



Product: [74004PU](#)

DataTuff® 7, 4PR #23 Sol BC, PO ins, S/FTP, PUR HF jkt, AWM 20549

Product Description

DataTuff® 7, 4 Pair AWG 23 Bare Copper - Solid, Polyethylene insulation, S/FTP - Overall Braid / Individual Foil shielding, PUR Halogen Free jacket , AWM 20549

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Suitable Applications: | harsh environment, IIoT, factory or process automation, video, audio, data communication, etc. |
|------------------------|--|

Construction Details

Conductor

| Size | Stranding | Material | Number of Pairs | Number of Element |
|--------|-----------|------------------|-----------------|-------------------|
| 23 AWG | Solid | BC - Bare Copper | 4 | 8 |

Insulation

| Material | Nom. Insulation Diameter | Color Code |
|--------------------------|--------------------------|--|
| PE - Polyethylene (Foam) | 1.45 mm (0.0571 in) | White & Blue, White & Orange, White & Green, White & Brown |

Cable Core

| Description |
|-------------------------------|
| 4 pairs twisted to cable core |

Inner Shield

| Element | Shield Type | Material | Coverage |
|--------------------------|-------------|-------------------------|----------|
| Individual Shielded Pair | Tape | Bi-Laminate (Alum+Poly) | 100% |

| | |
|--------------|------------------|
| Table Notes: | Aluminum outside |
|--------------|------------------|

Outer Shield

| Shield Type | Material | Coverage |
|-------------|--------------------|----------|
| Braid | Tinned Copper (TC) | 65% |

Outer Jacket

| Material | Nom. Diameter |
|-----------------------------------|----------------|
| PUR - Polyurethane (Halogen Free) | 8 mm (0.31 in) |

| | |
|-----------------------------------|------------------------|
| Table Notes: | Flame Retardant Sheath |
| Overall Cable Diameter (Nominal): | 8 mm (0.31 in) |

Electrical Characteristics

Electricals

| Max. Conductor DCR | Max. Mutual Capacitance | Max. Capacitance Unbalance | Nom. Characteristic Impedance |
|--------------------|-------------------------|----------------------------|-------------------------------|
| 75 Ohm/km | 56 pF/m (17 pF/ft) | 160 pF/100m | 100 Ohm |

Delay

| Max. Delay Skew | Nom. Velocity of Prop. |
|-----------------|------------------------|
| 40 ns/100m | 60% |

High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | 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] |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|
| 1 | 2 dB/100m | 78 | 75 | 74 | 71 | 78 | 75 | 20 |
| 4 | 3.7 dB/100m | 78 | 75 | 74.3 | 71.3 | 78 | 75 | 23 |
| 10 | 5.9 dB/100m | 78 | 75 | 72.1 | 69.1 | 75.3 | 72.3 | 25 |
| 16 | 7.4 dB/100m | 78 | 75 | 70.6 | 67.6 | 71.2 | 68.2 | 25 |
| 31.2 | 10.4 dB/100m | 78 | 75 | 67.6 | 64.6 | 65.4 | 62.4 | 23.6 |
| 62.5 | 14.9 dB/100m | 75.5 | 72.5 | 60.6 | 57.6 | 59.4 | 56.4 | 21.5 |
| 100 | 19 dB/100m | 72.4 | 69.4 | 53.4 | 50.4 | 55.3 | 52.3 | 20.1 |
| 125 | 21.4 dB/100m | 70.9 | 67.9 | 49.6 | 46.6 | 53.4 | 50.4 | 19.4 |
| 200 | 27.5 dB/100m | 67.9 | 64.9 | 40.4 | 37.4 | 49.3 | 46.3 | 16 |
| 250 | 31 dB/100m | 66.4 | 63.4 | 35.5 | 32.5 | 47.3 | 44.3 | 17.3 |
| 300 | 34.2 dB/100m | 65.2 | 62.2 | 31.1 | 28.1 | 45.8 | 42.8 | 17.3 |
| 600 | 50.1 dB/100m | 60.7 | 57.7 | 10.6 | 7.6 | 39.7 | 36.7 | 17.3 |
| 1000 | 66.9 dB/100m | 57.4 | 54.4 | | | 35.3 | 32.3 | 15.1 |

| | |
|--------------|--|
| Table Notes: | Limits below 4 MHz are for information only.; Values at 1000 MHz are for information only. Reference standard: IEC 61156-5 |
|--------------|--|

Transfer Impedance

| Frequency | Max. Transfer Impedance |
|-----------|-------------------------|
| 1 MHz | Max. 5 mOhm/m |
| 10 MHz | Max. 5 mOhm/m |
| 30 MHz | Max. 30 mOhm/m |
| 100 MHz | 100 mOhm/m |

| | |
|---------------------------|----------------------|
| Transfer Impedance Class: | Grade 1 |
| Screening Class: | Type Ib |
| Table Notes: | Coupling Attenuation |

Voltage

| UL Voltage Rating | Voltage Rating |
|-------------------|----------------|
| 30 V RMS | 30 V AC |

Mechanical Characteristics

Temperature

| Operating | Installation | Storage |
|----------------|---------------|----------------|
| -40°C to +70°C | -5°C To +50°C | -40°C To +80°C |

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 40 mm (1.6 in) | 80 mm |

| | |
|--------------------|---------------|
| Max. Pull Tension: | 80 N (18 lbf) |
|--------------------|---------------|

Standards and Compliance

| | |
|----------------------------------|---|
| Environmental Suitability: | Indoor, Indoor, Sunlight Resistance, Oil Resistance |
| AWM Compliance: | AWM 21292 |
| IEEE Compliance: | PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4 |
| Data Category: | Category 7 |
| TIA/EIA Compliance: | ANSI/TIA 568.2-D |
| ISO/IEC Compliance: | ISO/IEC 11801-1, IEC 61034-2 - Smoke Density Min Transmittance = 60% |
| CENELEC Compliance: | EN 50173-1, Segregation class according EN50174-2 = c |
| European Halogen Free Standards: | IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3 |
| European Directive Compliance: | EU CE Mark |

History

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| Update and Revision: | Revision Number: 0.225 Revision Date: 12-20-2022 |
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Part Numbers

Variants

| Item # | Color | Putup Type | Length | EAN |
|--------|-------|------------|--------|-----|
|--------|-------|------------|--------|-----|

| | | | | |
|----------------|-------|----------|-------|---------------|
| 74004PU.01B100 | Black | Flat Box | 100 m | 8719605013248 |
| 74004PU.01305 | Black | Reel | 305 m | 8719605013224 |
| 74004PU.01500 | Black | Reel | 500 m | 8719605013231 |

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