

## CABLE CONSTRUCTION

1. Fluoropolymer Jacket (Translucent Blue)
2. Tin-Plated Copper Shield
3. Fluoropolymer Jacket (Translucent Blue)
4. Silver-Plated Copper Shield
5. Foil Shield
6. Foam Fluoropolymer Insulation
7. Silver-Plated Copper Conductors

## COLOR CODES

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

This cable has been specially designed by PIC for airborne high-speed data applications. The twisted-pair construction (four separate pairs) effectively reduces inductive interference while 100% foil (for each pair) plus braided shielding over each pair and an overall shield serves to further protect against EMI.

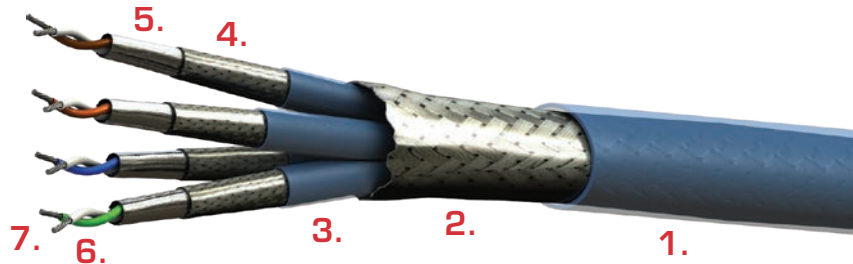
Data transmission aboard aircraft faces more severe environmental and EMI situations than conventional LAN systems in commercial buildings, hence special measures have been taken to preserve technical performance.

Conductor insulation consists of foamed fluoropolymer, having a higher velocity of propagation. This assures correct impedance matching, thus minimizing reflection — important in high-speed data applications. This permits smaller overall diameter and weight, at the same time retaining performance and required operating parameters. Each pair is individually shielded and jacketed to isolate it from the other pairs.

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.

E30824 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.

**PIC**  **DataMATES® PLUS**



## PHYSICAL DATA

- Conductors 24 AWG Stranded SPC
- Shield Coverage 100% (Foil), 90% (Braid), 85% (Overall)
- Operating Temperature -55° to +150°C
- Outer Diameter: in (mm) 0.45 (11.53)
- Minimum Bend Radius: in (mm) 2.30 (58.42)
- Weight: lbs/100 ft (kg/100 m) 12.8 (19.0)

## 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) 332 (101)
- Attenuation: Nom / Max dB/100 ft (dB/100 m)
  - @10 MHz 1.8 / 2.1 (5.9 / 6.9)
  - @100 MHz 5.8 / 7.0 (19.0 / 23.0)

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