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Solutions for Ground Defense

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Our commitment. Your advantage.

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CONNECT WITH MISSION-CRITICAL RELIABILITY



Solutions for Soldier Systems

- Connectors and Backshells
- Field-Deployable Cable Assemblies
- Heat-Shrink Harnessing Components
- High-Performance Wire and Cable
- Microminiature/Nanominiature Connectors
- Signal-Level Relays
- Terminals and Splices

Nothing is more important on or off the battlefield than reliable systems. The electronic content of soldier systems and ground defense equipment expands dramatically—and space remains at a premium. As systems grow more sophisticated in capabilities, trust Tyco Electronics for advanced solutions to support the mission.

Our experience in supporting military readiness extends for more than 50 years. Today we

are still helping ground defense equipment achieve a decisive edge in capabilities, reliability, and mission readiness.

Solving Tough Problems

Soldier systems must be wearable, flexible, and ready to withstand the stresses of use. They also need to be lightweight and compact so they enhance capabilities rather than encumber mobility and endurance.

Typical Applications

- Night vision
- Target acquisition and sighting
- Weapons
- Core computers



HIGH-DENSITY CONNECTORS



FIELD-DEPLOYABLE CABLE ASSEMBLIES



HIGH-PERFORMANCE WIRE

Our nanominiature and microminiature connectors offer interconnect solutions for a broad range of applications. From standard to MIL-SPEC configurations to custom designs, we have the nano-, micro-, sub- and ultra-miniature connectors to meet your needs.

Rugged, lightweight, flexible cables interconnect soldier-worn systems (computer, battery, HUD, weapons) to deliver critical electronic data and enable advanced capabilities for warning sensors, vision, communications, navigation, and GPS in harsh environments.

Lightweight and flexible, our high-performance wires are easy to integrate into soldier systems to enable advanced capabilities for warning sensors, radio and network communications, navigation, and GPS, while maximizing endurance and mobility.



Solutions for Weapons Systems

- Connectors and Backshells (MIL-SPEC)
- Heat-Shrink Harness Components
- High-Performance Relays and Contactors
- High-Performance Wire and Cable
- Maintenance and Repair Kits
- Molded Parts
- Networking Products
- Power Cables
- Power Distribution Boxes
- Rugged Optics
- Terminals and Splices
- Wire/Harness Identification

FORCE READINESS BEGINS WITH DEPENDABILITY

Maximum mobility, enhanced situational awareness, and precise target acquisition and firing solutions all require new levels of sophisticated processing and control of systems ranging from laser range finders to turret positioning. They require efficient use of space without sacrificing reliability, adding unnecessary weight, or compromising mission effectiveness.

As the complexity of weapons systems increases, we help simplify interconnections, increase performance, and enhance reliability to achieve greater accuracy, faster response, and better communications.

Typical Applications

- Remote weapon systems (RWS)
- Masts
- Thermal imager sights
- IED defeat



SEALED HARNESS ASSEMBLIES



MULTICONDUCTOR CABLE



MAINTENANCE AND REPAIR KITS

With all the components and integration expertise, we can design, prototype, and produce sealed harness assemblies to provide you a ready-to-use solution that means reliability in the harshest environments.

Our expertise in advanced materials yields wire and cable that's smaller, lighter, and tougher than traditional counterparts, with wide temperature ranges, resistance to fuels and contaminants, and options for EMI/EMP shielding. They also offer the flexibility to route through tight spaces and sharp turns.

Maintenance and repair kits designed for field or depot use are custom configured to meet the needs of specific platforms and provide all the necessary tools and parts to speed repairs. Kits are packaged in rugged, lightweight cases for easy transport and convenient storage and can be provisioned with a wide range of wire, connectors, tooling, and accessories required for specific applications.



PROVIDE MORE SPEED IN NETWORK-CENTRIC WARFARE

Solutions for Communications

- Advanced Optical Modules
- Controlled Electrical Cables
- COTS Products
- Subminiature-D Connectors
- FilterLine Cable
- High-Speed I/O Connectors
- High-Speed Backplane Connectors
- Microminiature/Nanominiature Connectors
- Rack and Panel Connectors
- Rectangular Connectors
- RF Connectors
- Rugged Optics
- Signal Relays
- Solid-State Relays
- VITA 46/LRU Products

Integrated communications is central to modern military operations—networking all units to provide maximum situation awareness and effective deployment. Not only do communication systems require higher bandwidth, they must maintain signal integrity under demanding mechanical and environmental conditions within an often hostile EMI environment.

We give you more options in high-density packaging, high-frequency performance, and modularity to achieve maximum performance in minimum space.

Typical Applications

- Antenna tuners
- Tactical data communication systems
- Single-board computers



Fortis Zd CONNECTORS

Fortis Zd connectors accomplish the seemingly contradictory goals of high-speed backplane interconnections in a form factor that withstands the vibration and other mechanical stresses of military applications. Supporting data rates of 10+ Gb/s, the modular system builds on established technology to achieve rugged reliability and high-speed processing.



RF CABLE AND CONNECTORS

As a leading manufacturer of RF connectors, cable, cable assemblies, and application tooling, we provide a wide range of coaxial connectors for the ground defense industry including military-qualified SMA, BNC and TNC connectors along with a portfolio of small form factor high-frequency connectors.



RUGGED OPTICAL ASSEMBLIES

Optical technology saves weight and space and offers inherent EMI immunity. For high-density applications, our MTC high-performance modular rectangular connectors save space compared to circular connectors and accept standard ARINC 801 optical termini in a compact, lightweight design. We also offer ruggedized assemblies and expanded-beam connectors that give unmatched performance in harsh, dirty, and mechanically challenging environments.



TAP POWERFUL SOLUTIONS

Solutions for Power Distribution

- Lightweight AC/DC Relays and Contactors
- Mid-Range Relays
- Power Cables
- Power Connectors
- Power Distribution Units

We make power distribution efficient and manageable. We offer relays and contacts with make/break current ratings up to 2000 A, current ratings up to 1000 A at 28 VDC and 500 A at 900 VDC, and hermetic sealing for reliability. Our relays offer an industry-leading combination of high current switching in compact, lightweight packages.

Our power solutions combat the potential hazards of ground defense vehicles, withstanding the heat of the engine compartment, resisting harsh oils, fuel, and other solvents, and maintaining efficient power distribution under tough conditions of vibration and shock.

Typical Applications

- Turret power drives
- Main power management systems
- Powered doors
- Powered entry ramps



RELAYS AND CONTACTORS



CUSTOM POWER DISTRIBUTION UNITS



POWER CABLES

From power systems and driver displays to turret and firing controls, our relays and contactors are available in compact, lightweight designs, covering a full range of requirements from low-level signals to high-power needs.

Count on us not only for all the components, but also the expertise to integrate them into end-to-end solutions that are lighter, smaller, and easier to install. Our custom power distribution units consolidate multiple contactors, circuit-breakers, sensing and protective devices, and related components into modular packages.

Flexible power cables are insulated and jacketed with materials that provide improved performance over other materials. Offering particular advantages for specific applications, cables are available in single- and multiconductor constructions and shielded and jacketed versions. Cables offer size and weight savings, good resistance to abrasion and cut-through, and the ability to operate in difficult environments.



Solutions for Vetronics

- Connectors and Backshells
- COTS Products
- Custom Harness Assemblies
- Heat-Shrink Tubing
- High-Performance Wire and Cable
- High-Speed PCB Connectors
- J1939 CANbus Wire
- MIL-STD-1553B DataBus
- Networking Solutions
- Rugged Optics
- Signal Relays

SMARTER CONNECTIVITY FOR ENHANCED CAPABILITIES

Future combat systems rely on vetronics to create a single web connecting both the vehicle's subsystems and the overall command and control structure—linking all units down to the individual soldier. As subsystems become networked, with sensors providing information on everything from fuel consumption and power management to external threats, the data processing requirements go far beyond the capabilities of traditional interconnection systems.

- #### Typical Applications
- Command and control bus
 - CANbus systems
 - MIL-STD-1553 systems
 - Signal processing systems
 - Data control and distribution
 - Computer resources
 - Crew control and displays
 - Power generation and management

See Our Full Product Lineup

For additional products for the Ground Defense Market, visit our internet site at: www.te.com/ADM/ Ground-Defense



NETWORKING SOLUTIONS



NBC SEALED HARNESS ASSEMBLIES



RECTANGULAR CONNECTORS

We support major vetronics network protocols with connectors, cable, and assemblies. By partnering with us, we help you not only to meet the needs for high-performance networking of sophisticated subsystems, but also to satisfy the critical demands to conserve space, weight, and power consumption.

We provide components and sealed cable assemblies that resist nuclear, biological, and chemical (NBC) threats to temperatures up to 200°C. Contamination-survivable systems are hardened against NBC contaminants and decontaminants without losing the ability to complete the assigned mission.

A full line of rack-and-panel connectors support power, signals, RF, and optics in modular high-density rectangular connectors for easier “black-box” installation and removal of line-replacement units (LRUs) and similar equipment.