PIC DataMATES®

PRODUCT BULLETIN

PIC E61224

10/100 BASE-T 1-PAIR (2-CONDUCTOR) CABLE

CABLE CONSTRUCTION

1. ETFE Jacket (White) Laser Markable
2. Silver-Plated Copper Braided Shield
3. Foil Shield
4. Foamed Fluoropolymer Insulation
5. Silver-Plated High Strength Copper Alloy Conductors

COLOR CODES

Blue, White

This cable has been specially designed by PIC for airborne 10 and 100 Base-T Local Area Network applications as defined by ARINC Specification 664. The twisted-pair construction effectively reduces inductive interference while 100% foil and 90% braided shielding serve to further protect against EMI.

Each conductor is surrounded by a foamed fluoropolymer dielectric having a high velocity of propagation which permits smaller overall diameter and weight while retaining performance and required operating parameters. Silver plated high strength copper alloy conductors and shielding assure uniform conductivity with excellent solderability. A laser markable fluoropolymer jacket protects the cable against abrasion and environmental effects while maintaining flexibility for ease of installation.

Data transmission aboard aircraft faces more severe environmental and EMI situations than conventional LAN systems in commercial buildings, hence special measures have been taken to preserve technical performance.

E61224 exceeds ANSI/TIA-568-C.2 CAT 5e Channel Requirements. It is Skydrol resistant, RoHS compliant and passes the FAA flammability requirements of FAR Part 23 and 25, Appendix F. Test results are available upon request.

PHYSICAL DATA

• Conductors	24 AWG Stranded SPCA
• Shield Coverage	100% (Foil), 90% (Braid)
• Operating Temperature	-50° to +200°C
• Outer Diameter: in (mm)	0.15 (3.81)
• Minimum Bend Radius: in (mm)	1.25 (31.75)
• Weight: lbs/100 ft (kg/100 m)	1.9 (2.8)

ELECTRICAL DATA

• Impedance: ohms		100
• Capacitance: pF/ft (m)		13.0 (42.7)
• Velocity of Propagation: %		80.0
• Dielectric Voltage Rating (kV RMS)		0.9
• DC Resistance: ohms/1000 ft (m) Max		28.4 (93.2)
• Max Distance*: ft (m)		328 (100)
• Attenuation: Nom / Max	dB/100 ft	(dB/100 m)
• @10 MHz	1.8 / 2.1	(5.9 / 6.9)
• @100 MHz	5.8 / 7.0	(19.0 / 23.0)

All values nominal unless otherwise noted
**Note: The max distance is based on maximum channel insertion loss per ANSI/TIA-568-C.2*