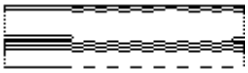
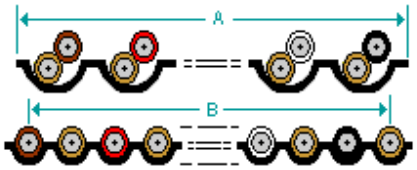
Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

9V28020 Flat - Vari-Twist® 9V280XX Series





For more Information please call

1-800-Belden1

Call
Customer Service
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	Conductor Material
10	28	7x36	TC - Tinned Copper

Conductor Spacing Center to Center Flat Section:	.050 +/- .005
Conductor Spacing Outside Center to Outside Center:	.95 +/- .015

Insulation

Insulation Material:

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

Substrate Thickness and Material:	.010
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:	1.00
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
8	Gray/Tan
9	White/Tan
10	Black/Tan

Pair Lay Length & Direction:

Lay Length (in.)
0.500

Spacing

Twisted Pair Spacing Center to Center:	.100

Mechanical Characteristics (Overall)

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

Applicable Specifications and Agency Compliance (Overall)

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)
@ 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)
	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. Adjacent pairs have opposite direction lay.

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

Revision Number: 1 Revision Date: 12-11-2008

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