PIC DataMATES®

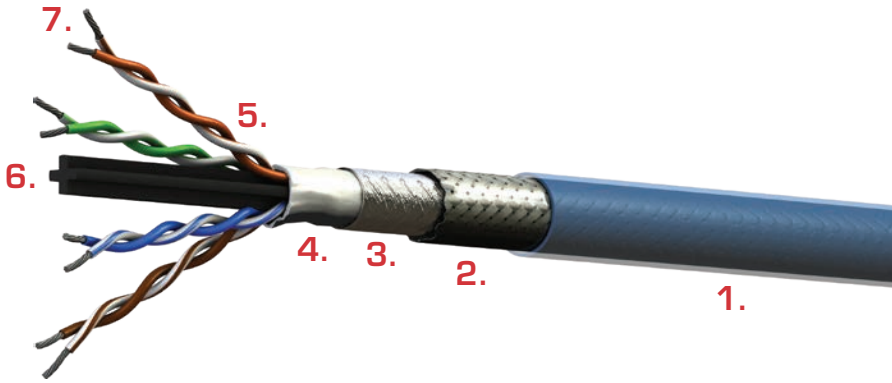
PRODUCT BULLETIN

PIC E50824

1000 BASE-T GIGABIT 4-PAIR (8-CONDUCTOR) ETHERNET CABLE

CABLE CONSTRUCTION

1. Fluoropolymer Jacket (Translucent Blue)
2. Silver-Plated Copper Braided Shield
3. Foil Shield
4. Fluoropolymer Tape Binder
5. Fluoropolymer Insulation
6. Fluoropolymer Spline
7. Silver-Plated Copper Conductors



COLOR CODES

Pair #1 - Blue, White/Blue
Pair #2 - Orange, White/Orange
Pair #3 - Green, White/Green
Pair #4 - Brown, White/Brown

This cable has been specially designed by PIC for airborne Gigabit Ethernet Local Area Network applications. The twisted-pair construction (four separate pairs) effectively reduces inductive interference while 100% foil and 90% braided shielding serve to further protect against EMI.

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 fluoropolymer jacket protects the cable against abrasion and environmental effects while maintaining flexibility for ease of installation.

E50824 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.

Note: This product is also available with a black fluoropolymer jacket under product number G50824.

PHYSICAL DATA

• Conductors	24 AWG Stranded SPC
• Shield Coverage	100% (Foil), 90% (Braid)
• Operating Temperature	-55° to +200°C
• Outer Diameter: in (mm)	0.27 (6.73)
• Minimum Bend Radius: in (mm)	1.40 (35.56)
• Weight: lbs/100 ft (kg/100 m)	5.0 (7.4)

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		28.5 (93.5)
• Max Distance*: ft (m)		268 (82)
• Attenuation: Nom / Max	dB/100 ft	(dB/100 m)
• @10 MHz	2.2 / 2.6	(7.2 / 8.5)
• @100 MHz	6.8 / 8.2	(22.3 / 26.9)

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

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PIC E50824 CONNECTORS

Description	Connector P/N	Tool P/N
Shielded CAT 6, Plug w/ATUM Strain Relief	110787	110288 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/Strain Relief Sleeve	110303	110288 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/Protective Boot	110339	110288 - RJ45 Crimp Tool
Shielded CAT 6 Plug w/ATUM Strain Relief (fits fits Amphenol (RJF) ruggedized backshell)	110361	110288 - RJ45 Crimp Tool
Shielded CAT 6a, Plug w/ATUM Strain Relief	110650 (568A) 110649 (568B)	110701 - Soft Jaw Clamping Pliers
Shielded CAT 6a, 90° Plug w/ATUM Strain Relief	110912 (568A) 110900 (568B)	110701 - Soft Jaw Clamping Pliers
Shielded CAT 6a, Plug w/Clamp Nut Strain Relief	110973 (568A) 110975 (568B)	110701 - Soft Jaw Clamping Pliers
Shielded CAT 6a, Jack w/ATUM Strain Relief	110937 (568A) 110938 (568B)	110701 - Soft Jaw Clamping Pliers
Shielded CAT 6, Plug, Blade Patch	110384	N/A

E50824 is normally terminated with RJ45 connectors. PIC has a wide variety of RJ45 connectors available including those listed above.

E50824 is also compatible with the innovative RJ45 BladePatch connector. The BladePatch connector features a unique design that locks into a standard RJ45 jack without using the standard RJ45 locking tab that is difficult to access and easy to break. Simply push the Blade-Patch connector into the jack to lock, pull back on the connector body to release. This connector is only available in assemblies built by PIC Wire & Cable. Please contact PIC Wire & Cable for more information.

E50824 may also be terminated into miniature circulator connectors such as the Mighty Mouse connector made by GlenAir. These connectors provide a durable ruggedized solution option to the RJ45. Contact PIC Wire & Cable for more information about these connectors.

Call PIC For Availability