PIC DataMATES®

PRODUCT BULLETIN

PIC E30824

100 OHM 4-PAIR HIGH SPEED DATA CABLE

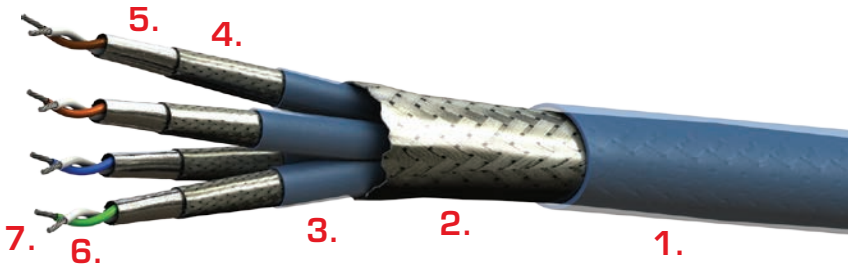
CABLE CONSTRUCTION

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

COLOR CODES

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

PIC DataMATES® PLUS



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 FEP, 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. An FEP 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.

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*

PIC WIRE & CABLE
A Division of The Angelus Corporation

QUALITY SERVICE TECHNOLOGY

N53 W24747 S. Corporate Circle
P.O. Box 330, Sussex, WI 53089-0330
P • 262.246.0500 Toll Free • 800.742.3191
F • 262.246.0450
WWW.PICWIRE.COM

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NBAA
AIRCRAFT ELECTRONICS ASSOCIATION MEMBER
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