# **Detailed Specifications & Technical Data**

## **ENGLISH MEASUREMENT VERSION**



## 7787A Coax - Bundled Miniature

For more Information please call

1-800-Belden1



## **Description:**

Miniature, 23 AWG solid .023" bare copper conductors, solid copper, gas-injected foam HDPE insulation, Duofoil® + tinned copper braid shield (95% coverage), overall PVC jacket.

## **Physical Characteristics (Overall)**

## Conductor

## AWG:

| # Coax | AWG | Stranding | <b>Conductor Material</b> | Dia. (in.) |
|--------|-----|-----------|---------------------------|------------|
| 3      | 23  | Solid     | BC - Bare Copper          | .023       |

#### Insulation

## Insulation Material:

| Insulation Material                                 | Dia. (in.) |
|-----------------------------------------------------|------------|
| Gas-injected FHDPE - Foam High Density Polyethylene | .102       |

## **Inner Shield**

## Inner Shield Material:

| Layer # | Inner Shield Trade Name | Type  | Inner Shield Material                      | Coverage (%) |
|---------|-------------------------|-------|--------------------------------------------|--------------|
| 1       | Duofoil®                | Tape  | Aluminum Foil-Polyester Tape-Aluminum Foil | 100          |
| 2       |                         | Braid | TC - Tinned Copper                         | 95           |

## **Inner Jacket**

## Inner Jacket Material:

| Inner Jacket Material    | Nom. Dia. (in.) |
|--------------------------|-----------------|
| PVC - Polyvinyl Chloride | .159            |

## **Inner Jacket Color Code Chart:**

| Number | Color |
|--------|-------|
| 1      | Red   |
| 2      | Green |
| 3      | Blue  |

### **Outer Jacket**

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

Outer Jacket Material
PVC - Polyvinyl Chloride

## **Overall Cabling**

Overall Nominal Diameter: 0.432 in.

| Mechanical Characteristics (Overall)   |                 |  |  |  |  |
|----------------------------------------|-----------------|--|--|--|--|
| Operating Temperature Range:           | -35°C To +75°C  |  |  |  |  |
| UL Temperature Rating:                 | 60°C            |  |  |  |  |
| Non-UL Temperature Rating:             | 75°C            |  |  |  |  |
| Bulk Cable Weight:                     | 85 lbs/1000 ft. |  |  |  |  |
| Max. Recommended Pulling Tension:      | 108 lbs.        |  |  |  |  |
| Min. Bend Radius (Install)/Minor Axis: | 4.500 in.       |  |  |  |  |

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| A 11    | Applicable Openifications and Approx. Compliance (Openall) |                       |  |  |  |  |  |
|---------|------------------------------------------------------------|-----------------------|--|--|--|--|--|
|         | Applicable Specifications and Agency Compliance (Overall)  |                       |  |  |  |  |  |
| Applica | plicable Standards & Environmental Programs                |                       |  |  |  |  |  |
| NE      | C/(UL) Specification:                                      | CMR                   |  |  |  |  |  |
| CE      | C/C(UL) Specification:                                     | CMG                   |  |  |  |  |  |
| 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):                         | 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                   |  |  |  |  |  |
| RG      | Type:                                                      | Mini                  |  |  |  |  |  |
| Flame   | Test                                                       |                       |  |  |  |  |  |
| UL      | Flame Test:                                                | UL1666 Vertical Shaft |  |  |  |  |  |
| Suitabi | ility                                                      |                       |  |  |  |  |  |
| Sui     | tability - Indoor:                                         | Yes                   |  |  |  |  |  |
| Sui     | tability - Outdoor:                                        | Yes                   |  |  |  |  |  |
| Plenun  | n/Non-Plenum                                               |                       |  |  |  |  |  |
| Ple     | num (Y/N):                                                 | No                    |  |  |  |  |  |
|         |                                                            |                       |  |  |  |  |  |

## **Electrical Characteristics (Overall)**

Nom. Characteristic Impedance:

| Impedance (Ohm) | Tolerance (Ohms) |
|-----------------|------------------|
| 75              | ± 3              |

Nom. Inductance:

Inductance (µH/ft) 0.106

Nom. Capacitance Conductor to Shield:



Nominal Velocity of Propagation:



Nominal Delay:



Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft) 20.1

Nom. Inner Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft) 7.6

Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 1           | 0.4                      |
| 3.6         | 0.8                      |
| 10          | 1.2                      |

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| 71.5 | 3.1  |
|------|------|
| 135  | 3.8  |
| 270  | 5.4  |
| 360  | 6.2  |
| 540  | 7.7  |
| 720  | 9.1  |
| 750  | 9.5  |
| 1000 | 10.5 |
| 1500 | 13.0 |
| 2500 | 16.9 |
| 3000 | 18.5 |

#### Max. Operating Voltage - UL:

Voltage 300 V RMS

Other Electrical Characteristic 1: Impedance tested in accordance with ASTM D-4566 paragraph 43.2, option 2

using a 75 Ohm fixed bridge and termination.

Other Electrical Characteristic 2: Return Loss Tested in Accordance With ASTM D-4566 Paragraph 45.3, Using

a 75 Ohm Fixed Bridge and Termination.

#### Minimum Return Loss:

| Start Freq. (MHz) | Stop Freq. (MHz) | Min. RL (dB) |
|-------------------|------------------|--------------|
| 5                 | 850              | 23           |
| 851               | 3000             | 15           |

#### **Sweep Test**

Sweep Testing: Sweep tested 5 MHz to 3 GHz.

## **Put Ups and Colors:**

| Item #        | Putup    | Ship Weight | Color        | Notes | Item Desc                   |
|---------------|----------|-------------|--------------|-------|-----------------------------|
| 7787A B591000 | 1,000 FT | 94.000 LB   | BLACK, MATTE | С     | 3 #23 PE/GIFHDPE SH PVC PVC |
| 7787A B59500  | 500 FT   | 47.500 LB   | BLACK, MATTE | С     | 3 #23 PE/GIFHDPE SH PVC PVC |

#### Notes:

C = CRATE REEL PUT-UP.

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