

## CABLE CONSTRUCTION

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

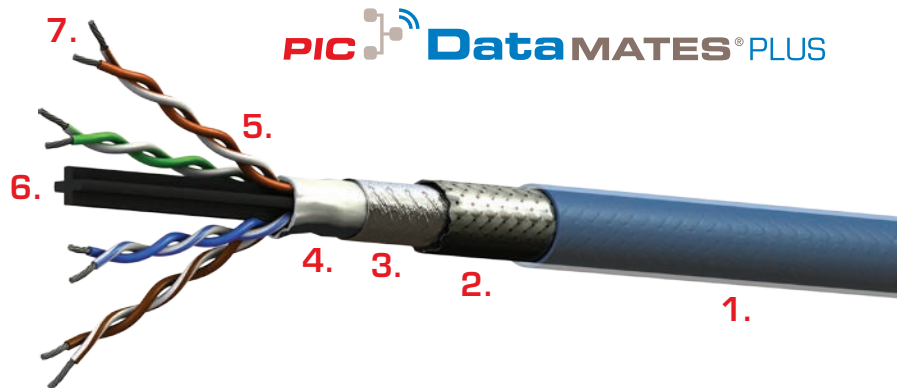
## COLOR CODES

- 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 10 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. An FEP jacket protects the cable against abrasion and environmental effects while maintaining flexibility for ease of installation.

E6A0824 exceeds ANSI/TIA-568-C.2 CAT 6a 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)
- Operating Temperature -55° to +200°C
- Outer Diameter: in (mm) 0.28 (6.99)
- Minimum Bend Radius: in (mm) 1.40 (35.56)
- Weight: lbs/100 ft (kg/100 m) 5.3 (7.9)

## 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) 246 (75)
- 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)
- @250 MHz 10.9 / 13.1 (35.8 / 43.0)
- @500 MHz 15.6 / 18.7 (51.2 / 61.4)

*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 6, Plug w/ATUM Strain Relief	110506	110288 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/Strain Relief Sleeve	110629	110288 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/Protective Boot	110630	110288 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/ATUM Strain Relief (fits Amphenol (RJF) ruggedized backshell)	110789	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, Jack w/ATUM Strain Relief	110937 (568A) 110938 (568B)	110701 - Soft Jaw Clamping Pliers
Siemon CAT 7 (Tera) Plug, 4 Pair, 24 AWG	110807*	110701 - Soft Jaw Clamping Pliers
Siemon CAT 7 (Tera) Jack, 4 Pair, 24 AWG	110808*	110701 - Soft Jaw Clamping Pliers

E6A0824 is a Category 6a (10Gb) ethernet cable that can be terminated in a variety of ways.

E6A0824 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*

