



Product: [SPE403](#)

DataTuff Ind SPE 40m 1Gbps 100 Ohm 24AWG SFTP LSPUR

Product Description

DataTuff Industrial Single Pair Ethernet 40m 1Gbps 100 Ohm 24AWG (Stranded) Tinned Copper, PE Insulation, Overall Beldfoil®+Tinned Copper Braid(80%) Shield, LSPUR Outer Jacket

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Suitable Applications: | Noisy environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc. |
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Construction Details

Conductor

| Size | Stranding | Material | No. of Pairs |
|--------|-----------|--------------------|--------------|
| 24 AWG | Stranded | TC - Tinned Copper | 1 |

Insulation

| Material | Nom. Insulation Diameter | Color Code |
|-------------------|--------------------------|------------------------|
| PE - Polyethylene | 0.075 in (1.9 mm) | Natural & Natural/Blue |

Outer Shield

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

Outer Jacket

| Material | Nom. Diameter |
|--------------------|--------------------|
| PUR - Polyurethane | 0.217 in (5.51 mm) |

Electrical Characteristics

Electricals

| Max. Conductor DCR | Max. Capacitance Unbalance |
|--------------------|----------------------------|
| 94.2 Ohm/km | 1,600 pF/km |

Delay

| Frequency | Max. Delay | Max. Delay Skew |
|-----------|-------------|-----------------|
| 100 MHz | 538 ns/100m | 25 ns/100m |

High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. RL (Return Loss) [dB] | Min. TCL [dB] | Min. ELTCTL [dB] | Max. Surface Transfer Impedance [mOhm/m] | Min. Coupling Attenuation [dB] |
|-----------------|-----------------------------------|----------------------------|---------------|------------------|--|--------------------------------|
| 1 | 3.1 dB/100m | 20 | 40 | 40 | 50 | |
| 4 | 5.6 dB/100m | 23 | 40 | 28 | 76 | |
| 8 | 7.8 dB/100m | 24.5 | 36.5 | 21.9 | 93 | |
| 10 | 8.7 dB/100m | 25 | 35.0 | 20.0 | 100 | |
| 16 | 11 dB/100m | 25 | 31.9 | 15.9 | 135 | |
| 20 | 12.3 dB/100m | 25 | 30.5 | 14 | 155 | |

| | | | | | | |
|-----|--------------|------|------|------|-----|----|
| 25 | 13.8 dB/100m | 24.2 | 29 | 12 | 178 | |
| 30 | 15.1 dB/100m | 23.5 | 27.8 | 10.5 | 200 | 84 |
| 60 | 21.4 dB/100m | 20.9 | 23.3 | 5 | | 85 |
| 100 | 27.8 dB/100m | 19 | 20 | 5 | | 85 |
| 200 | 39.7 dB/100m | 16.4 | 15.5 | 5 | | 79 |
| 250 | 44.6 dB/100m | 15.6 | 14 | 5 | | 77 |
| 300 | 49.0 dB/100m | 14.9 | 12.8 | 5 | | 75 |
| 350 | 53.2 dB/100m | 14.3 | 11.8 | 5 | | 74 |
| 400 | 57.0 dB/100m | 13.8 | 11 | 5 | | 73 |
| 450 | 60.7 dB/100m | 13.4 | 10.2 | 5 | | 72 |
| 500 | 64.1 dB/100m | 13 | 9.5 | 5 | | 71 |
| 550 | 67.5 dB/100m | 12.6 | 8.9 | 5 | | 70 |
| 600 | 70.7 dB/100m | 12.3 | 8.3 | 5 | | 69 |

Voltage

| UL Voltage Rating | Voltage Rating |
|----------------------|----------------------|
| 300 V (UL AWM 20549) | 300 V (IEC 61156-12) |

Mechanical Characteristics

Temperature

| UL Temperature | Operating |
|----------------|----------------|
| 80°C | -40°C To +80°C |

Bend Radius

| Installation Min. |
|-------------------|
| 2.2 in (56 mm) |

| | |
|--------------------|-----------------|
| Bulk Cable Weight: | 11.5 lbs/1000ft |
|--------------------|-----------------|

Standards and Compliance

| | |
|----------------------------------|---|
| Environmental Suitability: | Indoor, Outdoor, UV Resistance, Oil Resistance |
| Flammability / Reaction to Fire: | FT2, IEC 60332-1-2 |
| AWM Compliance: | AWM 20549, AWM I A/B |
| IEEE Compliance: | IEEE 802.3bp |
| ISO/IEC Compliance: | IEC 61156-12 |
| 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, 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 |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |

Product Notes

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| Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. |
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History

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| Update and Revision: | Revision Number: 0.32 Revision Date: 05-05-2023 |
|----------------------|---|

Part Numbers

Variants

| Item # | Color | Putup Type | Length |
|----------------|-------------|------------|----------|
| SPE403 0101000 | Black | Reel | 1,000 ft |
| SPE403 0061000 | Blue, Light | Reel | 1,000 ft |
| SPE403 1NH1000 | Teal | Reel | 1,000 ft |

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