PIC DataMATES®

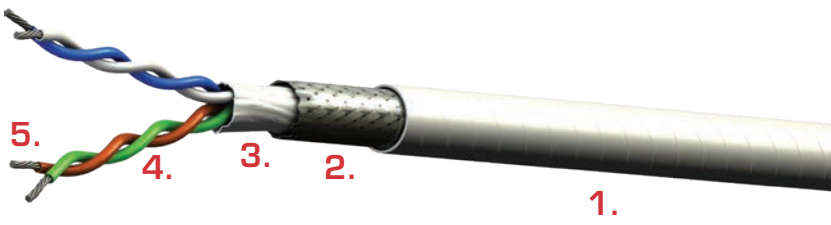
PRODUCT BULLETIN

PIC E13424

10/100 BASE-T 2-PAIR (4-CONDUCTOR) CABLE

CABLE CONSTRUCTION

1. PTFE Tape Jacket (White) Laser Markable
2. Silver-Plated Copper Braided Shield
3. Fluoropolymer Tape Binder
4. Solid Fluoropolymer Conductor Insulation
5. Silver-Plated High Strength Copper Alloy Conductors



COLOR CODES

Pair #1 - White/Blue
Pair #2 - Green/Orange

PIC's DataMATES Ethernet cables incorporate innovative design features that provide maximum electrical performance in a small, light weight and flexible package. Using 24 AWG silver-plated, high strength copper alloy conductors and a laser markable PTFE jacket, PIC's E13424 delivers CAT 5e channel performance up to 262 ft (80 m) with up to 45% less weight and up to 50% more flexibility.

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. Silver-plated copper conductors and shielding assure uniform conductivity with excellent solderability.

A PTFE jacket which is laser-markable, passed EN3475-503 Scrape Abrasion testing and is also very flexible for ease of installation.

E13424 is ideal for harsh environment applications that demand high reliability, maximum flexibility and light weight, such as cabin management, in-flight entertainment, internet backbones. It is Skydrol resistant, RoHS compliant and passes the FAA flammability requirements of FAR Part 23 and 25, Appendix F.

PHYSICAL DATA

• Conductors	24 AWG (19/38) Stranded SPCA
• Shield Coverage	80% (Braid)
• Operating Temperature	-55° to +200°C
• Outer Diameter: in (mm)	0.22 (5.59)
• Minimum Bend Radius: in (mm)	0.75 (19.05)
• Weight: lbs/100 ft (kg/100 m)	2.9 (4.3)

ELECTRICAL DATA

• Impedance: ohms		100
• Capacitance: pF/ft (m)		14.5 (47.6)
• Velocity of Propagation: %		70.0
• Dielectric Voltage Rating (kV RMS)		1.5
• DC Resistance: ohms/1000 ft (m) Max		28.4 (93.2)
• Max Distance: ft (m)		262.5 (80)
• Attenuation: Nom / Max	dB/100 ft	(dB/100 m)
• @10 MHz	2.2 / 2.6	(7.2 / 8.5)
• @100 MHz	6.0 / 7.2	(19.7 / 23.6)

All values nominal unless otherwise noted
Note: The max distance is based on maximum channel insertion loss per ISO 11801, Class F

PIC E13424
CONNECTORS

Description	Connector P/N	Tool P/N
Shielded CAT 5e, Plug w/Strain Relief Sleeve	190007 (568A) 190015 (ISDN)	110340 - RJ45 Crimp Tool
Shielded CAT 5e, Plug w/Protective Boot	190061 (568A) 190062 (ISDN)	110340 - RJ45 Crimp Tool
Shielded CAT 6a, Jack w/ATUM Strain Relief	110939	110701 - Soft Jaw Clamping Pliers

As an ethernet data cable, E13424 will most often be terminated with RJ45 connectors. They are reliable, inexpensive and can trace a huge installed base virtually everywhere.

The insulation surrounding each conductor in E13424 is softer and thicker than common commercial-type ethernet cables. This is necessary to achieve data rate and maintain impedance in a shielded design. As a result, the larger diameter of this insulation will not easily enter a standard RJ45 connector cavity without modification.

PIC has designed special RJ45 type connectors designed to accommodate this larger insulation. Termination using these connectors is recommended and saves considerable time.

Note: Part 110274 has been replaced with 110340.

Call PIC For Availability