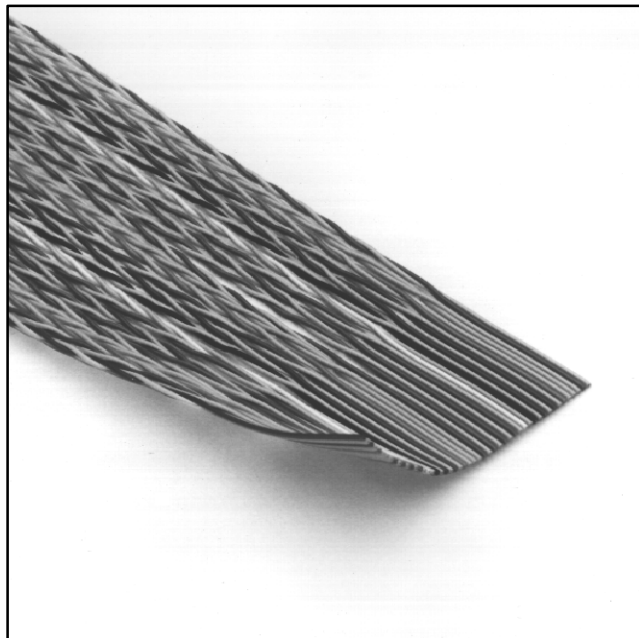


# 3M™ Twisted Pair Flat Cable

.050" 28 AWG Stranded, Mass Terminatable, PVC

1700 Series



- Wires are color-coded for easy identification
- Twist and flat repeat has variable length option
- Can be mass terminated to a broad line of IDC connectors
- Provides reduced crosstalk in balanced drive applications
- 28 AWG stranded wire provides flexibility and extended product life
- 10 color repeat

Date Modified: May 30, 2003

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## Physical

### Insulation

Material: Polyvinyl Chloride (PVC)

Color: 10 Color Repeat with Tan Common

Marking: None

Canadian Option:  AWM 20462 105C 300V VW1 3M NU  AWM IA 80C 150V FT1  
EU <50V

Conductors: 28 AWG 7 x 36 [ 7 x 0.127 ] Tinned Stranded Copper

## Electrical

**Voltage Rating:** USA: 300V Canada: 150V EU: <50V  
**Insulation Resistance:**  $>1 \times 10^9 \Omega / 10\text{ft} [3\text{m}]$

	Unbalanced	Balanced
<b>Characteristic Impedance:</b>	101 $\Omega$	122 $\Omega$
<b>Capacitance:</b>	15.9 pF/ft (52.2 pF/m)	13.3 pF/ft (43.6 pF/m)
<b>Inductance:</b>	16 $\mu\text{H}/\text{ft}$ (0.52 $\mu\text{H}/\text{m}$ )	.20 $\mu\text{H}/\text{ft}$ (0.66 $\mu\text{H}/\text{m}$ )
<b>Propagation Delay:</b>	1.61 ns/ft (5.28 ns/m)	1.63 ns/ft (5.35 ns/m)
<b>Velocity of Propagation:</b>	63%	62%

Note: Unbalanced is measured between ground-signal-ground conductors. Balanced is measured between conductors within a pair.

## Environmental

**Temperature Rating:** USA: -20° C to +105° C Canada: -20° C to +80° C  
**Flammability Rating:** USA: VW-1 Canada: FT1

UL File No.: E42769, Style No.: 20462

3M

Interconnect Solutions

<http://www.3M.com/interconnects/>

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For technical, sales or ordering information call

800-225-5373

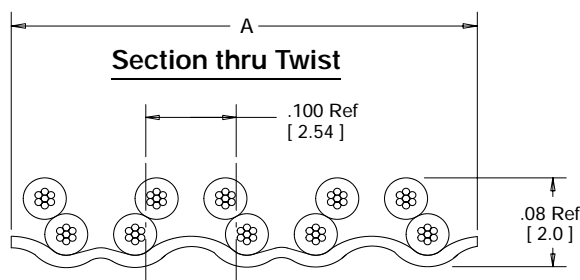
# 3M™ Twisted Pair Flat Cable

## .050" 28 AWG Stranded, Mass Terminatable, PVC

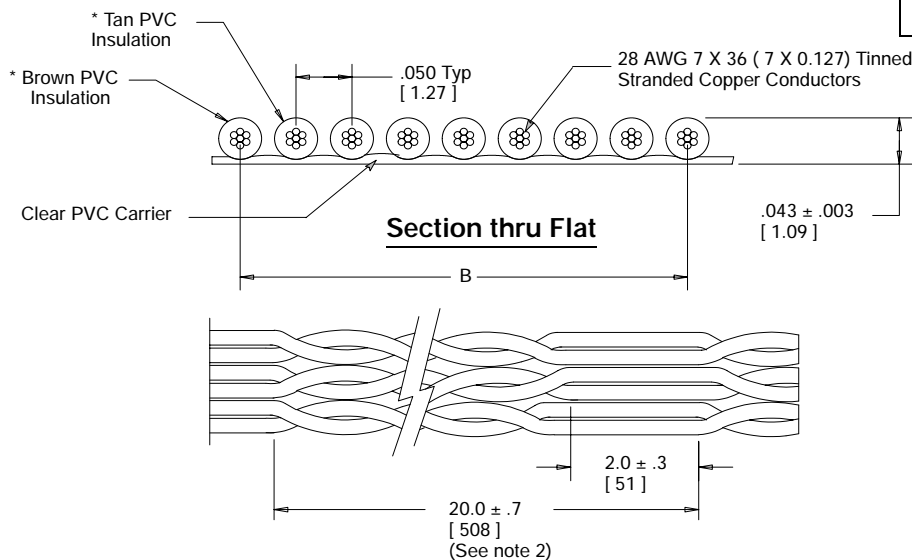
1700 Series



Number of Conductors	3M Part Number	Dimension A	Dimension B
10 (5 pair)	<b>1700/10</b>	0.50 [ 12.7 ]	0.450 ± .010 [ 11.43 ]
14 (7 pair)	<b>1700/14</b>	0.70 [ 17.8 ]	0.650 ± .010 [ 16.51 ]
16 (8 pair)	<b>1700/16</b>	0.80 [ 20.3 ]	0.750 ± .015 [ 19.05 ]
20 (10 pair)	<b>1700/20</b>	1.00 [ 25.4 ]	0.950 ± .015 [ 24.13 ]
26 (13 pair)	<b>1700/26</b>	1.30 [ 33.0 ]	1.250 ± .015 [ 31.75 ]
34 (17 pair)	<b>1700/34</b>	1.70 [ 43.2 ]	1.650 ± .020 [ 41.91 ]
36 (18 pair)	<b>1700/36</b>	1.80 [ 45.7 ]	1.750 ± .020 [ 44.45 ]
40 (20 pair)	<b>1700/40</b>	2.00 [ 50.8 ]	1.950 ± .020 [ 49.53 ]
50 (25 pair)	<b>1700/50</b>	2.50 [ 63.5 ]	2.450 ± .020 [ 62.23 ]
60 (30 pair)	<b>1700/60</b>	3.00 [ 76.2 ]	2.950 ± .020 [ 74.93 ]
64 (32 pair)	<b>1700/64</b>	3.20 [ 81.3 ]	3.150 ± .020 [ 80.01 ]



Variable Length Suffix Table		
Example of alternate twist and flat repeats		
Suffix	Repeat	Flat
<b>TO</b>	22.00	4.00
<b>TB</b>	7.50	1.00
<b>TD</b>	43.00	3.00
<b>BP</b>	9.00	1.50
<b>EA</b>	10.50	2.00
<b>BW</b>	34.00	2.00



\* 10 Color Repeat

- Brown/Tan
- Red/Tan
- Orange/Tan
- Yellow/Tan
- Green/Tan
- Blue/Tan
- Violet/Tan
- Gray/Tan
- White/Tan
- Black/Tan

Inch [mm]			
Tolerance Unless Noted			
	.0	.00	.000
Inch	±.1	±.01	±.005

[ ] Dimensions for Reference only

## Ordering Information

**1700/XX XX**

Blank = Standard  
C = Canadian Certified Version

Variable Length (See Variable length suffix table)

Number of Conductors (See Table)

### Notes:

- Available in standard lengths of 100 feet or 300 feet per roll, please specify when ordering.
- Standard product has a twist-flat repeat length of 20 inches (50.8 cm), with a 2-inch (5.1 cm) flat portion. The twist-flat repeat can be specified from 8-1/2 inches (16.5 cm) to 48 inches (1.219 m), and the flat can be specified as anything over 1 inch (2.5 cm).
- For special requirements, contact your 3M representative.

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