



Electrical Wiring Interconnection Systems

System-Level Solutions

System and Component Compatibility in Severe Aviation Environments

Comply with EWIS Standards for Installation and Maintenance with TE's Total Systems Approach to Complete Harnessing Applications

Rugged Reliability in Severe Aviation Environments

TE Connectivity (TE) can help you achieve EWIS solutions with comprehensive product sets designed to meet specific needs of aircraft subsystems. From the relatively benign environment of cabin services for passengers to the extreme demands of SWAMP (Severe Weather and Moisture Prone) areas such as landing gear and engines, we have products designed to work together.

Materials Expertise Drives Space and Weight Savings

We can help you achieve EWIS while reducing weight and making the most efficient use of space. We apply our expertise in materials science to create products that are not only lighter and more compact, but also with the rugged reliability needed for long-term dependability. Smaller wires and cables are more easily routed to avoid potential problems, such as abrasion, heat damage, or arcing, that can degrade the EWIS system.

Maintainability Made Easier

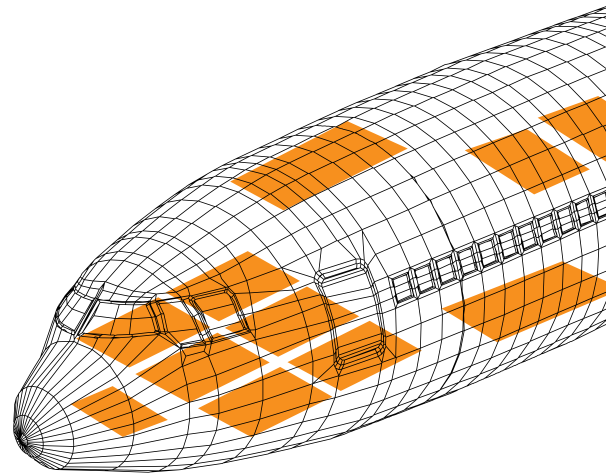
With TE, you'll find a wide range of solutions for maintaining and repairing wire and cables—from heat-shrink wraps and tapes to cold-applied splices whose heatless application allows use in the presence of fuels.

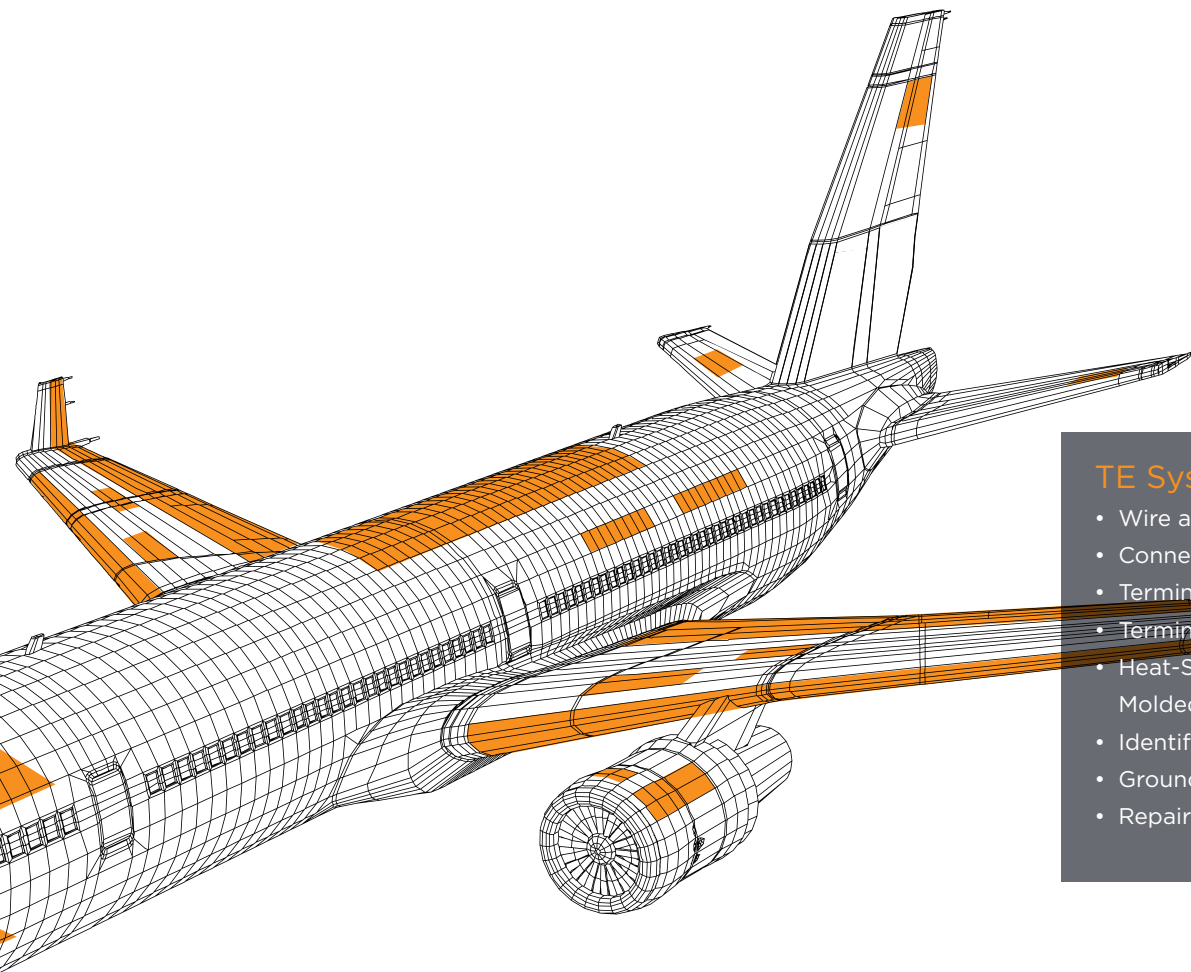
More Solutions with EWIS Compatibility

With one of the widest and deepest range of products—certified by major manufacturers and meeting recognized industry standards for EWIS applications—we can give you more options and flexibility to meet environmental, mechanical, and electrical parameters of your applications. End to end, you'll find products designed to work seamlessly together.

Early Involvement Allows Optimized Solutions

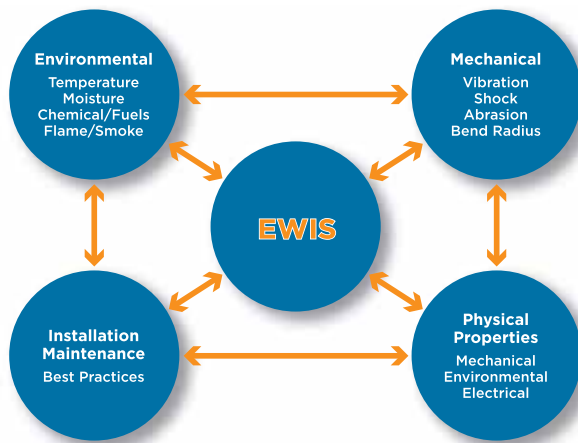
Talk to us early to leverage the full power of our expertise. Early on, we can take your preliminary requirements and help you find the best way to satisfy them technically and economically. It also allows us to work with you to innovate new EWIS solutions to meet specific requirements. We excel at providing integrated solutions—engineered to simplify installation, save space and weight, and boost performance.





TE System Solutions

- Wire and Cable
- Connectors and Backshells
- Termination Devices
- Terminals and Splices
- Heat-Shrink Tubing and Molded Shapes
- Identification Products
- Grounding Solutions
- Repair Products



EWIS: THE SYSTEM IS THE SOLUTION

To achieve reliable high performance and meet regulatory requirements for maintainability, aircraft wiring must be designed and installed as a system. Electrical Wiring Interconnection Systems (EWIS) is a concept that embraces wires, cables, connectors, and other termination devices as a system rather than an assembly of individual components. The main driver in EWIS is to prevent or remedy the long-term degradation of wiring components that results from vibration, temperature extremes, moisture, chemical contamination, and other factors present in aircraft. Poor parts selection, improper installation, and careless inspection and maintenance can accelerate degradation—with the consequences of minor or catastrophic failure.

TE Components . . . TE Technology . . . TE Know-how . . .

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem
SEACON | Rochester | DEUTSCH

Empower Engineers to Solve Problems, Moving the World Forward.



WIRE AND CABLE



Raychem CANbus Cable

High Performance

- High performance, 120 ohm twisted pair
- Shielded and unshielded variations available

Rugged, Flexible Design

- Constructions available meeting SAE J1939 and SAE J1939-11 and -15 requirements
- Abrasion resistant



Raychem Multicore Cables

Light Weight and Highly Durable

- Industry-standard components
- Designed to meet specific application hazards

Versatile

- Signal, power, RF, high-speed digital, and optical conductors
- Wide range of materials and configurations



Raychem SPEC 55 Wire and Cable

Space and Weight Savings

- Crosslinked ETFE

Excellent Performance

- Chemical resistance
- Arc tracking resistance
- Abrasion resistance
- Temperatures to 200°C

TERMINALS AND SPLICES



PIDG Terminals and Splices

Versatile

- Variety of tongue styles and platings
- 26 through 10 AWG
- MIL-T-2928 styles

Reliable

- Insulated and noninsulated
- Nylon insulation resists hydrocarbons



COPALUM Lite Terminals and Splices

Weight Savings

- 60% vs. copper terminals
- 53% vs. drop-forged aluminum terminals

Convenient

- Grease-free COPALUM dry crimp technology, compatible with existing tooling
- Qualification for use in commercial air



STRATO-THERM Terminals and Splices

High Temperature

- Uninsulated versions up to 650°C
- TFE-insulated versions to 288°C

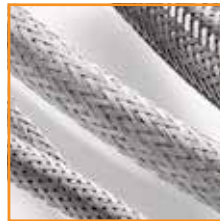
HARNESSING AND CABLE MANAGEMENT



Raychem Heat Shrinkable Tubing

Excellent Performance

- Space-grade versions for low outgassing
- With or without adhesive lining
- Wide range of sizes, shrink ratios, and environmental resistance



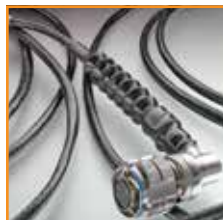
Raychem INSTALITE Lightweight Braid

Weight Savings

- Up to 50% lighter than traditional braid

Excellent Shielding

- Covers wide frequency range
- Better low-frequency performance than expensive plated fibers or microfilaments



Harnessing Components

Hazard Matched

- Complete product suites matched to application needs
- Tubing, molded parts, adhesives, backshells, and insulation/jacketing materials
- Flame-retarded, flame-resistant, and LSZH solutions

Space and Weight Savings

- Thin-wall insulation and composite material



Raychem INSTALITE Boots

Weight-Saving Design

- 20-30% lighter than TE's -25 part

Time Savings

- Optimized interior geometry speeds installation time

Rugged

- Rayaten shielding provides abrasion resistance and resists most common military fuels, oils and greases



HARNESSING AND CABLE MANAGEMENT



Raychem HexaShield EMI Adapters

High Performance

- 360° shield termination system
- Excellent mechanical and environmental resistance

Versatile and Flexible

- Aluminum, stainless steel, and composite versions available
- Simple installation and easy re-entry



Raychem Molded Parts

More Choice

- Wide range of size, shapes and materials
- Available to fit TE backshell adapters

Protects

- Provides excellent strain relief at connector cable termination



POLAMCO Backshells

Full Range

- Unshielded, shielded, and rugged conduit systems
- Rectangular and circular configurations
- Straight, 45, or 90-degree options

Rugged

- Versions to match any harsh environment



Raychem AS85049 Adapters and Band Straps

Reliable

- Self-coupling locking nut protects against loosening under vibration
- Corrosion resistant

Easy To Use

- Band straps available flat for fast, easy entry or precoiled for end entry

Versatile

- Variety of platings



Identification Products

Solutions for Most Every Need

- Rugged heat-shrinkable cable marker sleeves with excellent mark permanence
- Non-igniting/self-extinguishing label and wrap-around polyvinyl fluoride markers
- Preprinted markers in clip-on, snap-on, and push-on versions
- Self-laminating printable labels



Split Banding Ring

Rugged

- Rugged, lightweight, 2-piece snap lock side entry shield termination device
- Mechanical strength helps to protect cable bundle from physical damage

Reliable

- Use with TE's band straps for a highly reliable electrical termination and mechanical joint



Wire Seals

Convenient

- Removable or heat-shrinkable, watertight, fume-tight seals
- Cable entry seals have factory-applied adhesive for sealing to wire and cable jackets

Robust

- D-EASY wire seals withstands 500-hour salt spray



DEUTSCH Firewall Feedthroughs

Safer Reliability

- Titanium and stainless steel options
- Helps withstand fire without flame crossing
- Fire resistance: +1100°C for 20 min with direct flame
- Up to four 3/0 AWG wires

REPAIR



Raychem RT-555 Heat-Shrink Repair Tape

High Temperature

- Rated to +200°C continuous use

Fluid Resistant

- Resists aviation hydraulic fluids

Easy to Use

- Convenient tape form
- 4 standard widths
- Use as a system with RT-555 sealing sleeves



Raychem Side-Entry Bushings

Easy to Use

- Pre-coiled side-entry reusable silicone bushings that conform to circular wire bundles
- Fewer wraps needed than conventional silicone tapes, for up to 80% faster installation
- No adhesive for easy removal and reuse

High Temperature

- Rated to +180°C



REPAIR



Raychem S1260 High-Temperature Hot Melt Tape Adhesive

Capable

- Seals to PTFE insulation
- Rated to 240°C—suitable for repairing high-temperature power cables
- Permanent field repairs
- Fluid resistant



Raychem D-200 Flexible Splice Kit

Durable Splicing

- Resistant to most common aerospace fluids
- Flexible for long-term performance
- Immersion resistant, sealed, with 360° shielding

High Performance

- Rated for 200°C
- Resists vibration and shock



Raychem C-WRAP Side Entry Repair Sleeves

Mechanically Robust

- +150°C rated
- Long-term performance provides a permanent repair

Easy Installation

- Save time, manpower, and cost
- Color coded to ensure proper sizing
- Side entry for easy access to damaged wire



Raychem Rayseal Large Gauge Wire Repair

Versatile

- Side entry helps reduce repair times
- 8 AWG to 4/0 AWG cable
- -65°C to +260°C temperature range

Durable

- Permanent, sealed repair
- Resists abrasion and aggressive fluids



Raychem Cold-Applied Splice

Reliable Sealing

- Gel-based sealing
- Helps prevent water ingress under permanent pressure/weight

Easy to Use

- One-step termination
- No heating required



Raychem 200°C Solder Sleeve Devices

Versatile

- Crimp and controlled-solder splices and shield terminations

High Temperature

- Rated to 200°C or 260°C

Environmentally Sealed

- Heat-shrinkable insulation sleeve for sealing and strain relief

CONNECTORS



DEUTSCH DTS 38999 Connectors

Reliable

- Withstands severe vibration, corrosive, and high-temperature environments
- High-vibration connector
- Over-travel system
- Anti-fire locking system

Versatile

- More choice in shell sizes, materials, and options



DEUTSCH Lightweight Bulkhead Feedthrough

Weight-Saving Design

- Aluminum contacts up to 50% lighter than equivalent standard offering on male terminal

Compatible

- Utilizes industry standard MIL-DTL-38999 mounting dimensions

High Performance

- Current handling capabilities up to 500 amps AC



DEUTSCH Wildcat Micro Series Connectors

For Size- and Weight-Critical Applications

- 3, 5, or 9 contacts in two shell sizes
- Lightweight aluminum shells
- Bayonet or threaded coupling

Rugged

- Environmentally sealed with rear-removable contacts
- Cable EMI shield and boot termination



DEUTSCH 983 Series Connectors

Durable

- Withstands high vibration and temperatures to 260°C

Reliable

- Secure self-locking coupling

Versatile

- Designed for engine, APU, and pylon applications
- EN2997, ESC10, BACC63



CONNECTORS



DEUTSCH DBAS Series Connectors

High Reliability

- Easy and secure locking with a circular push/pull coupling ring for 100% mating
- Rated from -55°C to +200°C

Versatile

- Hermetic, rackable, lanyard, EMI shielded, dead-face, and cryogenic



Hermetic Connectors

High Performance

- Maintains a pressure differential between the two sections
- Gastight glass-to-metal sealing
- Withstand high pressures, extreme temperatures, and high vibration

Versatile

- Wide range of connector types and styles



POLAMCO Power Connectors

Capable

- 400 to 1000 amps

Flexible

- 38999-style, shell sizes 19 to 25
- Crimp, bus bar, standard lug termination

Rugged

- For high-vibration applications



DEUTSCH AS39029 Contacts

High Performance

- Achieve enhanced durability—1500 cycles (insertion/withdrawals)
- Terminate to aluminum or standard wires

More Compatibility

- Use with full range of mil-spec and aerospace connectors
- Meet ASE/EN requirements



DEUTSCH 369 Series Connectors

Rugged

- BACC options available
- Excellent temperature, vibration and fluid resistance

Weight and Space Savings

- Rectangular shape saves space
- Lightweight composite materials



DEUTSCH DMC-M Series Multi-Module EN4165 Connectors

Compact Flexibility

- Interchangeable modules for signal and power
- Wide range of configurations, backshells, and accessories for signal and power
- Standard and shielded versions

INTEGRATED SOLUTIONS



Sensors

Advanced

- Contactless and wearless monitoring of positions, linear and rotary motions

Versatile

- Binary (High/Low), Linear (0 mm to 200 mm) and Rotation (360° absolute)



HarnWare Harness Design Software

Powerful

- Speeds and simplifies harness design

Comprehensive

- Component selection
- Layout
- Assembly drawings
- Bills of material



Raychem Sealed Harnesses

Lightweight and Tough

- Small, lightweight, rugged, and environmentally sealed

Customized

- Custom designed to help meet your strictest requirements

Complete

- Harnesses include TE cables, connectors, backshells, tubing, molded parts, and adhesives



Conduit Systems

Reliable

- Spin-coupling EMC and environmental conduit adaptor
- Integral environmental seal

Rugged

- Highly flexible convoluted helical construction
- Fluid and crush resistant

Wide Range of Options

- Thin-wall insulation and composite materials
- Low temperature properties
- -55°C to 200°C temperature ranges

LET'S CONNECT

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit www.te.com/industrial to chat with a Product Information Specialist.

Technical Support

te.com/support-center

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SYSTEM AND COMPONENT COMPATIBILITY IN SEVERE AVIATION ENVIRONMENTS



te.com/ewis-swamp

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