame Retardant) | 3.9 mm |

| | |
|--------------|---------|
| Table Notes: | Bedding |
|--------------|---------|

Outer Shield Material

| Type | Material | Thickness of Foil | Min. Coverage [%] |
|-------|-------------------------|-------------------|-------------------|
| Tape | Bi-Laminate (Alum+Poly) | 50 µm | |
| Braid | Tinned Copper (TC) | | 85% |

Outer Jacket Material

| Material | Nominal Diameter | Diameter +/- Tolerance |
|--------------------|------------------|------------------------|
| PUR - Polyurethane | 6.5 mm | 0.2 mm |

Electrical Characteristics

Conductor DCR

| Max. Conductor DCR |
|--------------------|
| 57.1 Ohm/km |

Impedance

| Frequency [MHz] | Nominal Characteristic Impedance | Nominal Characteristic Tolerance |
|-----------------|----------------------------------|----------------------------------|
| 1 - 100 | 100 Ohm | 15 Ohm |

Delay

| Max. Delay | Nominal Velocity of Propagation (VP) [%] |
|-------------|--|
| 530 ns/100m | 68% |

High Freq

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. NEXT [dB] | Min. ACRF (ELFEXT) [dB] | Min. SRL (Structural Return Loss) |
|-----------------|-----------------------------------|----------------|-------------------------|-----------------------------------|
| 1 MHz | 2.1 dB/100m | 65.3 dB | 64 dB | |
| 4 MHz | 4.1 dB/100m | 56.3 dB | 52 dB | 23 dB |
| 10 MHz | 6.5 dB/100m | 50.3 dB | 44 dB | 25 dB |
| 16 MHz | 8.3 dB/100m | 47.2 dB | 40 dB | 25 dB |
| 31.25 MHz | 11.7 dB/100m | 42.9 dB | 34 dB | 23.6 dB |
| 62.5 MHz | 17 dB/100m | 38.4 dB | 28 dB | 21.5 dB |
| 100 MHz | 22 dB/100m | 35.3 dB | 24 dB | 20.1 dB |

| | |
|--------------------------------------|--|
| Table Notes: | Reference standard: ISO/IEC 11801 ed 2.0, Cat 5e |
| General Electrical Parameters Notes: | Reference standard: ISO/IEC 11801 ed 2.0, Cat 5e |

Transfer Impedance

| Frequency [MHz] | Transfer Impedance |
|-----------------|--------------------|
| 10 Mhz | Max. 10 mOhm/m |

Voltage

| Voltage Rating [V] |
|--------------------|
| 300 V |

Temperature Range

| | |
|--------------------------|----------------|
| Installation Temp Range: | -5°C To +50°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 |
|-----------------|---------------|

Standards

| | |
|--------------------------|-----------------|
| UL AWM Style Compliance: | UL AWM 20549 |
| IEC Compliance: | ISO/IEC 11801-1 |
| Data Category: | Category 5e |

Applicable Environmental and Other Programs

| | |
|---------------------------------------|------------|
| Environmental Space: | Indoor |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2015-11-11 |

Suitability

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

Flammability, LS0H, Toxicity Testing

| | |
|-------------------|---------------|
| IEC Flammability: | IEC 60332-1-2 |
|-------------------|---------------|

Part Number

Variants

| Item # | Color | Putup Type | Length | EAN |
|---------------|-------|------------|--------|---------------|
| 70006PU.01305 | Green | Reel | 305 m | 8719605009272 |
| 70006PU.01500 | Green | Reel | 500 m | 8719605009289 |

History

Update and Revision:

Revision Number: 0.213 Revision Date: 12-18-2020

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