

## 7731A Coax - Low Loss Serial Digital Coax



For more Information  
please call

1-800-Belden1

**General 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.

**Usage (Overall)**

Suitable Applications:

SMPTE 2081-1 6 Gb/s UHDTV, SMPTE 424M 3 Gb/s HD-SDI 1080p

**Physical Characteristics (Overall)****Conductor**

AWG:

| # Coax | AWG | Stranding | Conductor Material | Dia. (in.) |
|--------|-----|-----------|--------------------|------------|
| 1      | 14  | Solid     | BC - Bare Copper   | .064       |

Total Number of Conductors:

1

**Insulation**

Insulation Material:

| Insulation Material                                 | Dia. (in.) |
|-----------------------------------------------------|------------|
| Gas-injected FHDPE - Foam High Density Polyethylene | .280       |

**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 Cable**

Overall Nominal Diameter:

0.400 in.

**Mechanical Characteristics (Overall)**

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

Bulk Cable Weight: 87 lbs/1000 ft.

Max. Recommended Pulling Tension: 145 lbs.

Min. Bend Radius/Minor Axis: 4 in.

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

NEC/(UL) Specification: CMR

CEC/(UL) Specification: CMG

EU Directive 2011/65/EU (RoHS II): Yes

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

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|                        |                                                     |
|------------------------|-----------------------------------------------------|
| RG Type:               | 11/U                                                |
| Flame Test             |                                                     |
| UL Flame Test:         | UL1666 Vertical Shaft                               |
| CSA Flame Test:        | FT4                                                 |
| Suitability            |                                                     |
| Suitability - Indoor:  | Yes                                                 |
| Suitability - Outdoor: | Yes - Black only.                                   |
| Suitability - Aerial:  | Yes - Black only, when supported by messenger wire. |
| Suitability - Burial:  | No                                                  |
| Plenum/Non-Plenum      |                                                     |
| Plenum (Y/N):          | No                                                  |
| Plenum Number:         | 7732A                                               |

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

|                 |
|-----------------|
| Impedance (Ohm) |
| 75              |

Nom. Inductance:

|                    |
|--------------------|
| Inductance (µH/ft) |
| 0.097              |

Nom. Capacitance Conductor to Shield:

|                     |
|---------------------|
| Capacitance (pF/ft) |
| 16.0                |

Nominal Velocity of Propagation:

|        |
|--------|
| VP (%) |
| 85     |

Nominal Delay:

|               |
|---------------|
| Delay (ns/ft) |
| 1.21          |

Nom. Conductor DC Resistance:

|                          |
|--------------------------|
| DCR @ 20°C (Ohm/1000 ft) |
| 2.5                      |

Nominal Outer Shield DC Resistance:

|                          |
|--------------------------|
| DCR @ 20°C (Ohm/1000 ft) |
| 1.5                      |

Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 1.000       | 0.160                    |
| 3.580       | 0.290                    |
| 5.000       | 0.340                    |
| 7.000       | 0.390                    |
| 10.000      | 0.460                    |
| 67.500      | 1.050                    |
| 71.500      | 1.090                    |
| 88.500      | 1.210                    |
| 100.000     | 1.280                    |
| 135.000     | 1.470                    |
| 143.000     | 1.510                    |
| 180.000     | 1.690                    |
| 270.000     | 2.090                    |
| 360.000     | 2.450                    |
| 540.000     | 3.060                    |
| 720.000     | 3.580                    |
| 750.000     | 3.660                    |
| 800.000     | 3.790                    |
| 1000.000    | 4.300                    |
| 1500.000    | 5.500                    |
| 2000.000    | 6.400                    |
| 2250.000    | 6.900                    |
| 3000.000    | 8.200                    |
| 4500.000    | 10.400                   |
| 6000.000    | 11.000                   |

## 7731A Coax - Low Loss Serial Digital Coax

## Max. Operating Voltage - UL:

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

## Other Electrical Characteristic 1:

TDR Impedance: 75 +/- 3 Ohms

## Other Electrical Characteristic 2:

Return Loss: Fixed bridge and termination.

## Minimum Return Loss:

| Start Freq. (MHz) | Stop Freq. (MHz) | Min. RL (dB) |
|-------------------|------------------|--------------|
| 5.000             | 1600.000         | 23.000       |
| 1600.000          | 4500.000         | 21.000       |
| 4500.000          | 6000.000         | 15.000       |

## Sweep Test

## Sweep Testing:

100#37; Sweep tested 5 MHz to 6 GHz.

## Put Ups and Colors:

| Item #        | Putup    | Ship Weight | Color       | Notes | Item Desc                |
|---------------|----------|-------------|-------------|-------|--------------------------|
| 7731A N3U1000 | 1,000 FT | 92.000 LB   | GREEN, MIL  | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A N3U4000 | 4,000 FT | 376.000 LB  | GREEN, MIL  | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0011000 | 1,000 FT | 92.000 LB   | BROWN       |       | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0014000 | 4,000 FT | 376.000 LB  | BROWN       | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0021000 | 1,000 FT | 92.000 LB   | RED         | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0024000 | 4,000 FT | 376.000 LB  | RED         | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0031000 | 1,000 FT | 92.000 LB   | ORANGE      |       | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0034000 | 4,000 FT | 376.000 LB  | ORANGE      | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0041000 | 1,000 FT | 92.000 LB   | YELLOW      |       | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0044000 | 4,000 FT | 376.000 LB  | YELLOW      | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0061000 | 1,000 FT | 92.000 LB   | BLUE, LIGHT |       | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0064000 | 4,000 FT | 376.000 LB  | BLUE, LIGHT | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0071000 | 1,000 FT | 92.000 LB   | VIOLET      | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0074000 | 4,000 FT | 376.000 LB  | VIOLET      | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0081000 | 1,000 FT | 92.000 LB   | GRAY        |       | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0084000 | 4,000 FT | 376.000 LB  | GRAY        | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0091000 | 1,000 FT | 92.000 LB   | WHITE       |       | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0094000 | 4,000 FT | 376.000 LB  | WHITE       | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0101000 | 1,000 FT | 92.000 LB   | BLACK       | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 0104000 | 4,000 FT | 376.000 LB  | BLACK       | C     | #14 PE/GIFHDLDP SH FRPVC |
| 7731A 010500  | 500 FT   | 46.500 LB   | BLACK       | C     | #14 PE/GIFHDLDP SH FRPVC |

## Notes:

C = CRATE REEL PUT-UP.

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