Data Master® Aerospace Cable
Twisted Pair Designs

Physical Construction

Designs consist of one pair through five pair configurations with a temperature range from -55°C to +200°C. Typical gauge sizes consist of 22, 24 and 26 AWG, although other gauge sizes are available. A variety of dielectric materials are available including foam and solid extruded FEP, solid/foam composite, and low density PTFE tapes - all designed for superior electrical performance.

Electrical Characteristics

100 Ohm and 150 Ohm impedances are standard. Frequencies typically range from 10 MHz to 1000 MHz, but some cables are designed for operation up to 2 GHz.

Applications

Some constructions have been designed for the commercial aviation market with applications such as intra-plane communications and Internet access. Other constructions have been designed for high reliability commercial and military applications such as on-board instrumentation and sensing.

Physical Characteristics

Part Number	Conductor Diameter	Dielectric Diameter	Diameter over 1st braid	Diameter over 2nd braid	Cable Diameter	Temp. Rating	Weight (lbs/mft)
1E100-24(19)T	.0234" SPCA	.047"	.121" TPC		.141"	150°C	17
2E100-24(19)TT	.0234" SPCA	.061"	.128" TPC	.256" TPC	.276"	150°C	35
M17/176-00002	.0235" SPCA	.042"	.100" SPC	-	.129"	230°C	18

Electrical Characteristics

Part Number	Impedance (ohms)	Cap. (pF/ft)	Attenuation (dB/100 ft) @ 10 MHz Typ/Max	100 MHz Typ/Max	250 MHz Typ/Max	531 MHz Typ/Max	750 MHz Typ/Max	1062 MHz Typ/Max
1E100-24(19)SP	100	12.7	2.0/2.3	6.8/7.5	10.9/12.0	17.3/19.1	21.3/23.5	26.5/29.2
2E100-24(19)SP	100	12.7	2.0/2.3	6.8/7.5	10.9/12.0	17.3/19.1	21.3/23.5	26.5/29.2
M17/176-00002	77	18.8	4.1/4.5	15.4/17.0	18.0/19.8	24.4/26.9	28.9/31.8	39.7/43.7

Additional constructions available - check with the factory for details
All figures referenced are nominal

Harbour Industries • 4744 Shelburne Road • Shelburne • Vermont • 05482 • USA • 802-985-3311