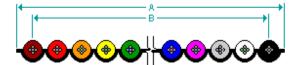
# **Detailed Specifications & Technical Data**

**ENGLISH MEASUREMENT VERSION** 



## 9R28020 Flat - Rainbow 9R280XX Series



For more Information please call

1-800-Belden1



# **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	<b>Conductor Material</b>
20	28	7x36	TC - Tinned Copper

Conductor Spacing Center to Center: .050 +/- .005

Conductor Spacing Outside Center to Outside .95 +/- .008

Center:

#### Insulation

## **Insulation Material:**

Insulation Material	Wall Thickness (in	.)
PVC - Polyvinyl Chloride	0.005	

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 Cabling**

Overall Nominal Thickness: .036 +/- .002

Overall Nominal Width: 1.00

## **Mechanical Characteristics (Overall)**

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

Bulk Cable Weight: 26 lbs/1000 ft.

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# **Detailed Specifications & Technical Data**

**ENGLISH MEASUREMENT VERSION** 



# 9R28020 Flat - Rainbow 9R280XX Series

Applicable Specifications and Agency Compliance (Overall)					
Applicable Standards & Environmental Programs					
UL Rating:		AWM 20932, 105°C, 300 V RMS, VW-1			
EU CE Mark:		Yes			
EU Directive 20	00/53/EC (ELV):	Yes			
EU Directive 20	02/95/EC (RoHS):	Yes			
EU RoHS Comp	liance Date (mm/dd/yyyy):	10/01/2005			
EU Directive 20	02/96/EC (WEEE):	Yes			
EU Directive 20	03/11/EC (BFR):	Yes			
CA Prop 65 (CJ	for Wire & Cable):	Yes			
MII Order #39 (C	China RoHS):	Yes			
Flame Test					
UL Flame Test:		VW-1			
Plenum/Non-Plen	um				
Plenum (Y/N):		No			

# **Electrical Characteristics (Overall)**

## Nom. Characteristic Impedance:

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

## Nom. Inductance:

Description	Inductance (µH/ft)		
@ 1 MHz (GS)	.29		
@ 1 MHz (GSG)	.20		

## Nom. Capacitance Conductor to Conductor:

Description	Capacitance (pF/ft)		
@ 1 kHz (GSG)	18		
@ 1 MHz (GS)	10		
@ 1 MHz (GSG)	15		

# Nominal Velocity of Propagation:

Description	VP	(%)
	72	

# Nominal Delay:

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

# Nom. Conductor DC Resistance:

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

## Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
10	2.8
20	4.8
30	6.5
40	8.3
50	9.8
60	12
70	13
80	14
90	15.8
100	17

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# **Detailed Specifications & Technical Data**

#### **ENGLISH MEASUREMENT VERSION**



#### 9R28020 Flat - Rainbow 9R280XX Series

#### Max. Operating Voltage - UL:

Voltage 300 V RMS

#### Max. Recommended 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

#### **Related Documents:**

No related documents are available for this product

#### **Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9R28020 000100	100 FT	2.400 LB	NONE		20 #28 PVC RAINBOW

Revision Number: 2 Revision Date: 09-11-2009

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