

# Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

**BELDEN**  
SENDING ALL THE RIGHT SIGNALS

9815 Twinax - 100 Ohm Twinax



For more Information  
please call

1-800-Belden1



## Description:

100 ohm, 20 AWG stranded (7x28) .037" one tinned/ one bare copper conductors, polyethylene insulation, Duofoil® + TC braid shield (95% coverage), high-density polyethylene jacket.

## Physical Characteristics (Overall)

### Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 1       | 20  | 7x28      | TC - Tinned Copper |
|         |     |           | BC - Bare Copper   |

Total Number of Conductors:

2

### Insulation

Insulation Material:

| Insulation Material |
|---------------------|
| PE - Polyethylene   |

### Inner Jacket

Inner Jacket Material:

| Inner Jacket Material | Nom. Dia. (in.) |
|-----------------------|-----------------|
| PE - Polyethylene     | .236            |

### 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 Shield Flooding Grease:

Polyethylene Grease

### Outer Jacket

Outer Jacket Material:

| Outer Jacket Material            |
|----------------------------------|
| HDPE - High Density Polyethylene |

### Overall Cable

Overall Nominal Diameter:

0.330 in.

### Pair

Pair Color Code Chart:

| Number | Color             |
|--------|-------------------|
| 1      | Natural & Natural |

## Mechanical Characteristics (Overall)

Operating Temperature Range:

-55°C To +80°C

Bulk Cable Weight:

60.500 lbs/1000 ft.

Max. Recommended Pulling Tension:

115 lbs.

Min. Bend Radius/Minor Axis:

3.500 in.

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

|                                       |            |
|---------------------------------------|------------|
| 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        |

### Suitability

|                       |     |
|-----------------------|-----|
| Suitability - Burial: | Yes |
|-----------------------|-----|

### Plenum/Non-Plenum

|               |    |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

## Electrical Characteristics (Overall)

### Nom. Characteristic Impedance:

|                 |
|-----------------|
| Impedance (Ohm) |
| 100             |

### Nom. Inductance:

|                          |
|--------------------------|
| Inductance ( $\mu$ H/ft) |
| 0.155                    |

### Nom. Capacitance Conductor to Conductor:

|                     |
|---------------------|
| Capacitance (pF/ft) |
| 14.5                |

### Nom. Capacitance Cond. to Other Conductor & Shield:

|                     |
|---------------------|
| Capacitance (pF/ft) |
| 23.0                |

### Nominal Velocity of Propagation:

|        |
|--------|
| VP (%) |
| 66     |

### Nominal Delay:

|               |
|---------------|
| Delay (ns/ft) |
| 1.54          |

### Nom. Conductor DC Resistance:

|                          |
|--------------------------|
| DCR @ 20°C (Ohm/1000 ft) |
| 9.5                      |

### Nominal Outer Shield DC Resistance:

|                          |
|--------------------------|
| DCR @ 20°C (Ohm/1000 ft) |
| 2                        |

### Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 1           | 0.4                      |
| 10          | 1.1                      |
| 50          | 2.5                      |
| 100         | 4.1                      |
| 200         | 6.4                      |
| 400         | 10.2                     |

### Max. Operating Voltage - Non-UL:

|         |
|---------|
| Voltage |
|---------|

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600 V RMS

## Put Ups and Colors:

| Item #       | Putup    | Ship Weight | Color | Notes | Item Desc              |
|--------------|----------|-------------|-------|-------|------------------------|
| 9815 0101000 | 1,000 FT | 69.000 LB   | BLACK | C     | TW PR #20 PE PE BRD PE |
| 9815 010500  | 500 FT   | 34.500 LB   | BLACK |       | TW PR #20 PE PE BRD PE |

**Notes:**

C = CRATE REEL PUT-UP.

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