



Product: [SPE405](#)

DataTuff Ind SPE 40m 1Gbps 100 Ohm 22AWG SFTP PVC

### Product Description

DataTuff Industrial Single Pair Ethernet 40m 1Gbps 100 Ohm 22AWG (Solid) Bare Copper, Foam PE Insulation, Overall Beldfoil®+Tinned Copper Braid(80%) Shield, PVC Outer Jacket

### Technical Specifications

#### Product Overview

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

#### Construction Details

##### Conductor

| Size   | Stranding | Material         | No. of Pairs |
|--------|-----------|------------------|--------------|
| 22 AWG | Solid     | BC - Bare Copper | 1            |

##### Insulation

| Material                 | Nom. Insulation Diameter | Color Code   |
|--------------------------|--------------------------|--------------|
| PE - Polyethylene (Foam) | 0.069 in (1.8 mm)        | White & Blue |

##### Outer Shield

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

##### Outer Jacket

| Material                 | Nom. Diameter      |
|--------------------------|--------------------|
| PVC - Polyvinyl Chloride | 0.201 in (5.11 mm) |

#### Electrical Characteristics

##### Electricals

| Max. Conductor DCR | Max. Capacitance Unbalance |
|--------------------|----------------------------|
| 54.3 Ohm/km        | 1,200 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. SRL (Structural Return Loss) [dB] | Min. TCL [dB] | Min. ELCTL [dB] | Max. Surface Transfer Impedance [mOhm/m] | Min. Coupling Attenuation [dB] |
|-----------------|-----------------------------------|----------------------------|--|---------------|-----------------|--|--------------------------------|
| 1               | 2.1 dB/100m                       | 20                         |  | 40            | 40              | 50                                       |                                |
| 4               | 3.7 dB/100m                       | 23                         |  | 40            | 28              | 76                                       |                                |
| 8               | 5.2 dB/100m                       | 24.5                       |  | 36.5          | 21.9            | 93                                       |                                |
| 10              | 5.8 dB/100m                       | 25                         |  | 35.0          | 20.0            | 100                                      |                                |
| 16              | 7.3 dB/100m                       | 25                         |  | 31.9          | 15.9            | 135                                      |                                |
| 20              | 8.2 dB/100m                       | 25                         |  | 30.5          | 14              | 155                                      |                                |

|     |              |      |      |      |      |     |    |
|-----|--------------|------|------|------|------|-----|----|
| 25  | 9.2 dB/100m  | 24.3 |      | 29   | 12   | 178 |    |
| 30  | 10.1 dB/100m | 23.8 |      | 27.8 | 10.5 | 200 | 85 |
| 60  | 14.3 dB/100m | 21.7 |      | 23.3 | 5    |     | 85 |
| 100 | 18.5 dB/100m |      | 20.1 | 20   | 5    |     | 85 |
| 200 | 26.5 dB/100m | 18.0 |      | 15.5 | 5    |     | 79 |
| 250 | 29.7 dB/100m | 17.3 |      | 14   | 5    |     | 77 |
| 300 | 32.7 dB/100m | 16.8 |      | 12.8 | 5    |     | 75 |
| 350 | 35.4 dB/100m | 16.3 |      | 11.8 | 5    |     | 74 |
| 400 | 38.0 dB/100m | 15.9 |      | 11   | 5    |     | 73 |
| 450 | 40.4 dB/100m | 15.5 |      | 10.2 | 5    |     | 72 |
| 500 | 42.8 dB/100m | 15.2 |      | 9.5  | 5    |     | 71 |
| 550 | 45.0 dB/100m | 14.9 |      | 8.9  | 5    |     | 70 |
| 600 | 47.1 dB/100m | 14.7 |      | 8.3  | 5    |     | 69 |

#### Voltage

| UL Voltage Rating   | Voltage Rating       |
|---------------------|----------------------|
| 300 V (UL AWM 2095) | 300 V (IEC 61156-11) |

## Mechanical Characteristics

#### Temperature

| UL Temperature | Operating      |
|----------------|----------------|
| 80°C           | -30°C To +80°C |

#### Bend Radius

| Installation Min. |
|-------------------|
| 2 in (51 mm)      |

|                    |                 |
|--------------------|-----------------|
| Bulk Cable Weight: | 10.9 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 2095, AWM I A/B   |
| IEEE Compliance:                 | IEEE 802.3bp  |
| ISO/IEC Compliance:              | IEC 61156-11  |
| 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

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

## History

|                      |   |
|----------------------|---|
| Update and Revision: | Revision Number: 0.89 Revision Date: 01-20-2023 |
|----------------------|---|

## Part Numbers

#### Variants

| Item #         | Color       | Putup Type | Length   |
|----------------|-------------|------------|----------|
| SPE405 0101000 | Black       | Reel       | 1,000 ft |
| SPE405 0061000 | Blue, Light | Reel       | 1,000 ft |

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