

Aerospace Electronic Wiring Unit 24 Cores



Article Overview

A 24-core Aerospace Electronic Wiring Unit (EWU) is a high-reliability, multi-conductor assembly designed for aircraft and spacecraft electrical systems, integrating multiple wires into a compact, lightweight, and durable harness.

Overview

A 24-core EWU typically consists of 24 individual conductors bundled together with specialized insulation and shielding to ensure electrical integrity, EMI/EMC protection, and mechanical durability in harsh aerospace environments. These units are used to connect avionics, sensors, power distribution systems, and control modules, often replacing complex individual wiring runs to reduce weight and improve reliability .

Key Features

- **High-Reliability Conductors:** Aerospace-grade wires, such as those from Prysmian or Gore, use copper or high-performance alloys with insulation resistant to temperature extremes, chemicals, abrasion, and humidity .
- **Insulation and Jacket Materials:** Polyimide, fluoropolymers, or other high-performance materials provide long-term stability, fire resistance, and low outgassing, critical for both aircraft and space applications .
- **Shielding and EMI Protection:** Many EWUs include braided or foil shields to prevent electromagnetic interference, ensuring signal integrity for avionics and communication systems

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3 Electrical Power (ATA 24)

3 Electrical Power (ATA 24) 3.1 Definition Those electrical units and components which generate, control and supply AC and/or DC

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