

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

For more Information  
please call

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### General 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

#### Insulation

**Insulation Material:**

| Insulation Material | Wall Thickness (mm) | Dia. (mm) |
|---------------------|---------------------|-----------|
| PP - Polypropylene  | 0.254               | 1.092     |

#### Inner Jacket

**Inner Jacket Material:**

| Inner Jacket Material | Nom Wall (mm) | Nom. Dia. (mm) |
|-----------------------|---------------|----------------|
| PVC                   | 0.508         | 6.858          |

**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 (mm) |
|-------------------------|---|--------------------------|
| Datatuff®               | Industrial Grade PVC - Polyvinyl Chloride | 0.762                    |

**Outer Jacket Diameter:**

| Nom. Dia. (mm) |
|----------------|
| 8.509          |

**Outer Jacket Ripcord:** No

### Overall Cable

**Overall Cabling Fillers:** X-Spline Center Member

**Overall Nominal Diameter:** 8.509 mm

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## 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:                | 65.481 Kg/Km   |
| Max. Recommended Pulling Tension: | 177.928 N      |
| Min. Bend Radius/Minor Axis:      | 101.600 mm     |

## Applicable Specifications and Agency Compliance (Overall)

## Applicable Standards &amp; Environmental Programs

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| NEC/(UL) Specification:               | CMR, CMX-Outdoor                    |
| CEC/C(UL) Specification:              | CMR                                 |
| AWM Specification:                    | UL Style 21047                      |
| EU Directive 2011/65/EU (ROHS II):    | Yes                                 |
| Other Standards:                      | ISO/IEC 11801 ed 2.1 (2008) Class E |
| 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)

Surface Printing: 7953A BELDEN VERIFIED (UL) CAT 6 4PR23 E108998-M CMR-CMX  
OUTDOOR OR C(UL) CMG----ISO/IEC11801 CAT 6 --- 300V PATENTED  
OIL/SUN RES FT4 IEEE 1202 123456 FT

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/m)

49.215

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               |

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|       |          |          |      |      |
|-------|----------|----------|------|------|
| 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 |
| 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.

**Notes (Cont'd.):** T568A Plug Compatible Part Number: R301603 T568B Plug Compatible Part Number: R301604

### Put Ups and Colors:

| Item #         | Putup     | Ship Weight | Color       | Notes | Item Desc                |
|----------------|-----------|-------------|-------------|-------|--------------------------|
| 7953A 0021000  | 1,000 FT  | 55.000 LB   | RED         | C     | 4 PR #23 PO PVC FS FRPVC |
| 7953A 0061000  | 1,000 FT  | 55.000 LB   | BLUE, LIGHT | C     | 4 PR #23 PO PVC FS FRPVC |
| 7953A 0081000  | 1,000 FT  | 55.000 LB   | GRAY        | C     | 4 PR #23 PO PVC FS FRPVC |
| 7953A 0101000  | 1,000 FT  | 55.000 LB   | BLACK       | C     | 4 PR #23 PO PVC FS FRPVC |
| 7953A 0105000  | 5,000 FT  | 260.000 LB  | BLACK       | C     | 4 PR #23 PO PVC FS FRPVC |
| 7953A 1NH1000  | 1,000 FT  | 55.000 LB   | TEAL 1NH    | C     | 4 PR #23 PO PVC FS FRPVC |
| 7953A 1NH10000 | 10,000 FT | 540.000 LB  | TEAL 1NH    |       | 4 PR #23 PO PVC FS FRPVC |

**Notes:**  
C = CRATE REEL PUT-UP.

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