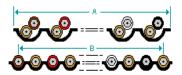
## **Detailed Specifications & Technical Data**

#### **ENGLISH MEASUREMENT VERSION**



#### 9V28010 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
5	28	7x36	TC - Tinned Copper

Total Number of Conductors:	10
Conductor Spacing Center to Center Flat Section:	.050 +/005
Conductor Spacing Outside Center to Outside Center:	.45 +/012

#### Insulation

#### Insulation Material:

	.010	040	040	040	040
					<u></u>

#### **Outer Shield**

#### Outer Shield Material:



#### **Overall Cable**

Overall Nominal Thickness Flat Section:	.042 +/003
Overall Nominal Thickness Twisted Section:	.080
Overall Nominal Width:	.526
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

#### Spacing

Twisted Pair Spacing Center to Center: .100

#### **Mechanical Characteristics (Overall)**

Operating Temperature Range:	-20°C To +105°C
Bulk Cable Weight:	25 lbs/1000 ft.
Min. Bend Radius/Minor Axis:	1.250 in.

#### **Applicable Specifications and Agency Compliance (Overall)**

#### Applicable Standards & Environmental Programs

UL Rating:	UL AWM Styles 1731, 2693, & 2697
EU Directive 2011/65/EU (ROHS II):	Yes

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# **Detailed Specifications & Technical Data**

#### **ENGLISH MEASUREMENT VERSION**



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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	
ame Test		
UL Flame Test:	VW-1	
enum/Non-Plenum		
Plenum (Y/N):	No	

#### **Electrical Characteristics (Overall)**

Nom. Inductance:

Description 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:

Typical Balanced Crosstalk - dB Suppression:

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Crosstalk (dB)
10 ft. sample length		10	100	35

2, 000 V RMS

Typical Unbalanced Crosstalk:

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## **Detailed Specifications & Technical Data**

#### **ENGLISH MEASUREMENT VERSION**



#### 9V28010 Flat - Vari-Twist® 9V280XX Series

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
9V28010 000H100	100 FT	2.800 LB	NONE	E	5 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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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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