# **Detailed Specifications & Technical Data**



ENGLISH MEASUREMENT VERSION

# 9R28034 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.

Conductor		
	cteristics (Overall)	
AWG:		
	AWG Stranding Conducto	
34	28 7x36 TC - Tinne	ed Copper
Total Number	of Conductors:	34
Conductor Spa	acing Center to Center:	.050
sulation		
Insulation Materi		
Insulation Ma		n.)
PVC - Polyviny	yl Chloride 0.010	
Insulation Res	sistance:	>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 Black	
	uctors Repeat as required	
Outer Shield Outer Shield Mat Outer Shield I Unshielded		
overall Cable		
Overall Nomin	al Thickness:	.036
• ···· ·	al Width:	1.70
Overall Nomin		
	aracteristics (Overall)	
echanical Cha	aracteristics (Overall nperature Range:	) -20°C To +105°C
echanical Cha	nperature Range:	
echanical Cha Operating Ten Bulk Cable We	nperature Range:	-20°C To +105°C
echanical Cha Operating Ten Bulk Cable We Min. Bend Rac	nperature Range: sight: dius/Minor Axis:	-20°C To +105°C 39 lbs/1000 ft.
echanical Cha Operating Ten Bulk Cable We Min. Bend Rac pplicable Spe	nperature Range: sight: dius/Minor Axis:	-20°C To +105°C 39 lbs/1000 ft. 0.500 in. cy Compliance (Overall)
Operating Ten Operating Ten Bulk Cable We Min. Bend Rac Oplicable Spe	nperature Range: eight: dius/Minor Axis: cifications and Agen	-20°C To +105°C 39 lbs/1000 ft. 0.500 in. cy Compliance (Overall)
echanical Cha Operating Ten Bulk Cable We Min. Bend Rac oplicable Spe pplicable Stand UL Rating:	nperature Range: eight: dius/Minor Axis: cifications and Agen	-20°C To +105°C 39 lbs/1000 ft. 0.500 in. cy Compliance (Overall) Programs
echanical Cha Operating Ten Bulk Cable We Min. Bend Rac oplicable Spe pplicable Stand UL Rating:	nperature Range: sight: lius/Minor Axis: <b>cifications and Agen</b> dards & Environmental I	-20°C To +105°C 39 lbs/1000 ft. 0.500 in. cy Compliance (Overall) Programs AWM 20932, 105°C, 300 V RMS, VW-1
echanical Cha Operating Ten Bulk Cable We Min. Bend Rac pplicable Spe pplicable Stand UL Rating: EU Directive 2 EU CE Mark:	nperature Range: sight: lius/Minor Axis: <b>cifications and Agen</b> dards & Environmental I	-20°C To +105°C 39 lbs/1000 ft. 0.500 in. cy Compliance (Overall) Programs AWM 20932, 105°C, 300 V RMS, VW-1 Yes
echanical Cha Operating Tem Bulk Cable We Min. Bend Rac pplicable Spe UL Rating: EU Directive 2 EU CE Mark: EU Directive 2	nperature Range: eight: dius/Minor Axis: cifications and Agen dards & Environmental I co11/65/EU (ROHS II):	-20°C To +105°C 39 lbs/1000 ft. 0.500 in. <b>cy Compliance (Overall)</b> Programs AWM 20932, 105°C, 300 V RMS, VW-1 Yes Yes

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EU Dire	ective 2002/96/EC (WEEE):		Yes			
			100			
Ell Dire	ective 2003/11/EC (BFR):		Yes			
CA Pro	p 65 (CJ for Wire & Cable):		Yes			
MII Ord	ler #39 (China RoHS):		Yes			
ame Tes	t					
	ne Test:		VW-1			
	on-Plenum					
Plenum	n (Y/N):		No			
octrical	Characteristics (Overal	N				
	cteristic Impedance:	')				
	ion Impedance (Ohm)					
(GS)	150					
(GSG)	105					
om. Induct						
Descripti						
@ 1 MHz						
	(GSG) .20					
-						
	itance Conductor to Conducto	:				
Descripti						
-	(GSG) 18					
@ 1 MHz						
-	(GSG) 15					
	ocity of Propagation:					
Descripti	ion VP (%)					
	72					
om. Condu	iay: s/ft) TT. (GSG) uctor DC Resistance:					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM	lay: s/ft) FT. (GSG) lctor DC Resistance: 10°C (Ohm/1000 ft) IS/1000 FT. MAX.					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM om. Attenu	lay: s/ft) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) //S/1000 FT. MAX. lation:					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM om. Attenu Freq. (MH	lay: s/ft) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) //S/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.)					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM om. Attenu Freq. (MH 10	lay: s/ft) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) //S/1000 FT. MAX. iation: Hz) Attenuation (dB/100 ft.) 2.8					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM om. Attenu Freq. (MH 10 20	lay: s/ft) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) //S/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.) 2.8 4.8					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM om. Attenu Freq. (MH 10 20 30	lay: s/ft) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. iation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5					
Delay (ns     1.40 NS/F     om. Condu     DCR @ 2     68.2 OHM     pm. Attenu     Freq. (MF     10     20     30     40	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM om. Attenu Freq. (MH 10 20 30	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM Freq. (MF 10 20 30 40 50	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3					
Delay (ns     1.40 NS/F     om. Condu     DCR @ 2     68.2 OHM     om. Attenu     Freq. (MF     10     20     30     40     50     60	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM Freq. (MF 10 20 30 40 50 60 70	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13					
Delay (ns 1.40 NS/F om. Condu DCR @ 2 68.2 OHM Freq. (MF 10 20 30 40 50 60 70 80	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14					
Delay (ns     1.40 NS/F     om. Condu     DCR @ 2     68.2 OHM     om. Attenu     Freq. (MH     10     20     30     40     50     60     70     80     90     100	lay: s/ft) FT. (GSG) ictor DC Resistance: i0°C (Ohm/1000 ft) AS/1000 FT. MAX. iation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14 15.8 17					
Delay (ns     1.40 NS/F     om. Condu     DCR @ 2     68.2 OHM     om. Attenu     Freq. (MH     10     20     30     40     50     60     70     80     90     100     ax. Operation	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. lation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14 15.8					
Delay (ns     1.40 NS/F     om. Condu     DCR @ 2     68.2 OHM     om. Attenu     Freq. (MH     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. iation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14 15.8 17 ing Voltage - UL:					
Delay (ns     1.40 NS/F     0m. Condu     DCR @ 2     68.2 OHI     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM	lay: sift) FT. (GSG) rector DC Resistance: roo C (Ohm/1000 ft) AS/1000 FT. MAX. ration: 12) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14 15.8 17 ring Voltage - UL: 15					
Delay (ns     1.40 NS/F     om. Condu     DCR @ 2     68.2 OHI     om. Attenu     Freq. (MF     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. iation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14 15.8 17 ing Voltage - UL:					
Delay (ns     1.40 NS/F     om. Condu     DCR @ 2     68.2 OHI     om. Attenu     Freq. (MF     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom     Current	lay: sift) FT. (GSG) inctor DC Resistance: inor C (Ohm/1000 ft) AS/1000 FT. MAX. lation: 12) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14 15.8 17 ing Voltage - UL: IS immended Current:					
Delay (ns     1.40 NS/F     om. Condu     DCR @ 2     68.2 OHI     om. Attenu     Freq. (MF     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom     Current	lay: sift) FT. (GSG) rector DC Resistance: roo C (Ohm/1000 ft) AS/1000 FT. MAX. ration: 12) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14 15.8 17 ring Voltage - UL: 15					
Delay (ns     1.40 NS/F     0.00 m. Condu     DCR @ 2     68.2 OHM     0om. Attenu     Freq. (MF     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom     Current     1 Amp pe	lay: sift) FT. (GSG) ictor DC Resistance: 10°C (Ohm/1000 ft) AS/1000 FT. MAX. iation: Hz) Attenuation (dB/100 ft.) 2.8 4.8 6.5 8.3 9.8 12 13 14 15.8 17 ing Voltage - UL: IS immended Current: Hr conductor @ 20°C		2,000 V RMS			
Delay (ns     1.40 NS/F     m. Condu     DCR @ 2     68.2 OHM     om. Attenu     Treq. (MF     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom     Current     1 Amp pe     Dielectr	lay:   sift)   FT. (GSG)   ictor DC Resistance:   0°C (Ohm/1000 ft)   Als/1000 FT. MAX.   jation:   H2   Attenuation (dB/100 ft.)   2.8   4.8   6.5   8.3   9.8   12   13   14   15.8   17   ing Voltage - UL:   IS   immended Current:   er conductor @ 20°C   ric Withstand Voltage:		2,000 V RMS			
Delay (ns     1.40 NS/F     m. Condu     DCR @ 2     68.2 OHM     om. Attenu     Treq. (MF     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom     Current     1 Amp pe     Dielectur	lay:   sift)   FT. (GSG)   ictor DC Resistance:   0°C (Ohm/1000 ft)   Als/1000 FT. MAX.   jation:   H2   Attenuation (dB/100 ft.)   2.8   4.8   6.5   8.3   9.8   12   13   14   15.8   17   ing Voltage - UL:   IS   immended Current:   ir conductor @ 20°C   ric Withstand Voltage:   alanced Crosstalk:	) (MHz) Near End % (MHz)				
Delay (ns     1.40 NS/F     m. Condu     DCR @ 2     68.2 OHM     om. Attenu     Freq. (MF     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom     Current     1 Amp pe     Dielectur     pical Unbia	lay:   sift)   FT. (GSG)   ictor DC Resistance:   0°C (Ohm/1000 ft)   Als/1000 FT. MAX.   iation:   H2   Attenuation (dB/100 ft.)   2.8   4.8   6.5   8.3   9.8   12   13   14   15.8   17   ing Voltage - UL:   IS   umended Current:   er conductor @ 20°C   ric Withstand Voltage:   alanced Crosstalk:   on Pulse Rise Time (NS)	s) (MHz) Near End % (MHz) 4.8				
Delay (ns     1.40 NS/F     m. Condu     DCR @ 2     68.2 OHM     om. Attenu     Treq. (MF     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom     Current     1 Amp pe     Dielectur     pical Unba     Descripti     10 ft. sam	lay:   sift)   FT. (GSG)   ictor DC Resistance:   i0° C (Ohm/1000 ft)   ////////////////////////////////////		Far End % (MHz)			
Delay (ns     1.40 NS/F     0.00 CR @ 2     68.2 OHM     00m. Attenu     10     20     30     40     50     60     70     80     90     100     ax. Operati     Voltage     300 V RM     ax. Recom     Dielectur     pical Unba     Descripti     10 ft. sam     10 ft. sam	lay:   sift)   FT. (GSG)   ictor DC Resistance:   0°C (Ohm/1000 ft)   Als/1000 FT. MAX.   iation:   H2   Attenuation (dB/100 ft.)   2.8   4.8   6.5   8.3   9.8   12   13   14   15.8   17   ing Voltage - UL:   IS   umended Current:   er conductor @ 20°C   ric Withstand Voltage:   alanced Crosstalk:   on Pulse Rise Time (NS)	4.8	Far End % (MHz) 7			

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

### Put Ups and Colors:

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#### ENGLISH MEASUREMENT VERSION

### 9R28034 Flat - Rainbow 9R280XX Series

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9R28034 000100	100 FT	4.300 LB	NONE		34 #28 PVC RAINBOW

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

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