

## 7953A Multi-Conductor - Category 6 DataTuff® 600V AWM Rated Cables



For more Information  
please call

1-800-Belden1

**Description:**

23 AWG solid bare copper conductors, bonded pair polypropylene insulation, FRPE spline center member, inner PVC jacket, overall Beldfoil® Shield (100% coverage), industrial grade sunlight and oil resistant DataTuff® PVC jacket, sequential footage marking every two feet.

**Usage (Overall)****Suitable Applications:**

Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG  
ANYLAN, 155 ATM, 622 ATM, 250MHz Category 6

**Physical Characteristics (Overall)****Conductor****AWG:**

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4       | 23  | Solid     | BC - Bare Copper   |

Total Number of Conductors: 8

**Ground Wire**

Ground Wire (Y/N): N

**Insulation****Insulation Material:**

| Insulation Material | Wall Thickness (in.) | Dia. (in.) |
|---------------------|----------------------|------------|
| PP - Polypropylene  | 0.010                | 0.043      |

**Inner Jacket****Inner Jacket Material:**

| Inner Jacket Material | Nom Wall (in.) | Nom. Dia. (in.) |
|-----------------------|----------------|-----------------|
| PVC                   | 0.020          | 0.270           |

Inner Jacket Ripcord: Yes

**Outer Shield****Outer Shield Material:**

| Outer Shield Trade Name | Type | Outer Shield Material          | Coverage (%) |
|-------------------------|------|--------------------------------|--------------|
| Beldfoil®               | Tape | Aluminum Foil - Polyester Tape | 100.000      |

**Outer Shield Drain Wire AWG:**

| AWG | Stranding | Drain Wire Conductor Material |
|-----|-----------|-------------------------------|
| 24  | 7x32      | TC - Tinned Copper            |

**Outer Jacket****Outer Jacket Material:**

| Outer Jacket Trade Name | Outer Jacket Material                     | Nom. Wall Thickness (in.) |
|-------------------------|-------------------------------------------|---------------------------|
| Datatuff®               | Industrial Grade PVC - Polyvinyl Chloride | 0.030                     |

**Outer Jacket Diameter:**

| Nom. Dia. (in.) |
|-----------------|
| 0.335           |

Outer Jacket Ripcord: No

**Overall Cable****Overall Cabling Fillers:**

X-Spline Center Member

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|                           |           |
|---------------------------|-----------|
| Overall Nominal Diameter: | 0.335 in. |
|---------------------------|-----------|

**Pair****Pair Color Code Chart:**

| Number | Color                        |
|--------|------------------------------|
| 1      | White/Blue Stripe & Blue     |
| 2      | White/Orange Stripe & Orange |
| 3      | White/Green Stripe & Green   |
| 4      | White/Brown Stripe & Brown   |

**Mechanical Characteristics (Overall)**

|                                   |                 |
|-----------------------------------|-----------------|
| Storage Temperature Range:        | -40°C To +80°C  |
| Installation Temperature Range:   | -25°C To +75°C  |
| Operating Temperature Range:      | -40°C To +75°C  |
| UL Temperature Rating:            | 75°C            |
| Bulk Cable Weight:                | 44 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 40 lbs.         |
| Min. Bend Radius/Minor Axis:      | 4 in.           |

**Applicable Specifications and Agency Compliance (Overall)****Applicable Standards & Environmental Programs**

|                                       |                           |
|---------------------------------------|---------------------------|
| NEC/(UL) Specification:               | CMR, CMX-Outdoor          |
| CEC/C(UL) Specification:              | CMR                       |
| AWM Specification:                    | UL Style 21047            |
| Other Standards:                      | TIA 1005                  |
| EU CE Mark:                           | Yes                       |
| EU Directive 2000/53/EC (ELV):        | Yes                       |
| EU Directive 2002/95/EC (RoHS):       | Yes                       |
| EU RoHS Compliance Date (mm/dd/yyyy): | 10/09/2009                |
| 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 6 - TIA 568.C.2  |
| Other Specification:                  | UL Verified to Category 6 |

**Flame Test**

|                   |              |
|-------------------|--------------|
| UL Flame Test:    | UL1666 Riser |
| C(UL) Flame Test: | FT4          |
| IEEE Flame Test:  | 1202         |

**Suitability**

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

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## Plenum/Non-Plenum

Plenum (Y/N): No

## Surface Printing (Overall)

## Electrical Characteristics (Overall)

## Nom. Mutual Capacitance:

Capacitance (pF/ft)

15

Maximum Capacitance Unbalance (pF/100 m): 330

## Nominal Velocity of Propagation:

VP (%)

72

## Maximum Delay:

Delay (ns/100 m)

537 @ 100MHz

## Max. Delay Skew:

Delay Skew (ns/100 m)

45

## Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)

8.2

## Max. Operating Voltage - UL:

| Voltage   | Description               |
|-----------|---------------------------|
| 300 V RMS |                           |
| 600 V RMS | Appliance Wiring Material |

## Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)

3.000

## Electrical Characteristics-Premise (Overall)

## Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min RL (dB) | Min. SRL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|---------------|
| 1           | 2.000                       | 74.3           | 72.3             | 72.3          | 70.3            | 21.000      | na            |
| 4           | 3.800                       | 65.3           | 63.3             | 61.5          | 59.5            | 24.000      | na            |
| 8           | 5.300                       | 60.8           | 58.8             | 55.4          | 53.4            | 25.500      | na            |
| 10          | 6.000                       | 59.3           | 57.3             | 53.3          | 51.3            | 26.000      | na            |
| 16          | 7.600                       | 56.2           | 54.3             | 48.7          | 46.7            | 26.000      | na            |
| 20          | 8.500                       | 54.8           | 52.8             | 46.3          | 44.3            | 26.000      | na            |
| 25          | 9.500                       | 53.3           | 51.3             | 43.8          | 41.8            | 25.300      | na            |
| 31.25       | 10.700                      | 51.9           | 49.9             | 41.2          | 39.2            | 24.600      | na            |
| 62.5        | 15.400                      | 47.4           | 45.4             | 32.0          | 30.0            | 22.500      | na            |
| 100         | 19.800                      | 44.3           | 42.3             | 24.5          | 22.5            | 21.100      | na            |
| 155         | 25.200                      | 41.5           | 39.5             | 16.3          | 14.3            | 19.800      | na            |
| 200         | 29.000                      | 39.8           | 37.8             | 10.8          | 8.8             | 19.000      | na            |
| 250         | 32.800                      | 38.3           | 36.3             | 5.5           | 3.5             | 18.300      | na            |

## Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-------------|------------------------------|------------------|------------------|--------------------|
| 1           | 100 ± 15                     | 100 ± 15         | 67.8             | 64.8               |
| 4           | 100 ± 15                     | 100 ± 15         | 55.8             | 52.7               |
| 8           | 100 ± 15                     | 100 ± 15         | 49.7             | 46.7               |
| 10          | 100 ± 15                     | 100 ± 15         | 47.8             | 44.8               |
| 16          | 100 ± 15                     | 100 ± 15         | 43.7             | 40.7               |
| 20          | 100 ± 15                     | 100 ± 15         | 41.8             | 38.8               |
| 25          | 100 ± 15                     | 100 ± 15         | 39.8             | 36.8               |

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|       |          |          |      |      |
|-------|----------|----------|------|------|
| 31.25 | 100 ± 15 | 100 ± 15 | 37.9 | 34.9 |
| 62.5  | 100 ± 15 | 100 ± 15 | 31.9 | 28.9 |
| 100   | 100 ± 15 | 100 ± 15 | 27.8 | 24.8 |
| 155   | 100 ± 22 | 100 ± 15 | 23.9 | 20.9 |
| 200   | 100 ± 22 | 100 ± 15 | 21.8 | 18.8 |
| 250   | 100 ± 32 | 100 ± 15 | 19.8 | 16.8 |

**Notes (Overall)**

**Notes:** US Patent #'s 5, 606, 151; 5, 734, 126. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Not intended for 600 V electrical power delivery.

**Put Ups and Colors:**

| Item #        | Putup    | Ship Weight | Color | Notes | Item Desc                 |
|---------------|----------|-------------|-------|-------|---------------------------|
| 7953A 0101000 | 1,000 FT | 55.000 LB   | BLACK | C     | 4 PR #23 PO FRPO FS FRPVC |
| 7953A 0105000 | 5,000 FT | 260.000 LB  | BLACK | C     | 4 PR #23 PO FRPO FS FRPVC |

**Notes:**

C = CRATE REEL PUT-UP.

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