Detailed Specifications & Technical Data



ENGLISH MEASUREMENT VERSION

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.

| Physical Characteristics (Overall) | • |
|--|-----------------|
| Physical Characteristics (Overall) Conductor | |
| AWG: | |
| # Coax AWG Stranding Conductor Material Dia. (in.) 1 14 Solid BC - Bare Copper .064 | |
| 1 14 Solid BC - Bare Copper .064 | |
| Total Number of Conductors: | 1 |
| Insulation | |
| Insulation Material: Insulation Material Dia. (in | a |
| Gas-injected FHDPE - Foam High Density Polyethylene .280 | |
| Outer Shield | |
| Outer Shield Material: | |
| Layer # Outer Shield Trade Name Type Outer Shield Materi | |
| 1 Duofoil® Tape Aluminum Foil-Polye 2 Braid TC - Tinned Copper | |
| | |
| 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 | |
| Applicable Specifications and Agency compliance Applicable Standards & Environmental Programs | (Overall) |
| NEC/(UL) Specification: | CMR |
| CEC/C(UL) Specification: | СМС |
| 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 |
| RG Type: | 11/U |
| | |

Flame Test

UL Flame Test:

UL1666 Vertical Shaft

Detailed Specifications & Technical Data





7731A Coax - Low Loss Serial Digital Coax

| iitability | | | |
|--|---|-----|---|
| | / | | |
| Suitab | pility - Indoor: | Ye | s |
| Suitab | pility - Outdoor: | Ye | s - Black only. |
| | bility - Aerial: | | s - Black only, when supported by messenger wire. |
| | | | |
| | oility - Burial: | No | |
| | Ion-Plenum | | |
| Plenur | m (Y/N): | No | |
| Plenur | m Number: | 77: | 32A |
| | | | |
| ectrical | I Characteristics (Overall) acteristic Impedance: | | |
| | nce (Ohm) | | |
| 75 | | | |
| om. Induc | tanco: | | |
| | nce (µH/ft) | | |
| 0.097 | | | |
| | citance Conductor to Shield: | | |
| • | ance (pF/ft) | | |
| 16.0 | | | |
| | | | |
| | elocity of Propagation: | | |
| VP (%) 85 | | | |
| | | | |
| ominal De | - | | |
| Delay (n | is/ft) | | |
| 1.21 | | | |
| 2.5 ominal Ou | uter Shield DC Resistance: | | |
| ominal Ou | uter Shield DC Resistance: 20°C (Ohm/1000 ft) | | |
| ominal Ou DCR @ 3 | 20°C (Ohm/1000 ft) | | |
| ominal Ou DCR @ 2 1.5 om. Atten | 20°C (Ohm/1000 ft) | | |
| ominal Ou DCR @ 2 1.5 om. Atten | 20°C (Ohm/1000 ft) uation: | | |
| ominal Ou DCR @ 3 1.5 om. Atten Freq. (M | 20°C (Ohm/1000 ft) nuation: IHz) Attenuation (dB/100 ft.) | | |
| ominal Ou DCR @ 2 1.5 om. Atten Freq. (M 1 3.58 5 | 20°C (Ohm/1000 ft) nuation: IHz) Attenuation (dB/100 ft.) 0.16 | | |
| ominal Ou DCR @ 2 1.5 om. Atten Freq. (M 1 3.58 5 7 | 20°C (Ohm/1000 ft) inuation: IHz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 | | |
| ominal OL DCR @ : 1.5 oom. Atten 7 10 17 10 | 20°C (Ohm/1000 ft) nuation: IHz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 0.46 | | |
| ominal OL DCR @ 2 1.5 om. Atten 1 3.58 5 7 10 67.5 | 20°C (Ohm/1000 ft) nuation: IHZ) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 | | |
| ominal Ou DCR @ 7 1.5 om. Atten 7 10 67.5 71.5 | 20°C (Ohm/1000 ft) nuation: IHZ) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 | | |
| ominal Ou DCR @ 7 1.5 om. Atten 1 3.58 5 7 10 67.5 71.5 88.5 | 20°C (Ohm/1000 ft) nuation: IHZ) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 | | |
| ominal Ou DCR @ 7 1.5 T.5 Treq. (M 1 3.58 5 7 10 67.5 71.5 88.5 100 | 20°C (Ohm/1000 ft) nuation: IHz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 | | |
| ominal Ou DCR @ 7 1.5 om. Atten 1 3.58 5 7 10 67.5 71.5 88.5 | 20°C (Ohm/1000 ft) nuation: IHZ) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 | | |
| ominal Ou DCR @ 7 1.5 00. Atten 7 10 67.5 71.5 88.5 100 135 | 20°C (Ohm/1000 ft) mutation: IHz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 | | |
| ominal OL DCR @ 2 1.5 T.5 T.5 T.5 T.5 T.5 T.5 88.5 T.10 67.5 T.5 88.5 T.00 T.35 T.5 88.5 T.00 T.35 T.5 T.5 T.5 T.5 T.5 T.5 T.5 T.5 T.5 T. | 20°C (Ohm/1000 ft) utation: IHz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 | | |
| ominal Ou DCR @ : 1.5 Teq. (M 1 3.58 5 7 10 67.5 71.5 88.5 100 135 143 180 | 20°C (Ohm/1000 ft) utation: IHz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 | | |
| ominal Ou DCR @ : 1.5 om. Atten 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 135 143 180 270 360 540 | 20°C (Ohm/1000 ft) suation: IHz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 | | |
| ominal Ou DCR @ : 1.5 om. Atten 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 135 143 180 270 360 540 720 | 20°C (Ohm/1000 ft) Huation: Hz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 | | |
| ominal Ou DCR @ : 1.5 om. Atten 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 135 143 180 270 360 540 720 750 | 20°C (Ohm/1000 ft) suation: IHz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 3.66 | | |
| ominal Ou DCR @ : 1.5 om. Atten 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 135 143 180 270 360 540 720 750 1000 | 20°C (Ohm/1000 ft) Huation: Hz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 3.66 4.30 | | |
| ominal Ou DCR @ : 1.5 om. Atten 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 135 143 180 270 360 540 720 750 1000 1500 | 20°C (Ohm/1000 ft) HIII Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 3.66 4.30 5.50 | | |
| ominal Ou DCR @ : 1.5 om. Atten 1 3.58 5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 135 143 180 270 360 540 720 750 1000 1500 2000 | 20°C (Ohm/1000 ft) HIII Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 3.66 4.30 5.50 6.40 | | |
| ominal Ou DCR @ : 1.5 orn. Atten 1 3.58 5 7 10 67.5 7 10 67.5 7 7 10 67.5 7 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 10 10 10 10 10 10 10 10 10 10 10 | 20°C (Ohm/1000 ft) Huation: Hz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 3.66 4.30 5.50 6.40 6.90 | | |
| ominal Ou DCR @ : 1.5 orn. Atten 1 3.58 5 7 10 67.5 7 1.5 88.5 100 135 143 143 143 143 143 143 143 143 143 143 | 20°C (Ohm/1000 ft) Huation: Hz) Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 3.66 4.30 5.50 6.40 6.90 8.20 | | |
| ominal Ou DCR @ : 1.5 om. Atten 1 3.58 5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 7 10 67.5 7 7 10 67.5 7 7 10 67.5 7 7 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 10 10 10 10 10 10 10 10 10 10 10 | 20°C (Ohm/1000 ft) HIII Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 3.66 4.30 5.50 6.40 6.90 8.20 10.40 | | |
| ominal Ou DCR @ : 1.5 om. Atten 1 3.58 5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 10 67.5 7 7 10 67.5 7 7 10 67.5 7 7 10 67.5 7 7 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 67.5 7 7 10 10 10 10 10 10 10 10 10 10 10 10 10 | 20°C (Ohm/1000 ft) HIZ Attenuation (dB/100 ft.) 0.16 0.29 0.34 0.39 0.46 1.05 1.09 1.21 1.21 1.28 1.47 1.51 1.69 2.09 2.45 3.06 3.58 3.66 4.30 5.50 6.40 6.90 8.20 10.40 ttig Voltage - UL: | | |

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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

Minimum Return Loss:

| Start Freq. (MHz) | Stop Freq. (MHz) | Min. RL (dB) |
|-------------------|------------------|--------------|
| 5.000 | 1600.000 | 23.000 |
| 1601.000 | 4500.000 | 21.000 |

| | 1601.000 | 4500.000 | 21.000 |
|----|-----------|----------|--------|
| Sv | veep Test | | |

Sweep Testing:

100% Sweep tested 5 MHz to 4.5 GHz.

termination.

Put Ups and Colors:

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

Notes:

C = CRATE REEL PUT-UP

Revision Number: 6 Revision Date: 03-11-2015

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product. Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.