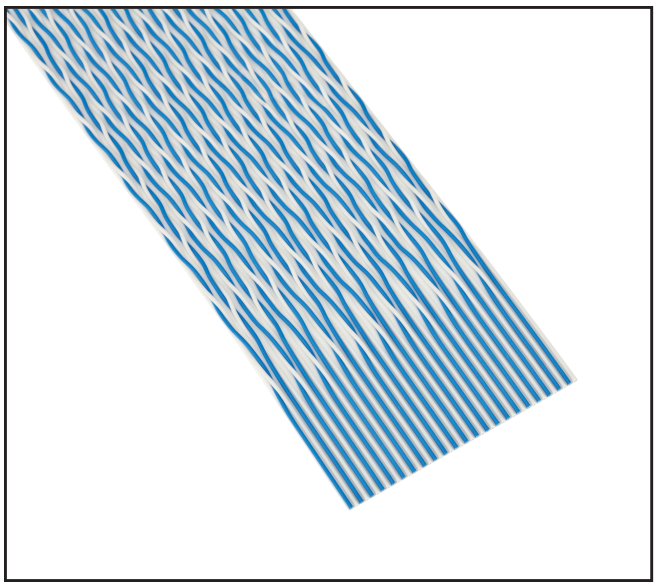
3M™ Twisted Pair Flat Cable

.050" 28 AWG Stranded, Mass Terminable, Halogen Free PO HF100 Series



- Low Smoke Zero Halogen (LSZH) Insulation. Advantages of LSZH insulation are the low smoke (IEC 61034-2:2005), and low toxicity of combustion gases (NF X 70-100-2:2006), reducing the risk to firefighters, and reducing the soot and corrosion damage to nearby equipment
- Broad operating temperature range from -40°C to 105°C
- 28 AWG wire on .050 inch centers permits mass termination to broad line of IDC connectors
- See the Regulatory Information Appendix (RIA) in the "RoHS compliance" section of www.3Mconnectors.com for compliance information (RIA E1 & C1 apply)

Date Modified: June 19, 2012

Physical

Insulation:

Material: Halogen-Free Polyolefin (PO)

Color: Blue / White Pairs

Marking:

Standard: None

Canadian Option: AWM 21008 105°C 150V HOR AWM 1A 105°C 150V FT2 EU<50V

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

Electrical

Voltage Rating: USA: 150V EU: <50V Canada: 150V

Insulation Resistance: > 1×10^{10} Ω/10 ft. [3 m]

	Unbalanced	Balanced
Characteristic Impedance:	102 Ω	119 Ω
Capacitance:	16.9 pF/ft [55.4 pF/m]	14.6 pF/ft [47.9 pF/m]
Inductance:	0.18 µH/ft [0.59 µH/m]	0.21 µH/m [0.69 µH/m]
Propagation Delay:	1.74 ns/ft [5.71 ns/m]	1.73 ns/ft [5.68 ns/m]
Velocity of Propagation:	58%	59%

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

Environmental

Temperature Rating: -40°C to +105°C

Flammability Rating: UL: Horizontal

Halogen Free is defined as both 1) no halogen compounds that are intentionally added to the product or used in the manufacturing process for the product and 2) any impurities present are less than 900 ppm bromine, less than 900 ppm chlorine and/or less than 1500 ppm total bromine and chlorine. The latter are the levels set forth in certain industry standards for printed circuit boards, such as the International Electrotechnical Commission (IEC) 61249-2-21 standard. This information represents 3M's knowledge and belief which may be based in whole or in part on information provided by 3rd party suppliers to 3M.

UL File No. :E42769, Style No: 21008

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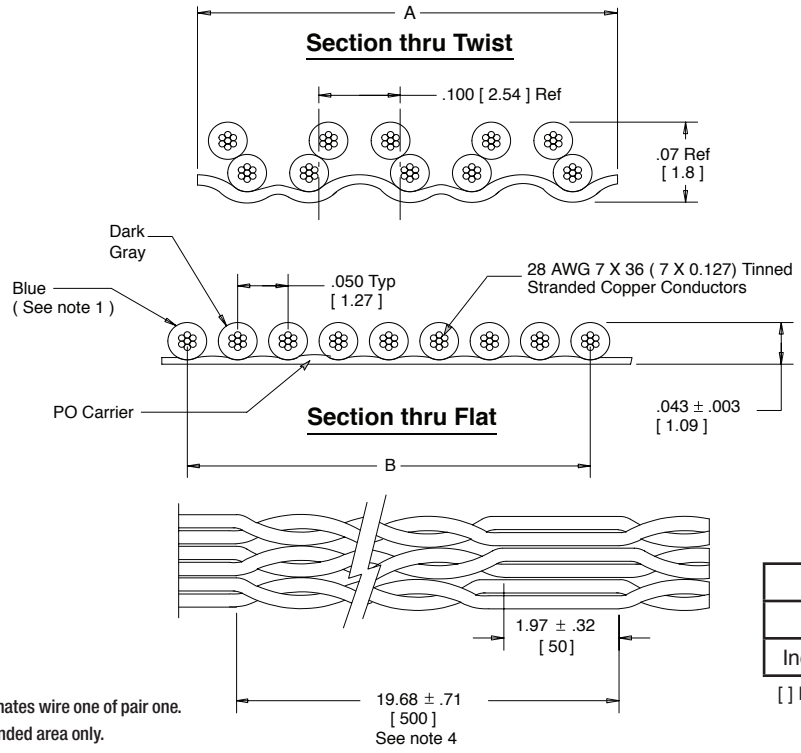
Number of Conductors	3M Part Number	Dimension A	Dimension B (See Note 2)
10 (5 pair)	HF100/10TP	0.50 [12.7]	0.450 ± .010 [11.43]
14 (7 pair)	HF100/14TP	0.70 [17.8]	0.650 ± .010 [15.88]
16 (8 pair)	HF100/16TP	0.80 [20.3]	0.750 ± .010 [20.96]
20 (10 pair)	HF100/20TP	1.00 [25.4]	0.950 ± .010 [22.23]
24 (12 pair)	HF100/24TP	1.20 [30.5]	1.150 ± .010 [24.77]
26 (13 pair)	HF100/26TP	1.30 [33.0]	1.250 ± .010 [31.12]
30 (15 pair)	HF100/30TP	1.50 [38.1]	1.450 ± .015 [36.80]
34 (17 pair)	HF100/34TP	1.70 [43.2]	1.650 ± .015 [37.47]
40 (20 pair)	HF100/40TP	2.00 [50.8]	1.950 ± .015 [42.55]
50 (25 pair)	HF100/50TP	2.50 [63.5]	2.450 ± .015 [50.17]
60 (30 pair)	HF100/60TP	3.00 [76.2]	2.950 ± .015 [62.87]
64 (32 pair)	HF100/64TP	3.20 [81.3]	3.150 ± .015 [80.01]



Inch
[mm]

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

[ ] Dimensions for Reference Only

Note:
1. Blue edge conductor designates wire one of pair one.
2. Dimension B pertains to bonded area only.

Ordering Information

HF100/XX TP XX

- XX (after HF100/): Number of Conductors (See Table)
- XX (after TP): Blank = Standard; SF = Splice Free

Note:
3. Available in standard lengths of 100 ft and 300 ft per roll, please specifiy when ordering.
4. Standard product has a 2" flat on 19.7" repeat (50 mm bond on 500 mm repeat). For special requirements, please contact your 3M sales representative. The flat can be specified anything over 1" (25 mm), the repeat can be specified from 6.5" to 48" (16.5 cm to 1.2 m).

3M
Interconnect Solutions
http://www.3Mconnectors.com

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For technical, sales or ordering information call
800-225-5373

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