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1-800-Belden1



## General Description:

Belden's .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.

## Physical Characteristics (Overall)

### Conductor

#### AWG:

# Conductors	AWG	Stranding	Conductor Material
20	28	7x36	TC - Tinned Copper

Total Number of Conductors: 20

Conductor Spacing Center to Center: .050

### Insulation

#### Insulation Material:

Insulation Material	Wall Thickness (mm)
PVC - Polyvinyl Chloride	0.254

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
9	White
10	Black
Over 10 conductors	Repeat as required

### Outer Shield

#### Outer Shield Material:

Outer Shield Material
Unshielded

### Overall Cable

Overall Nominal Thickness: .036

Overall Nominal Width: 1.00

## Mechanical Characteristics (Overall)

Operating Temperature Range: -20°C To +105°C

Bulk Cable Weight: 35.717 Kg/Km

Min. Bend Radius/Minor Axis: 12.700 mm

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

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
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### Plenum/Non-Plenum

Plenum (Y/N):	No
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## Electrical Characteristics (Overall)

### Nom. Characteristic Impedance:

Description	Impedance (Ohm)
(GS)	150
(GSG)	105

### Nom. Inductance:

Description	Inductance (µH/m)
@ 1 MHz (GS)	0.95149
@ 1 MHz (GSG)	0.6562

### Nom. Capacitance Conductor to Conductor:

Description	Capacitance (pF/m)
@ 1 kHz (GSG)	59.058
@ 1 MHz (GS)	32.81
@ 1 MHz (GSG)	49.215

### Nominal Velocity of Propagation:

Description	VP (%)
	72

### Nominal Delay:

Delay (ns/m)
1.40 NS/FT. (GSG)

### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)
68.2 OHMS/1000 FT. MAX.

### Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
10	9.1868
20	15.7488
30	21.3265
40	27.2323
50	32.1538
60	39.372
70	42.653
80	45.934

METRIC MEASUREMENT VERSION

9R28020 Flat - Rainbow 9R280XX Series

90	51.8398
100	55.777

**Max. Operating Voltage - UL:**

<b>Voltage</b>
300 V RMS

**Max. Recommended Current:**

<b>Current</b>
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:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9R28020 000100	100 FT	2.600 LB	NONE		20 #28 PVC RAINBOW

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