

CABLE CONSTRUCTION

1. ETFE Jacket (White) Laser Markable
2. Tin-Plated Copper Shield
3. Foil Shield
4. Fluoropolymer Insulation
5. Tin-Plated Copper Conductors

COLOR CODES

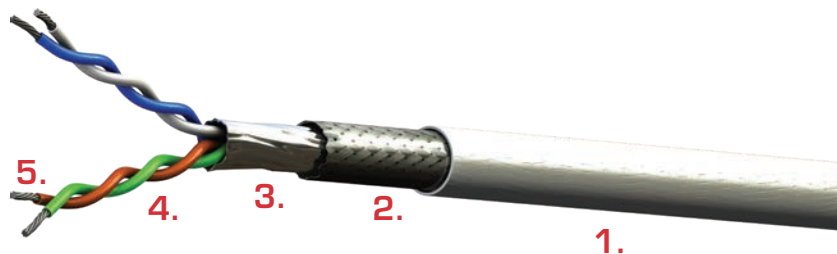
- Pair #1 - White/Blue
 Pair #2 - Green/Orange

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 85% braided shielding serve to further protect against EMI.

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

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. Tin-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.

E12424 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 TPC
- Shield Coverage 100% (Foil), 85% (Braid)
- Operating Temperature -55° to +150°C
- Outer Diameter: in (mm) 0.21 (5.28)
- Minimum Bend Radius: in (mm) 1.00 (25.4)
- Weight: lbs/100 ft (kg/100 m) 2.3 (3.4)

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) 257 (78)
- Attenuation: Nom / Max dB/100 ft (dB/100 m)
 - @10 MHz 2.3 / 2.7 (7.5 / 8.9)
 - @100 MHz 6.2 / 7.5 (20.3 / 24.6)

*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, E12424 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 E12424 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