

## 7731A Coax - Low Loss Serial Digital Coax

For more Information  
please call

1-800-Belden1



### Description:

RG-11/U type, 14 AWG solid .064" bare copper conductor, gas-injected foam HDPE insulation, Duofoil® + tinned copper braid shield (95% coverage), PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

AWG:

| # Coax | AWG | Stranding | Conductor Material | Dia. (mm) |
|--------|-----|-----------|--------------------|-----------|
| 1      | 14  | Solid     | BC - Bare Copper   | 1.6256    |

#### Insulation

Insulation Material:

| Insulation Material                                 | Dia. (mm) |
|---|-----------|
| Gas-injected FHDPE - Foam High Density Polyethylene | 7.112     |

#### Outer Shield

Outer Shield Material:

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

#### Outer Jacket

Outer Jacket Material:

| Outer Jacket Material    |
|--------------------------|
| PVC - Polyvinyl Chloride |

#### Overall Cabling

Overall Nominal Diameter: 10.160 mm

### Mechanical Characteristics (Overall)

Operating Temperature Range: -30°C To +75°C

UL Temperature Rating: 75°C

Bulk Cable Weight: 148.820 Kg/Km

Max. Recommended Pulling Tension: 644.989 N

Min. Bend Radius (Install)/Minor Axis: 101.600 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/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

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EU Directive 2003/11/EC (BFR): Yes

CA Prop 65 (CJ for Wire & Cable): Yes

MII Order #39 (China RoHS): Yes

RG Type: 11/U

### Flame Test

UL Flame Test: UL1666 Vertical Shaft

### Suitability

Suitability - Indoor: Yes

Suitability - Outdoor: Yes - Black only.

Suitability - Aerial: Yes - Black only, when supported by a messenger wire

### Plenum/Non-Plenum

Plenum (Y/N): No

Plenum Number: 7732A

## Electrical Characteristics (Overall)

### Nom. Characteristic Impedance:

Impedance (Ohm)

75

### Nom. Inductance:

Inductance (µH/m)

0.318257

### Nom. Capacitance Conductor to Shield:

Capacitance (pF/m)

52.496

### Nominal Velocity of Propagation:

VP (%)

85

### Nominal Delay:

Delay (ns/m)

3.97001

### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)

8.2025

### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)

4.9215

### Nom. Attenuation:

Freq. (MHz) Attenuation (dB/100m)

|      |         |
|------|---------|
| 1    | 0.52496 |
| 3.58 | 0.95149 |
| 5    | 1.11554 |
| 7    | 1.27959 |
| 10   | 1.50926 |
| 67.5 | 3.44505 |
| 71.5 | 3.57629 |
| 88.5 | 3.97001 |
| 100  | 4.19968 |
| 135  | 4.82307 |
| 143  | 4.95431 |
| 180  | 5.54489 |
| 270  | 6.85729 |
| 360  | 8.03845 |

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|      |         |
|------|---------|
| 540  | 10.0399 |
| 720  | 11.746  |
| 750  | 12.0085 |
| 1000 | 14.1083 |
| 1500 | 18.0455 |
| 2000 | 20.9984 |
| 2250 | 22.6389 |
| 3000 | 26.9042 |
| 4500 | 34.1224 |

**Max. Operating Voltage - UL:**

|                |
|----------------|
| <b>Voltage</b> |
| 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           |
| 850               | 3000             | 21           |

**Sweep Test**

**Sweep Testing:** 100% Sweep tested 5 MHz to 3 GHz.

### Put Ups and Colors:

| Item #        | Putup    | Ship Weight | Color                        | Notes | Item Desc                  |
|---------------|----------|-------------|------------------------------|-------|----------------------------|
| 7731A N3U1000 | 305 MT   | 43.091 KG   | NATURAL & YELLOW W/BLUE TAPE | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A N3U4000 | 1,219 MT | 175.995 KG  | NATURAL & YELLOW W/BLUE TAPE | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0011000 | 305 MT   | 43.091 KG   | BROWN                        |       | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0014000 | 1,219 MT | 175.995 KG  | BROWN                        | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0021000 | 305 MT   | 43.091 KG   | RED                          | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0024000 | 1,219 MT | 175.995 KG  | RED                          | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0031000 | 305 MT   | 43.091 KG   | ORANGE                       |       | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0034000 | 1,219 MT | 175.995 KG  | ORANGE                       | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0041000 | 305 MT   | 43.091 KG   | YELLOW                       |       | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0044000 | 1,219 MT | 175.995 KG  | YELLOW                       | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0061000 | 305 MT   | 43.091 KG   | BLUE, LIGHT                  |       | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0064000 | 1,219 MT | 175.995 KG  | BLUE, LIGHT                  | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0071000 | 305 MT   | 43.091 KG   | VIOLET                       | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0074000 | 1,219 MT | 175.995 KG  | VIOLET                       | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0081000 | 305 MT   | 43.091 KG   | GRAY                         |       | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0084000 | 1,219 MT | 175.995 KG  | GRAY                         | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0091000 | 305 MT   | 43.091 KG   | WHITE                        |       | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0094000 | 1,219 MT | 175.995 KG  | WHITE                        | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0101000 | 305 MT   | 43.091 KG   | BLACK                        | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 0104000 | 1,219 MT | 175.995 KG  | BLACK                        | C     | #14 PE/GIFHDL DPE SH FRPVC |
| 7731A 010500  | 152 MT   | 21.092 KG   | BLACK                        | C     | #14 PE/GIFHDL DPE SH FRPVC |

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

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