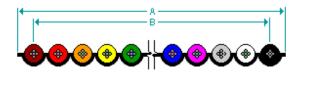
# **Detailed Specifications & Technical Data**



ENGLISH MEASUREMENT VERSION

## 9R28010 Flat - Rainbow 9R280XX Series



For more Information please call

1-800-Belden1



## **General Description:**

Belden<sup>s</sup> .050" pitch, color-coded PVC flat cable allows for quick identification and circuit tracing, along with easy breakouts for circuit routing, and is designed for mass-termination with standard IDC connectors.

| <b>y</b>                                      | 5                      |
|---|------------------------|
| Physical Characteristics (Overall)            |                        |
| Conductor                                     |                        |
| AWG:  |                        |
| # Conductors AWG Stranding Conductor Material |                        |
| 10 28 7x36 TC - Tinned Copper                 |                        |
| Total Number of Conductors:                   | 10                     |
| Conductor Spacing Center to Center:           | .050                   |
| Insulation<br>Insulation Material:            |                        |
| Insulation Material Wall Thickness (in.)      |                        |
| PVC - Polyvinyl Chloride 0.010                |                        |
| Insulation Resistance:                        | >10,000 Mega Ohms      |
| Insulation Color Code Chart:                  |                        |
| Number Color                                  |                        |
| 1 Brown                                       |                        |
| 2 Red   |                        |
| 3 Orange                                      |                        |
| 4 Yellow                                      |                        |
| 5 Green                                       |                        |
| 6 Blue  |                        |
| 7 Purple                                      |                        |
| 8 Gray<br>9 White                             |                        |
| 9 White<br>10 Black                           |                        |
|   |                        |
| Outer Shield                                  |                        |
| Outer Shield Material:                        |                        |
| Outer Shield Material<br>Unshielded           |                        |
| Outer Jacket                                  |                        |
| Outer Jacket Material:                        |                        |
| Outer Jacket Material                         |                        |
| Clear PVC                                     |                        |
| Overall Cable                                 |                        |
| Overall Nominal Thickness:                    | .036                   |
| Overall Nominal Width:                        | .50                    |
| Mechanical Characteristics (Overall)          |                        |
| Operating Temperature Range:                  | -20°C To +105°C        |
|   | ·····                  |
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# **Detailed Specifications & Technical Data**



# ENGLISH MEASUREMENT VERSION

50 60

9.8 12

## 9R28010 Flat - Rainbow 9R280XX Series

| Bulk Cable Weight:  | 12 lbs/1000 ft.   |
|---|-------------------|
| Min. Bend Radius/Minor Axis:  | 0.500 in.         |
| Applicable Specifications and Agency Com                                    | pliance (Overall) |
| Applicable Standards & Environmental Program                                | ns                |
| UL Rating:  | AWM 20932         |
| 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):                                       | 10/01/2005        |
| 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               |
| Flame Test  |                   |
| UL Flame Test:  | VW-1              |
| Plenum/Non-Plenum   |                   |
| Plenum (Y/N):   | No                |
| Electrical Characteristics (Overall)  |                   |
| Nom. Characteristic Impedance:  |                   |
| Description Impedance (Ohm)   |                   |
| (GS) 150<br>(GSG) 105   |                   |
| Nom. Inductance:  |                   |
| Description Inductance (µH/ft)  |                   |
| @ 1 MHz (GS) .29  |                   |
| @ 1 MHz (GSG) .20   |                   |
| Nom. Capacitance Conductor to Conductor:<br>Description Capacitance (pF/ft) |                   |
| @ 1 kHz (GSG) 18  |                   |
| @ 1 MHz (GS) 10   |                   |
| @ 1 MHz (GSG) 15  |                   |
| Nominal Velocity of Propagation:<br>Description VP (%)                      |                   |
| 72  |                   |
| Nominal Delay:  |                   |
| Delay (ns/ft)<br>1.40 NS/FT. (GSG)  |                   |
| Nom. Conductor DC Resistance:   |                   |
| DCR @ 20°C (Ohm/1000 ft)<br>68.2 OHMS/1000 FT. MAX.                         |                   |
| Nom. Attenuation:   |                   |
| Freq. (MHz) Attenuation (dB/100 ft.)  |                   |
| 10 2.8  |                   |
| 20 4.8<br>30 6.5  |                   |
| 40 8.3  |                   |

# **Detailed Specifications & Technical Data**



#### ENGLISH MEASUREMENT VERSION

#### 9R28010 Flat - Rainbow 9R280XX Series

| 70  | 13   |  |
|-----|------|--|
| 80  | 14   |  |
| 90  | 15.8 |  |
| 100 | 17   |  |

Max. Operating Voltage - UL:

Voltage 300 V RMS

Max. Recommended Current:

| Current                    |
|----------------------------|
| 1 Amp per conductor @ 20°C |

#### Dielectric Withstand Voltage:

2,000 V RMS

#### Typical Unbalanced Crosstalk:

| Description          | Pulse Rise Time (NS) (MHz) | Near End % (MHz) | Far End % (MHz) |
|----------------------|----------------------------|------------------|-----------------|
| 10 ft. sample length | 3                          | 4.8              | 7               |
| 10 ft. sample length | 5                          | 3.5              | 4.7             |
| 10 ft. sample length | 7                          | 3                | 3               |

#### Notes (Overall)

Notes: GS=Ground-Signal Mode; GSG=Ground-Signal-Ground Mode

#### Put Ups and Colors:

| ltem #         | Putup  | Ship Weight | Color | Notes | Item Desc          |
|----------------|--------|-------------|-------|-------|--------------------|
| 9R28010 000100 | 100 FT | 6.600 LB    | NONE  |       | 10 #28 PVC RAINBOW |

Revision Number: 3 Revision Date: 10-02-2012

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