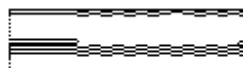
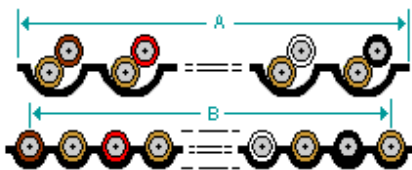


9V28050 Flat - Vari-Twist® 9V280XX Series



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 | 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 (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: 2.50

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 |
| 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

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 |

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| | |
|-----|------|
| 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.

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'

Revision Number: 1 Revision Date: 05-14-2007

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