



Pushing the Performance Envelope with Solutions Engineered to Your Needs

# Wire and Cable The Industry Standard for Rugged, Reliable Performance

As one of the world's largest suppliers of passive electronic components—including connectors and interconnect systems, relays, switches, circuit protection devices, touchscreens, sensors, and wire and cable — TE Connectivity (TE) brings advanced engineering, world-class manufacturing, and innovative thinking to help your next design go from concept to production.

As we have for over 60 years in serving the aerospace, defense, and marine industries, we put a premium on innovation when helping solve tough design problems. Talking to us early in your design cycle gives you the full benefit of our expertise. We can help you to:

- Shorten the design cycle and reduce costs
- Increase reliability
- Design for manufacturability
- Meet the demanding requirements for lighter, faster, more capable systems

#### RAYCHEM GENERAL WIRE AND CABLE

In short, we help you achieve a sustainable competitive advantage in some of the toughest and most severe application environments. Over 7000 engineers, 20 global design centers, and manufacturing in 20 countries are at your service for innovation and collaborative engineering.

# Solutions Engineered to Your Needs

We understand the demanding and diverse needs of aerospace, defense, and marine applications from avionics to control to passenger comfort. TE has been leading the trend of moving to applicationspecific value-added subsystems. These engineered solutions cut your engineering time, lower manufacturing costs, and increase reliability. And you will find that our sales and application support, logistics, and global presence help you move to production.



#### Hook-Up Wire SPEC 44 PVDF/PE

- Wire and Cable
- Dual-wall construction Resistant to most solvents, fuels and lubricants

Mil Spec version available



Hook-Up Wire
SPEC 55 XL-ETFE

- Wire and CableExcellent abrasion and
- cut-through resistance Excellent flexibility
- Low-fluoride and Electroloss filtering options

Mil Spec version available



Electroloss Filterline Wire and Cable

## SPEC 55F XL-ETFE Wire and Cable

- High Performance

  Suppresses EMI above 100 MHz
- Suppresses EMI above
   SPEC 55 insulation
- Rated for continuous operation
- -65°C to 200°C • 600 V rating
- Light weight, small size
- Mil Spec version available



Raychem 99M and 100G Cables

- TYPE 99M
- Def Stan 61-12 Part 18
- Highly flame retardantLow smoke and toxicity
- Spec 100
- Zero halogen
- Highly flame retardant





Raychem Spec 80 FlexLine Wire and Cable

#### Flexible Light Weight Hookup Wire

- Operating temperature range: -65° to +200°C
- Voltage rating: 600V
- Single and dual wall constructionsConductors available in tin, silver
- and nickel coated copperConductors available in Aluminum
- Gauge availability: 28 to 4/0 AWG

#### **Lightweight Marine Cables**

#### C-Lite Cable and C-Lite Fire-Resistant Cable

#### Small Size, Light Weight, Robust

- Marine approvals: DNVGL, ABS, BV, CCS, KR, NK and RMRS
- 30% lighter than standard marine cable
- Reduced diameter for easy routing
- Low-fire-hazard performance

#### Wire and Cable



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#### **RAYCHEM MULTICORE CABLES**



### **Raychem Multicore Cables**

- **Custom Cable Designs** Available in small order
- quantities Up to 40% smaller than
- comparable products Cost savings over hand-building
- point-to-point harnesses Ability to include data, power,
- and signal in the same bundle



**Raychem Defense Standard** 61-12 Part 25 Cables

#### **Light Weight Marine Cables**

- Low fire hazard multicore cables Stranded tinned copper
- conductor, LFH insulated Part 18 cores
- Thin wall to reduce size and weight
- Halogen-free cable jacket •
- Operating temperature range: -30°C to +105°C



#### VG-95218 Marine Cables

- Alternatives to Part 61-66
- System compatibility
- Increased EMC requirements •
- Reduction in weight and diameter
- Significantly increased service life
- Halogen-free cables with low fire hazard

#### **RAYCHEM CONTROLLED IMPEDANCE CABLES**



**Raychem Cheminax Controlled Electrical Cables** 

#### Small Size, Light Weight

- Coax, twinax, triax, balanced line, data bus available
- Improved electrical performance over RG cables
- 25-40% smaller and lighter than RG cables
- J1939-15/11 compliant cables available
- MIL-STD-1553 cables available



#### **RAYCHEM HIGH SPEED COPPER CABLES**



**Raychem High Speed Copper Cables** 

- EMI protection
- Increased bandwidth
- Lightening protection
- Reduced size and weight Harness component system compatibility
- Ruggedized to survive in harsh environments
  - Cat 5e, Cat 6a, Cat 7, 100Base-T, CANbus, IEEE 1394, USB 2.0/3.0, DVI, fiber





# **Ravchem Cat 6a Ethernet Cable**

- Data Rates: 10 Gb/s Ethernet Cable Excellent signal integrity at 10 Gb/s
- Operating temperature range from -65°C to +200°C
- Pending AS6070/6 qualification
- Harness components and connector compatibility
- Easier to terminate compared to tape wrapped designs





Zero halogen and FDR jacket material available Harness components and

**Ravchem Cat 7 Ethernet Cable** 

Excellent signal integrity

connector compatibility Available in both 24 AWG stranded TCC and 23 AWG solid BC conductor variations



Raychem 100Base-T (or 100Mb) **Ethernet Quadrax Cable** 

#### Data Rates: 100 Mb/s **Ethernet Cable**

- Excellent signal integrity at 100 Mb/s
- Smaller size and weight than Cat 5e cables
- Pending AS6070/1 gualification Harness component system compatibility



Raychem IEEE 1394 (Firewire) Cable

#### Data Rates: 100 Mb/s to 3.2 Gb/s

- JSFY18 approved
- Easier routing in confined spaces . Smaller cable bundles for
- improved installation Double braid to achieve excellent
- signal integrity
- Tough, high-temperature FEP insulation and jacket



#### **Raychem CANbus Cable**

- Data Rates: 1 Mb/s
- Flexible design
- Abrasion resistant High performance. •
- $120\Omega$  twisted pair Shielded and unshielded
- variations available Easier to terminate when compared to tape-wrap designs
- Designs available to SAE J1939-11 and -15 requirements



# **Raychem USB Cable**

#### Data Rate: Up to 480 Mb/s (USB 2.0) and 5 Gb/s (USB 3.0)

- USB 2.0 & USB 3.0 available
- Flexible design
- Abrasion resistant Custom designs available
- Designs available with operating temperature range: -65°C to +200°C



Qualified to MIL-DTL-24643

Harness components and

Tested in accordance with

ANSI/TIA-568-C.2

-65°C to +200°C

connector compatibility

Pending AS6070/2 gualification

Utilization of low loss foamed

High temperature fluoropolymers offer temperature ranges from

# Reliable 100Mb/s and 1 Gb/s

#### **Ethernet Cable** Waterblock capability

dielectrics

at 10 Gb/s



#### **RAYCHEM HIGH SPEED COPPER CABLES**



#### Raychem DVI Cable Data Rate: 3.96 Gb/s to

- 7.92 Gb/s
- Custom designs available
- HD video coaxial cables
  - Primarily used for video displays and uni-directional data transfer



#### **Fiber Cable**

#### Designs Available for Harsh Military and Aerospace Environments

- Meets requirements of BMS 13-71
- Meets requirements of ARINC 802
- Meets requirements of Def Stan 61-12 Part 31
- TE connector compatibility
- Designs available for shipboard marine cable using multimode and single mode fiber

#### **RAYCHEM POWER CABLES**



#### Raychem SHF-260 Power Cable Flexible High Temperature

# Power FeederOperating temperature range:

- -65° to +260°C (10k hours)
- Operating temperature range: -65° to +290°C (500 hours)
   Voltage rating: 1000V
- Tight routing bends without isolate wrighting or eracking.
- jacket wrinkling or cracking Conductors available in nickel coated copper
- Gauge availability: 24 to 4/0 AWG



Raychem Spec 80 FlexLine Wire and Cable

# Flexible Light Weight Hookup Wire to Power Feeders

- Operating temperature range: -65° to +200°C
- Voltage rating: 600V
- Single and dual wall constructions
- Conductors available in tin, silver and nickel coated copper
- Conductors available in aluminum
- Gauge availability: 28 to 4/0 AWG



## Raychem HI-FLEX Power Cable

- FDR25S
- Diesel fuel resistantTight routing bends without
- jacket wrinkling or crackingVery flexible with tight bend
- radius (3x static, 6x dynamic) Gauge availability: 16 to 4/0 AWG
- Available colors: orange,
- red, black
- Braided jacketed cables available

#### ZHENS

- Zero halogen, low smoke
- Tight routing bends without
- jacket wrinkling or cracking
  Flexible with tight bend radius (4x static, 8x dynamic)
- Gauge availability: 8 to 4/0 AWG
- Dual wall construction



# 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 te.com to chat with a Product Information Specialist.

### **Technical Support**

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North America (Toll)	+'
EMEA/South Africa	+;
EMEA (Toll)	+
India (Toll-Free)	+;

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+86 400 820 6015 +81 044 844 8180 +61 2 9554 2695 +64 (0) 9 634 4580

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Consult TE for the latest dimensions and design specifications.

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4-1773447-3 05/19

