# 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

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 application-specific 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.

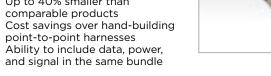
### MULTICORE CABLES



**Raychem Multicore Cables** 

#### **Custom Cable Designs**

- Available in small order quantities
- Up to 40% smaller than





**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

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**VG-95218 Marine Cables Alternatives to Part 61-66** 

- System compatibility
- Reduction in weight
- and diameter Significantly increased
- fire hazard

Increased EMC requirements

- service life
- Halogen-free cables with low

### **CONTROLLED IMPEDANCE CABLES**



**Raychem Cheminax Controlled Electrical Cables** 

# **Small Size, Light Weight**

- Coax, twinax, triax, balanced line.
- data bus available

AEROSPACE, DEFENSE & MARINE / WIRE AND CABLE

- 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

# Empower Engineers to Solve Problems, Moving the World Forward.

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

# **CONNECT WITH US**

We make it easy to connect with our experts and are ready to provide all the support you need. Visit te.com/support to chat with a Product Information Specialist.

### **QUALITY STARTS WITH THE RIGHT APPLICATION TOOLING**

Creating a quality crimp connection is essential to delivering high performance and reliability in extreme environments. From low to high volume wire processing, TE has you covered with a full range of application tooling and a global field service team.

- View all application tooling
- Connect with our experts to find the right tool for your application

# te.com/wireandcable

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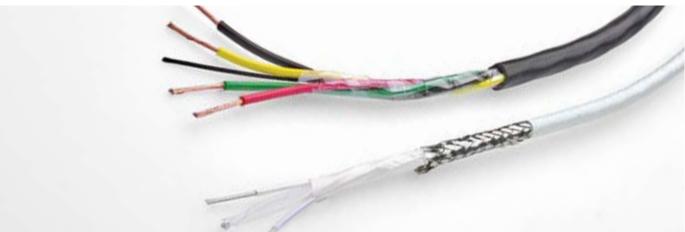
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### **WIRE AND CABLE**

TE Connectivity Aerospace, Defense & Marine 2900 Fulling Mill Road







# **WIRE AND CABLE**

THE INDUSTRY STANDARD FOR RUGGED, RELIABLE PERFORMANCE

Pushing the Performance Envelope with Solutions Engineered to Your Needs



#### **GENERAL WIRE AND CABLE**

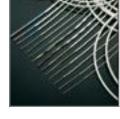


Hook-Up Wire

#### 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 Cable

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

Mil Spec version available



Hook-Up Wire SPEC 55 LF

#### Rugged

5x scrape abrasion within

#### Lightweight Single thin wall primary

**Low Outgassing** Less than 10 PPM



**Electroloss Filterline** Wire and Cable

## **SPEC 55F XL-ETFE Wire and Cable**

# **High Performance**

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

Mil Spec version available



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 constructions
- Conductors available in tin, silver and nickel coated copper
- Conductors available in
- Aluminum
- Gauge availability: 28 to 4/0 AWG

Raychem 99M and 100G Cables

- Def Stan 61-12 Part 18 Highly flame retardant
- Low smoke and toxicity
- Spec 100
- Zero halogen
- Highly flame retardant



**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

#### 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

**Raychem Cat 6a Ethernet Cable** 

Operating temperature range

Pending AS6070/6 qualification

· Excellent signal integrity

from -65°C to +200°C

Harness components and

connector compatibility

to tape wrapped designs

Easier to terminate compared

Raychem 100Base-T (or 100Mb)

Ethernet Quadrax Cable

Excellent signal integrity

Smaller size and weight than

Harness component system

Raychem CANbus Cable

High performance,  $120\Omega$ 

Shielded and unshielded

Easier to terminate when

compared to tape-wrap designs

• Designs available to SAE J1939-11

variations available

and -15 requirements

Data Rates: 1 Mb/s

Abrasion resistant

Flexible design

twisted pair

Pending AS6070/1 qualification

Data Rates: 100 Mb/s

**Ethernet Cable** 

at 100 Mb/s

Cat 5e cables

compatibility

at 10 Gb/s

Data Rates: 10 Gb/s Ethernet Cable



Raychem Cat 5e Ethernet Cable

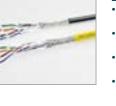
#### Reliable 100Mb/s and 1 Gb/s **Ethernet Cable**

- Waterblock capability
- Qualified to MIL-DTL-24643
- Pending AS6070/2 qualification Harness components and
- connector compatibility Utilization of low loss foamed dielectrics
- Tested in accordance with ANSI/TIA-568-C.2
- High temperature fluoropolymers offer temperature ranges from -65°C to +200°C



#### Data Rates: 10 Gb/s Ethernet Cable

- Excellent signal integrity at 10 Gb/s
- Zero halogen and FDR jacket
- Harness components and
- Available in both 24 AWG stranded TCC and 23 AWG



- material available
- connector compatibility
- solid BC conductor variations



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

Single Pair Ethernet (SPE)

- improved installation
- Double braid to achieve
- excellent signal integrity
- Tough, high-temperature FEP insulation and jacket





Raychem SHF-260 Power Cable

- -65° to +260°C (10k hours)
- Voltage rating: 1000V
- Tight routing bends without
- Conductors available in nickel coated copper
- Gauge availability: 24 to



Wire and Cable

# **Wire to Power Feeders**

- Operating temperature range:
- Voltage rating: 600V
- silver and nickel coated copper
- aluminum

# Wire and Cable

#### HIGH SPEED COPPER CABLES



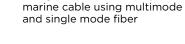


Fiber Cable

### **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



Ravchem USB 3.1 Cable

## Capable

- Provides power for USB 3.1 while still providing legacy USB 2.0 support
- Double the bandwidth of USB 3.0

• Use of an extruded component and jacket reduces termination time when compared to solutions using tape wrap construction



Ravchem USB Cable

Flexible design

+200°C

Abrasion resistant

Data Rate: Up to 480 Mb/s

• Custom designs available

(USB 2.0) and 5 Gb/s (USB 3.0)

USB 2.0 and USB 3.0 available

• Designs available with operating

temperature range: -65°C to

- · Operating temperature range: -65° to +290°C (500 hours)
- jacket wrinkling or cracking
- 4/0 AWG



Raychem Spec 80 FlexLine

# Flexible Light Weight Hookup

- -65° to +200°C
- Single and dual wall constructions Conductors available in tin,
- Conductors available in
- Gauge availability: 28 to 4/0 AWG



Raychem HI-FLEX Power Cable

# FDR25S

- Diesel fuel resistant Tight routing bends without
- jacket wrinkling or cracking Very 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

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