# **Detailed Specifications & Technical Data**

#### **ENGLISH MEASUREMENT VERSION**



#### 9R28040 Flat - Rainbow 9R280XX Series



For more Information please call

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
40	28	7x36	TC - Tinned Copper

**Total Number of Conductors:** 40 .050

**Conductor Spacing Center to Center:** 

#### Insulation

#### 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
9	White
10	Black
Over 10 conductors	Repeat as required

#### **Outer Shield**

Outer Shield Material:



#### **Outer Jacket**

Outer Jacket Material:



## **Overall Cable**

Overall Nominal Thickness:	.036
Overall Nominal Width:	2.00

## **Mechanical Characteristics (Overall)**

Operating Temperature Range:	-20°C To +105°C
Bulk Cable Weight:	44 lbs/1000 ft.
Min. Bend Radius/Minor Axis:	0.500 in.

#### **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

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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
(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

## 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					

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#### Notes (Overall)

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

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

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9R28040 000100	100 FT	4.800 LB	NONE		40 #28 PVC RAINBOW

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

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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.

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