



**Product:** [9V28010](#)

Flat Vari-Twist Cable .050" Pitch, 9V280XX Series, #28-10c, PVC Ins on PVC Substrate

## Product Description

Flat Vari-Twist Cable .050" Pitch, 9V280XX Series, 10 Conductors, 28 AWG (7x36) Tinned Copper, PVC Insulated Conductors on PVC Substrate

## Technical Specifications

### Product Overview

Suitable Applications:	Internal interconnection, internal wiring of electronic equipment, reduced crosstalk in balanced mode, can be mass-terminatable in flat sections with standard IDC connectors
------------------------	---

### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	No. of Pairs
28	7x36	TC - Tinned Copper	5

Conductor Count: 10

#### Insulation

Material	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.010 in

#### Color Chart

Number	Color
1	Brown/Tan
2	Red/Tan
3	Orange/Tan
4	Yellow/Tan
5	Green/Tan

### Construction and Dimensions

Cond Spacing Center-Center Flat Section:	.050 +/- .005 in
Cond Spacing Center-Center Outside:	.450 +/- .015 in
Substrate Thickness and Material:	.010 in, Clear PVC
Twisted Pair Spacing Center-Center:	0.100 in
Overall Flat Section Length:	2.0 +.50 - 0 in
Overall Twisted Length:	18 in
OuterJacket1, Nominal Width:	0.526 in
OuterJacket1, Nom Thick Flat Section:	0.042 in
OuterJacket1, Nom Thick Twisted Section:	0.084 in

### Electrical Characteristics

#### Conductor DCR

Nominal Conductor DCR
68.2 Ohm/1000ft

## Capacitance

Element	Nom. Capacitance Conductor to Conductor
@ 1 kHz	20 pF/ft
@ 1 MHz	16 pF/ft

## Inductance

Element	Nominal Inductance
@ 1 MHz	0.24 $\mu$ H/ft

## Impedance

Nominal Balanced Characteristic Impedance $\Omega$	Nominal Characteristic Impedance	Nominal Characteristic Impedance Description	Nominal Unbalanced Characteristic Impedance
115 Ohm	115 Ohm	Balanced	100 Ohm
	100 Ohm	Unbalanced	

## High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
10 MHz	3.5 dB/100ft
20 MHz	5.5 dB/100ft
30 MHz	7.2 dB/100ft
40 MHz	8.8 dB/100ft
50 MHz	10.2 dB/100ft
60 MHz	12 dB/100ft
70 MHz	13 dB/100ft
80 MHz	14.2 dB/100ft
90 MHz	15 dB/100ft
100 MHz	16 dB/100ft

Table Notes: 18" of twisted pairs and 2" of flat section. The transition area is included in the twisted length to assure a full 2 inches of flat termination area.

## Delay

Nominal Delay
1.6 ns/ft

## Balanced Crosstalk

Description	Start Frequency [MHz]	Start Frequency [MHz]	dB Suppression
10 ft. sample length	10 MHz	100 MHz	35 dB

## Unbalanced Crosstalk

Element	Typical Unbalanced NEXT %	Typical Unbalanced FEXT %	Typical Cross Talk Pulse Rise Time (ns)
10 ft. sample length all grounds connected together.	5.8	5.2	3 ns
10 ft. sample length all grounds connected together.	4	3.2	5 ns
10 ft. sample length all grounds connected together.	2.5	2.8	7 ns

## Current

Max. Recommended Current [A]
1 Amp per Conductor at 20°C

## Voltage

Dielectric Withstand Voltage	UL Voltage Rating
2000 V	300 V

## Temperature Range

Operating Temp Range:	-20°C to +105°C
-----------------------	-----------------

## Mechanical Characteristics

Bulk Cable Weight:	25 lbs/1000ft
Min Bend Radius During Installation:	4.5 in
Min Bend Radius/Minor Axis:	1.25 in

## Standards

UL AWM Style Compliance:	2693, 2697
--------------------------	------------

## Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2005-10-01
MII Order #39 (China RoHS):	Yes

## Suitability

Suitability - Indoor:	Yes
-----------------------	-----

## Flammability, LSOH, Toxicity Testing

UL Flammability:	VW-1
UL voltage rating:	300 V

## Plenum/Non-Plenum

Plenum (Y/N):	No
---------------	----

## Part Number

### Variants

Item #	Color	Length	UPC
9V28010 000H100	None	100 ft	612825222118

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

## History

Update and Revision:	Revision Number: 0.269 Revision Date: 08-25-2020
----------------------	--

© 2021 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.