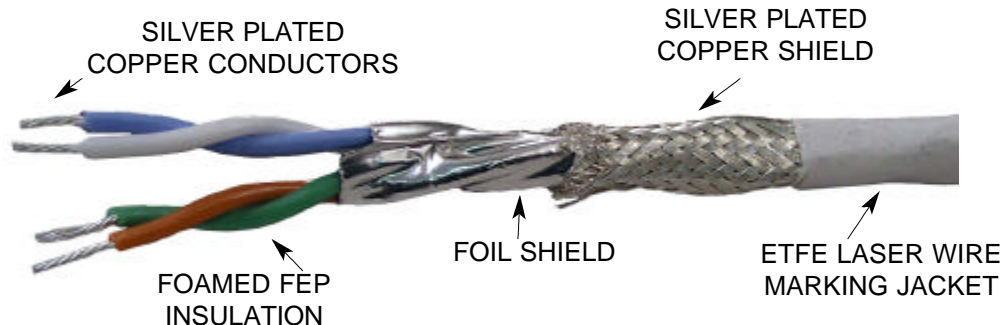


10/100BASE-T QUAD (4-Conductor) CABLE



This cable has been specially designed by PIC for airborne 10- and 100Base-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 95% 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 a foamed FEP dielectric

having a high velocity of propagation which permits smaller overall diameter and weight while retaining performance and required operating parameters. Silver-plated copper conductors and shielding assure uniform conductivity with excellent solderability. An ETFE laser wire marking jacket protects the cable against abrasion and environmental effects while maintaining flexibility for ease of installation.

E40424 exceeds ANSI/TIA-568A Category 5e requirements. It is Skydrol resistant and meets the FAA flammability requirements of FAR 23.1359(d), FAR 25.853(a) and FAR 25.869(a)(4).

| PHYSICAL DATA | | ELECTRICAL DATA | |
|------------------------------|--------------------------|--|------------|
| Conductors | 24 AWG (7/32) SPC | Impedance (ohms) | 100 |
| Insulation | Foam FEP | Capacitance (pF/ft) (Between Conductors) | 13.0 |
| Temperature | -55° to +150°C | Velocity of Propagation | 80% |
| Shield Coverage | 100% (Foil), 95% (Braid) | Attenuation (dB/100 ft) Nominal | |
| | | @ 10 MHz | 1.9 |
| | | @ 100 MHz | 6.7 |
| Outer Diameter, Nominal | 0.21 in. | Dielectric Withstanding Voltage | 1.5 KV RMS |
| Min. Bend Radius | 1.4 in. | Structural Return Loss (SRL) | |
| | | @ 10 MHz | -23.0 dB |
| | | @ 100 MHz | -17.0 dB |
| Weight per 100 ft.(7/32) SPC | 2.9 lbs | Near-End Cross-Talk (NEXT) | |
| | | @ 10 MHz | -47 dB |
| | | @ 100 MHz | -32 dB |

PIC P/N E40424



AVAILABLE IN STOCK FOR IMMEDIATE SHIPMENT



CONNECTORIZATION

As an ethernet data cable, E40424 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 E40424 is softer and thicker than common building-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 supplies a special RJ-45 type connector designed to accommodate this larger insulation. Termination using this connector is recommended and saves considerable time.

PIC Special RJ45 Connector
RJ45 Crimp Tool

PIC P/N 190007
PIC P/N 110274

A detailed instruction sheet is available to help understand and perform this termination procedure successfully.