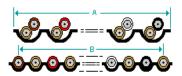
Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION



9V28014 Flat - Vari-Twist® 9V280XX Series





For more Information please call

1-800-Belden1



General Description:

Belden's PVC Vari-Twist series was designed to reduce crosstalk in the balanced mode by twisting the pairs, but can be mass-terminated in the flat sections with standard IDC connectors.

Physical Characteristics (Overall)

Conductor

AWG:

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

Total Number of Conductors:	14
Conductor Spacing Center to Center Flat Section:	.050 +/005
Conductor Spacing Outside Center to Outside Center:	.65 +/012

Insulation

Insulation Material:

Insulation Resistance:		>10,00	Mega Ohms	
Substrate Thickness and	l Material:	.010		
PVC - Polyvinyl Chloride	0.018			
insulation Material	wall fillckness (iii.)			

Outer Shield

Outer Shield Material:



Overall Cable

Overall Nominal Thickness Flat Section:	.042 +/003
Overall Nominal Thickness Twisted Section:	.080
Overall Nominal Width:	.726
Overall Flat Section Length:	2 +.5/0
Overall Twisted Length:	18 in.
Flat Section Center to Center Spacing:	20 +/50

Pair

Pair Color Code Chart:

Number	Color
1	Brown/Tan
2	Red/Tan
3	Orange/Tan
4	Yellow/Tan
5	Green/Tan
6	Blue/Tan
7	Purple/Tan

Spacing

Twisted Pair Spacing Center to Center: .100

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +105°C
Bulk Cable Weight:	29 lbs/1000 ft.
Min. Bend Radius/Minor Axis:	1.250 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

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	UL Rating:	UL AWM Styles 1731, 2693, & 2697
	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
Fla	me Test	
	UL Flame Test:	VW-1
Ple	num/Non-Plenum	
	Plenum (Y/N):	No

Electrical Characteristics (Overall)

Nom. Inductance:

	Inductance (µH/ft)
@ 1 MHz	.24

Nom. Capacitance Conductor to Conductor:

Description	Capacitance (pF/ft)
@ 1 kHz	20
@ 1 MHz	16

Nominal Velocity of Propagation:

Description	VP (%)
	64

Nominal Delay:

Delay (ns/ft) 1.6 NS/FT.

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	3.5
20	5.5
30	7.2
40	8.8
50	10.2
60	12
70	13
80	14.2
90	15
100	16

Max. Operating Voltage - UL:

Voltage 300 V RMS

Max. Recommended Current:

Current
1 Amp per conductor @ 20°C

Nominal Balanced Characteristic Impedance:

Description Impedance (Ohm)
115

Nominal Unbalanced Characteristic Impedance:

Description Impedance (Ohm)

Dielectric Withstand Voltage: 2, 000 V RMS

Typical Balanced Crosstalk - dB Suppression:

Description Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Crosstalk (dB)

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10 ft. sample length		10	100	35
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Typical Unbalanced Crosstalk:

Description	Pulse Rise Time (NS) (MHz)	Near End % (MHz)	Far End % (MHz)
10 ft. sample length all grounds connected together.	3	5.8	5.2
10 ft. sample length all grounds connected together.	5	4	3.2
10 ft. sample length all grounds connected together.	7	2.5	2.8

Notes (Overall)

Notes: The transition area is included in the twisted length to assure a full 2 inches of flat termination area.

Kennedy Information (Overall)

Construction:

18" of Twisted Pairs, 2" of Flat Section

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9V28014 000H100	100 FT	3.200 LB	NONE	E	7 PR #28 PVC VARI-TWIST

Notes:

E = MAY CONTAIN MORE THAN 1 PIECE. MINIMUM LENGTH OF ANY ONE PIECE IS 25'

Revision Number: 2 Revision Date: 11-08-2012

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