

## Vari-Twist® 9V280XX Series

.050" Pitch, 28 AWG, PVC

### Product Description

Belden's PVC Vari-Twist 9V280XX series was designed to reduce crosstalk in the balanced mode by twisting the pairs, but can be mass-terminated in the programmed flat sections with any standard IDC connector. To further reduce crosstalk, each adjacent pair is twisted in the opposite direction. The standard twist length is 18 inches followed by a 2 inch flat section of .050" spaced conductors. The cable consists of stranded 28 AWG (7x36) tinned copper, color-coded PVC pre-insulated singles — laminated to a single clear PVC substrate. Eleven various conductor/pair counts are standard; other sizes are available upon request. The cable is UL approved (CSA available upon request) and passes the VW-1 Vertical Wire Flame Test.

Upon your request, Vari-Twist can also be manufactured to your own specific requirements whether that be longer or shorter twist sections and/or flat sections.

**Color Code:** Each pair consists of a Tan conductor paired with a color-coded conductor. *Color Sequence Each Terminating Section:* Brown/Tan, Red/Tan, Orange/Tan, Yellow/Tan, Green/Tan, Blue/Tan, Purple/Tan, Gray/Tan, White/Tan, Black/Tan. Sequence is repeated as necessary.

**Application:** Internal interconnection or internal wiring of electronic equipment.

### Physical Specifications

<b>Conductor</b>	28 AWG (7x36) Tinned Copper
<b>Insulation</b>	.010" Nom. Wall Color-coded PVC
<b>Substrate</b>	.010" Nom. Wall Clear PVC
<b>Pitch</b>	
Twisted Pair Centers:	.100" Nom.
Conductor Centers in Flat:	.050" ± .005"
<b>Pairs</b>	1/2" Nom. Lay
	Adjacent Pairs have Opposite Direction Lay
<b>Construction</b>	18" of Twisted Pairs 2" of Flat Section
<b>Temperature Rating</b>	-20 to +105°C
<b>Flammability Rating</b>	UL: VW-1
<b>UL Approval</b>	File #E12683, Style Dual Rated 2693 & 2697
<b>CSA Approval</b>	Available Upon Request
<b>Packaging</b>	H100

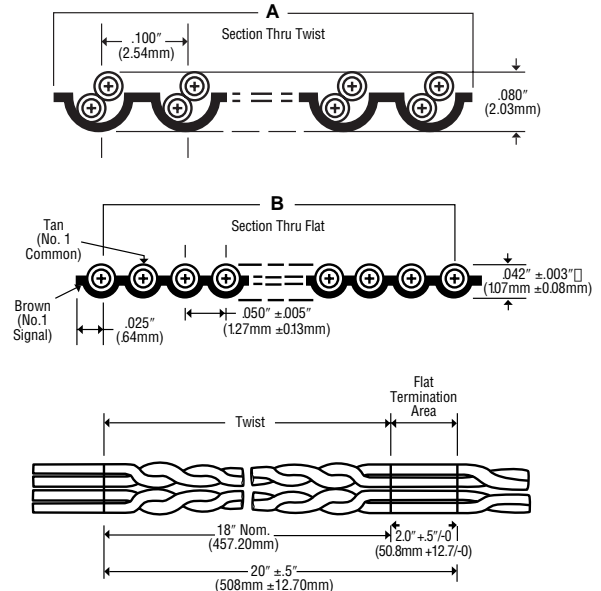
### Electrical Specifications

<b>Voltage Rating</b>	300V RMS
<b>Current Rating</b>	1A
<b>Conductor Resistance</b>	68.2Ω/1000 ft.
<b>Insulation Resistance</b>	>1 x 10 <sup>10</sup> Ω • 10 ft. (3m)
<b>Impedance (Balanced)</b>	115Ω
<b>Impedance* (Unbalanced)</b>	100Ω
<b>Capacitance* (@ 1 MHz)</b>	16 pF/ft. (52 pF/m)
<b>Inductance* (@ 1 MHz)</b>	.24 μH/ft. (.79 μH/m)
<b>Propagation Delay*</b>	1.60 ns/ft. (5.25 ns/m)

\*Test Configuration: G-S (ground-signal), unbalanced.

Part No.	No. of Pairs	Dimensions			
		Width "A"		Span "B"	
		Inch	mm	Inch	mm
9V28010	5	.50	12.70	.45 ±.012	11.43 ±.31
9V28014	7	.70	17.78	.65 ±.012	16.51 ±.30
9V28016	8	.80	20.32	.75 ±.012	19.05 ±.30
9V28020	10	1.00	25.40	.95 ±.015	24.13 ±.38
9V28026	13	1.30	33.02	1.25 ±.015	31.75 ±.38
9V28034	17	1.70	43.18	1.65 ±.015	41.91 ±.38
9V28036	18	1.80	45.72	1.75 ±.017	44.45 ±.43
9V28040	20	2.00	50.80	1.95 ±.017	49.53 ±.43
9V28050	25	2.50	63.50	2.45 ±.017	62.23 ±.43
9V28060	30	3.00	76.20	2.95 ±.020	74.93 ±.51
9V28064	32	3.20	81.28	3.15 ±.020	80.01 ±.51

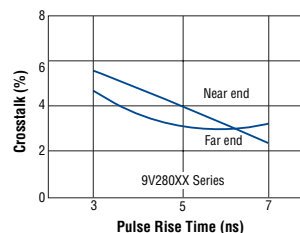
### Dimensions



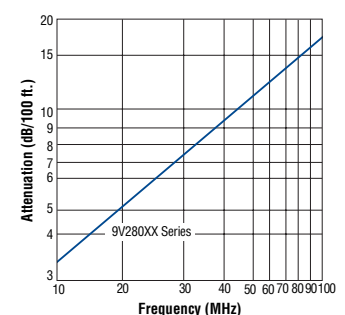
NOTE: the transition area is included in the twisted section to assure a full 2 Inches of flat termination area.

### Unbalanced Crosstalk\*

(See page 7.14 for Balanced Crosstalk)



### Attenuation\*



## Vari-Twist® 8V280XX Series

.050" Pitch, 28 AWG, FEP (High Temperature)

### Product Description

Belden's FEP Vari-Twist 8V280XX series allows for high and low temperature, low out-gassing, and chemical resistant applications, improved electricals, and provides quick identification and circuit tracing. The cable was designed to reduce crosstalk in the balanced mode by twisting the pairs but can be mass-terminated in the programmed flat sections with any standard IDC connector. To further reduce crosstalk, each adjacent pair is twisted in the opposite direction. The standard twist length is 18 inches followed by a 2 inch flat section of .050" spaced conductors. The cable consists of stranded 28 AWG (7x36) silver-plated copper, color-coded FEP pre-insulated singles — laminated to a single clear FEP substrate. Eight various conductor/pair counts are standard; other sizes are available upon request. The cable is UL approved and passes the IEEE 383-1974 70,000 BTU Flame Test.

Upon your request, Vari-Twist can also be manufactured to your own specific requirements whether that be longer or shorter twist sections and/or flat sections.

**Color Code:** Each pair consists of a Tan conductor paired with a color-coded conductor. *Color Sequence Each Terminating Section:* Brown/Tan, Red/Tan, Orange/Tan, Yellow/Tan, Green/Tan, Blue/Tan, Purple/Tan, Gray/Tan, White/Tan, Black/Tan. Sequence is repeated as necessary.

**Application:** Internal wiring of appliances or electronic equipment. May be additionally marked "For 300V Peak Electronic Use Only."

### Physical Specifications

<b>Conductor</b>	28 AWG (7x36) Silver-plated Copper
<b>Insulation</b>	.010" Nom. Wall Color-coded FEP
<b>Substrate</b>	.010" Nom. Wall Clear FEP
<b>Pitch</b>	
Twisted Pair Centers:	.100" Nom.
Conductor Centers in Flat:	.050" ± .005"
<b>Pairs</b>	1/2" Nom. Lay
	Adjacent Pairs have Opposite Direction Lay
<b>Construction</b>	18" of Twisted Pairs 2" of Flat Section
<b>Temperature Rating</b>	-70 to +150°C
<b>Flammability Rating</b>	UL: VW-1; IEEE 383-1974 70,000 BTU
<b>UL Approval</b>	File #E12683, Style 20468
<b>Packaging</b>	100

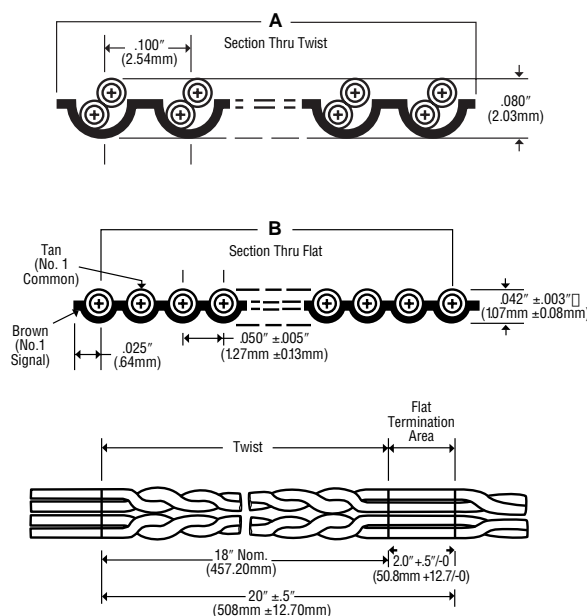
### Electrical Specifications

<b>Voltage Rating</b>	150V RMS
<b>Current Rating</b>	1A
<b>Conductor Resistance</b>	68.2Ω/1000 ft.
<b>Insulation Resistance</b>	>1 x 10 <sup>11</sup> Ω • 10 ft. (3m)
<b>Impedance (Balanced)</b>	145Ω
<b>Impedance* (Unbalanced)</b>	130Ω
<b>Capacitance* (@ 1 MHz)</b>	10.6 pF/ft. (34.78 pF/m)
<b>Inductance* (@ 1 MHz)</b>	.22 μH/ft. (.72 μH/m)
<b>Propagation Delay*</b>	1.32 ns/ft. (4.33 ns/m)

\*Test Configuration: G-S (ground-signal), unbalanced.

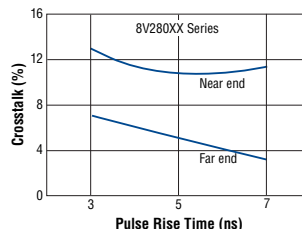
Part No.	No. of Pairs	Dimensions			
		Width "A"		Span "B"	
		Inch	mm	Inch	mm
8V28010	5	.50	12.70	.45 ±.012	11.43 ±.31
8V28014	7	.70	17.78	.65 ±.012	16.51 ±.31
8V28020	10	1.00	25.40	.95 ±.015	24.13 ±.38
8V28026	13	1.30	33.02	1.25 ±.015	31.75 ±.38
8V28036	18	1.80	45.72	1.75 ±.017	44.45 ±.43
8V28040	20	2.00	50.80	1.95 ±.017	49.53 ±.43
8V28060	30	3.00	76.20	2.95 ±.020	74.93 ±.51

### Dimensions



NOTE: the transition area is included in the twisted section to assure a full 2 inches of flat termination area.

### Unbalanced Crosstalk\*



### Attenuation\*

