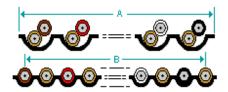
# **Detailed Specifications & Technical Data**

## **ENGLISH MEASUREMENT VERSION**



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





For more Information please call

1-800-Belden1



# **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	<b>Conductor Material</b>
5	28	7x36	TC - Tinned Copper

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

Conductor Spacing Outside Center to Outside .45 +/- .012

Center:

#### Insulation

## **Insulation Material:**

Insulation Material	Wall Thickness (in.)
PVC - Polyvinyl Chloride	.010

Substrate Thickness and Material: .010" Clear PVC

Insulation Resistance: >10, 000 Mega Ohms

## **Outer Shield**

# Outer Shield Material:

# Outer Shield Material Unshielded

#### **Overall Cable**

Overall Nominal Thickness Flat Section:	.042 +/003
Overall Nominal Thickness Twisted Section:	.080
Overall Nominal Width:	.50
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





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

# **Mechanical Characteristics (Overall)**

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

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

# App

Applicable Standards & Environmental Programs				
UL AWM Style:	2693 and 2697			
UL Rating:	105°C, 300 V RMS, VW-1			
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			
Flame Test				
UL Flame Test:	VW-1			
Plenum/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)
_	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:

# **Detailed Specifications & Technical Data**

#### **ENGLISH MEASUREMENT VERSION**



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

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)
	100

Dielectric Withstand Voltage: 2, 000 V RMS

#### Typical Balanced Crosstalk - dB Suppression:

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

#### 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

#### **Related Documents:**

No related documents are available for this product

#### **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: 1 Revision Date: 05-14-2007

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