

CABLE CONSTRUCTION

1. FEP Jacket (Translucent Blue)
2. Silver-Plated Copper Shield
3. Foil Shields
4. 2-Layer Solid/Foam FEP Insulation
5. Tin-Plated Drain Wire
6. Silver-Plated Copper Conductors

COLOR CODES

- Pair #1 - White w/Blue Inner, Blue w/White Inner
 Pair #2 - White w/Orange Inner, Orange w/White Inner

This cable has been specially designed by PIC for airborne high-speed data applications. The twisted-pair construction (two separate pairs) effectively reduces inductive interference while 100% foil (for each pair, as well as the entire cable) plus 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 dual-layer foamed/solid FEP dielectric insulation having a high velocity of propagation. This permits smaller overall diameter and weight, at the same time retaining performance and required operating parameters. Removal of the outer foamed layer reveals the inner solid insulation of a diameter compatible with conventional RJ45 connector terminations.

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.

E20424 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 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) 1.30 (33.02)
- Weight: lbs/100 ft (kg/100 m) 4.2 (6.2)

ELECTRICAL DATA

- Impedance: ohms 100
- Capacitance: pF/ft (m) 13.4 (44.0)
- Velocity of Propagation: % 76.0
- Dielectric Voltage Rating (kV RMS) 1.5
- DC Resistance: ohms/1000 ft (m) Max 28.5 (93.5)
- Max Distance*: ft (m) 296 (90)
- Attenuation: Nom / Max dB/100 ft (dB/100 m)
 - @10 MHz 2.2 / 2.4 (7.2 / 7.7)
 - @100 MHz 7.6 / 8.0 (24.9 / 26.2)

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

