

7960A Multi-Conductor - Category 5e DataTuff® Quad Cables



For more Information
please call

1-800-Belden1



General Description:

22 AWG Symmetric quad solid bare copper conductors, polyolefin insulation, FRPE bedding, industrial grade sunlight- and oil-resistant PVC jacket, rip cord. Sequential marking at two foot intervals. PROFINET Type A cable

Usage (Overall)

Suitable Applications:

Industrial Ethernet Cable, Harsh Environments, Category 5e, ProfiNet, 100BaseTX, CMX - Outdoor, PLTC Listed, Approved for Cable Tray Use in Class 1, Division 2, Hazardous Areas and Non-hazardous Areas, Cable Trays, Raceways, Conduit and Supported by Messenger Wires, Approved for Outdoor Usage

Physical Characteristics (Overall)

Conductor

AWG:

| # Conductors | AWG | Stranding | Conductor Material | Dia. (mm) |
|--------------|-----|-----------|--------------------|-----------|
| 4 | 22 | Solid | BC - Bare Copper | 0.660 |

Total Number of Conductors: 4

Insulation

Insulation Material:

| Insulation Material | Dia. (mm) |
|---------------------|-----------|
| PO - Polyolefin | 1.499 |

Inner Jacket

Inner Jacket Material:

| Inner Jacket Material | Nom. Dia. (mm) |
|-----------------------|----------------|
| FRPE | 4.166 |

Outer Shield

Outer Shield Material:

| Layer # | Outer Shield Trade Name | Type | Outer Shield Material | Coverage (%) |
|---------|-------------------------|-------|--------------------------------|--------------|
| 1 | Beldfoil® | Tape | Aluminum Foil - Polyester Tape | 100.000 |
| 2 | | Braid | | 85.000 |

Outer Jacket

Outer Jacket Material:

| Outer Jacket Material |
|-----------------------|
| Industrial Grade PVC |

Overall Cable

Overall Nominal Diameter: 6.807 mm

Pair

Pair Color Code Chart:

| Number | Color |
|--------|--------|
| 1 | White |
| 2 | Blue |
| 3 | Yellow |
| 4 | Orange |

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Mechanical Characteristics (Overall)

| | |
|-----------------------------------|----------------|
| Storage Temperature Range: | -40°C To +80°C |
| Installation Temperature Range: | -20°C To +60°C |
| Operating Temperature Range: | -40°C To +80°C |
| Bulk Cable Weight: | 60.570 Kg/Km |
| Max. Recommended Pulling Tension: | 244.651 N |
| Min. Bend Radius/Minor Axis: | 65.024 mm |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|-----------------------------|
| NEC/(UL) Specification: | CMG, CMX-Outdoor, ITC, PLTC |
| CEC/C(UL) Specification: | CMG |
| AWM Specification: | UL Style 21047 |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2004 |
| EU Directive 2002/96/EC (WEEE): | Yes |
| EU Directive 2003/11/EC (BFR): | Yes |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |
| Telecommunications Standards: | Category 5e - TIA 568.C.2 |

Flame Test

| | |
|-------------------|-----------------------------------------------|
| UL Flame Test: | UL1685 FT4/IEEE 1202 Vertical Tray Flame Test |
| C(UL) Flame Test: | FT4 |
| IEEE Flame Test: | 1202 |

Suitability

| | |
|------------------------|-----|
| Suitability - Indoor: | Yes |
| Suitability - Outdoor: | Yes |
| Sunlight Resistance: | Yes |
| Oil Resistance: | Yes |

Plenum/Non-Plenum

| | |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Electrical Characteristics (Overall)

Nom. Capacitance Conductor to Shield:

| | |
|--------------------|--------|
| Capacitance (pF/m) | 49.215 |
|--------------------|--------|

| | |
|-------------------------------------------|----|
| Maximum Capacitance Unbalance (pF/100 m): | 66 |
|-------------------------------------------|----|

Nominal Velocity of Propagation:

| | |
|--------|----|
| VP (%) | 70 |
|--------|----|

Maximum Delay:

| | |
|------------------|---------|
| Delay (ns/100 m) | 552.000 |
|------------------|---------|

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Maximum Conductor DC Resistance:

| |
|-------------------------------|
| DCR @ 20°C (Ohm/100 m) |
| 5.700 |

Max. Operating Voltage - UL:

| |
|----------------|
| Voltage |
| 300 V RMS |

Maximum DCR Unbalanced:

| |
|---------------------------------|
| DCR Unbalance @ 20°C (%) |
| 3 |

Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. ACR (dB) | Min RL (dB) |
|-------------|-----------------------------|----------------|---------------|-------------|
| 1 | 2.100 | 65.3 | 63.2 | 23.000 |
| 4 | 4.000 | 56.3 | 52.3 | 23.000 |
| 10 | 6.300 | 50.3 | 43.9 | 25.000 |
| 16 | 8.000 | 47.2 | 39.1 | 25.000 |
| 20 | 9.000 | 45.8 | 35.2 | 25.000 |
| 31.25 | 11.400 | 42.9 | 31.3 | 23.600 |
| 62.5 | 16.500 | 38.4 | 21.6 | 21.500 |
| 100 | 21.300 | 35.3 | 17.1 | 20.100 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ACRF (dB) |
|-------------|------------------------------|------------------|----------------|
| 1 | 100 ± 20.2 | 105 ± 10 | 64.0 |
| 4 | 100 ± 14.2 | 100 ± 10 | 52.0 |
| 10 | 100 ± 11.3 | 100 ± 10 | 44.0 |
| 16 | 100 ± 11.3 | 100 ± 10 | 39.9 |
| 20 | 100 ± 11.3 | 100 ± 10 | 38.0 |
| 31.25 | 100 ± 13.2 | 100 ± 10 | 34.1 |
| 62.5 | 100 ± 16.9 | 100 ± 10 | 28.1 |
| 100 | 100 ± 20.0 | 100 ± 10 | 24.0 |

Notes (Overall)

Notes: Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Limits below 4 MHz are for information only.

Notes (Cont'd.):

T568A Plug Compatible Part Number: R301601 T568B Plug Compatible Part Number: R301602

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-----------------|-------|--------------------------|
| 7960A 1SW1000 | 1,000 FT | 44.000 LB | GREEN, RAL 6018 | | PROFINET TYPE A CAT 5/5E |
| 7960A 1SW2000 | 2,000 FT | 88.000 LB | GREEN, RAL 6018 | | PROFINET TYPE A CAT 5/5E |

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