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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
25	28	7x36	TC - Tinned Copper

Total Number of Conductors: 50

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

Conductor Spacing Outside Center to Outside Center: 2.45 +/- .017

Insulation

Insulation Material:

Insulation Material	Wall Thickness (mm)
PVC - Polyvinyl Chloride	0.457

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: 2.526

Overall Flat Section Length: 2 +.5/-0

Overall Twisted Length: 457.200 mm

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
Over 10 pair	Repeat as required

Spacing

Twisted Pair Spacing Center to Center: .100

Mechanical Characteristics (Overall)

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

Bulk Cable Weight: 105.662 Kg/Km

Min. Bend Radius/Minor Axis: 31.750 mm

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

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/m)
@ 1 MHz	0.78744

Nom. Capacitance Conductor to Conductor:

Description	Capacitance (pF/m)
@ 1 kHz	65.62
@ 1 MHz	52.496

Nominal Velocity of Propagation:

Description	VP (%)
	64

Nominal Delay:

Delay (ns/m)
1.6 NS/FT.

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)
68.2 OHMS/1000 FT. MAX.

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
10	11.4835
20	18.0455
30	23.6232

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9V28050 Flat - Vari-Twist® 9V280XX Series

40	28.8728
50	33.4662
60	39.372
70	42.653
80	46.5902
90	49.215
100	52.496

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.

Kennedy Information (Overall)

Construction: 18" of Twisted Pairs, 2" of Flat Section

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9V28050 000H100	100 FT	7.400 LB	NONE	E	25 PR #28 PVC VARI-TWIST

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

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