

## CABLE CONSTRUCTION

1. FEP Jacket (Translucent Blue)
2. Silver-Plated Copper Shield
3. Foil Shield
4. Foamed FEP Insulation
5. Silver-Plated Copper Conductors

## COLOR CODES

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

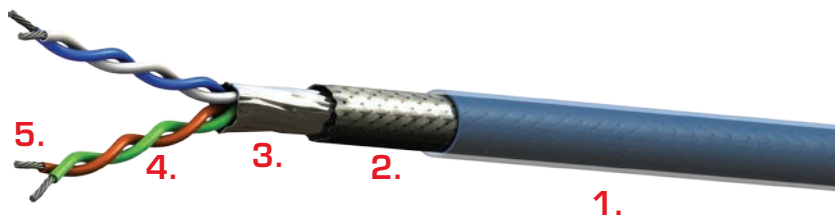
This cable has been specially designed by PIC for airborne 10 and 100 Base-T Local Area Network applications as defined by ARINC Specification 664. The twisted-pair construction (two separate pairs) effectively reduces inductive interference while 100% foil and 90% braided shielding serve to further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

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

E10424 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.

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## PHYSICAL DATA

• Conductors	24 AWG Stranded SPC
• Shield Coverage	100% (Foil), 90% (Braid)
• Operating Temperature	-55° to +200°C
• Outer Diameter: in (mm)	0.21 (5.28)
• Minimum Bend Radius: in (mm)	1.10 (27.94)
• Weight: lbs/100 ft (kg/100 m)	3.3 (4.9)

## ELECTRICAL DATA

• Impedance: ohms	100
• Capacitance: pF/ft (m)	13.0 (42.7)
• Velocity of Propagation: %	80.0
• 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	6.0 / 7.2 (19.7 / 23.6)

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



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/Strain Relief Sleeve	110362	110288 - RJ45 Crimp Tool 190048 - Insulation Compression Tool
Shielded CAT 5e, Plug w/Protective Boot	190061 (568A) 190062 (ISDN)	110340 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/ATUM Strain Relief (fits Amphenol (RJF) ruggedized backshell)	110788	110288 - RJ45 Crimp Tool 190048 - Insulation Compression Tool
Shielded CAT 6a, Jack w/ATUM Strain Relief	110939	110701 - Soft Jaw Clamping Pliers

As an ethernet data cable, E10424 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 E10424 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*

