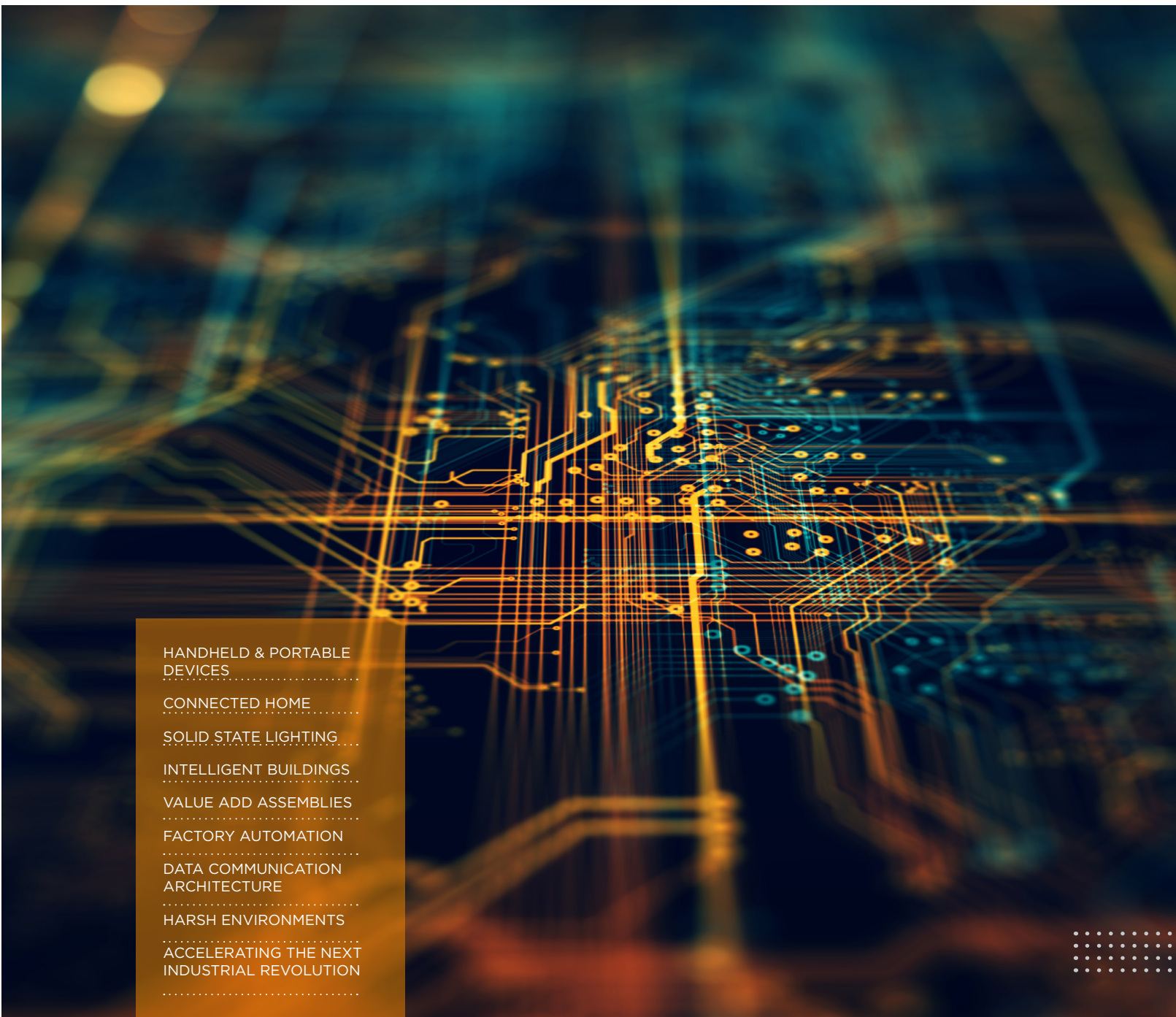


TE Connectivity's (TE) market-defining technologies and engineering expertise are setting the pace for the future of connectivity. This guide provides a quick view of how TE's newest products provide solutions across a range of market-leading applications.

NEW PRODUCT

Application Guide

October 2020

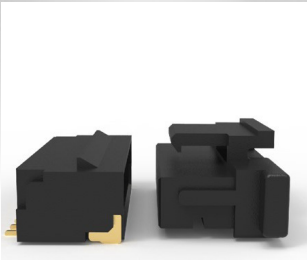
The background of the lower half of the page is a glowing, abstract image of a circuit board. The lines and components are rendered in shades of orange, yellow, and blue, creating a sense of depth and complexity. The lighting is soft and ethereal, highlighting the intricate patterns of the circuitry.

HANDHELD & PORTABLE DEVICES
CONNECTED HOME
SOLID STATE LIGHTING
INTELLIGENT BUILDINGS
VALUE ADD ASSEMBLIES
FACTORY AUTOMATION
DATA COMMUNICATION ARCHITECTURE
HARSH ENVIRONMENTS
ACCELERATING THE NEXT INDUSTRIAL REVOLUTION

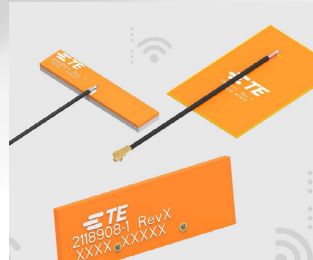


HANDHELD & PORTABLE DEVICES

The rapidly growing needs of the electronics industry are trending toward smaller, lighter and thinner devices with improved portability. TE is at the forefront of this trend with the latest technology advancements and a broad portfolio of new compact interconnects that keep engineers in all markets ahead of changing industry needs.



a



b



c



d

a. 1.0mm Locking Wire-to-Board Connectors

Addresses the needs of low-profile applications that require a reliable, secure wire-to-board signal or low-power connection. A locking feature strengthens the mating connection between the plug assembly and the receptacle and provides an audible and tactile click feedback when mating.

b. TE Antennas for Wi-Fi 6E

Can support triple bands, including the new 6 GHz band, with quick time-to-market. Enables new applications and services, greater network flexibility, and faster speeds with reduced latency in end devices and applications.

c. TE Antennas for 5G, NB-IoT and LTE-M

Provide a variety of band solutions ranging from 600 MHz to 6 GHz. They can address wide frequency band and various bandwidth demands from cellular Internet of Things (IoT) devices, helping to enable lower latency and higher peak data rate connection of 5G network communication.

d. MS5839 Chlorine Resistant Digital Pressure and Temperature Sensor

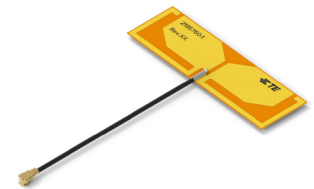
An ultra-compact digital altimeter that is optimized for applications where chlorine and saline are present. The robust, gel-filled design of the MS5839 enables operation in harsh media environments while providing accurate and reliable digital measurements.

e. Standard Portfolio of GNSS Antennas

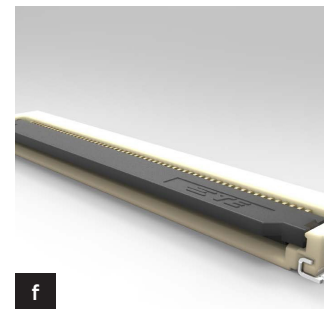
Make positioning wireless connections more reliable by using a range of multi-band antennas for individual device configuration.

f. Locking Flexible Printed Circuit (FPC) Connectors

Secure the FPC cable into the connector, preventing accidental demating in rugged environments. A ZIF (Zero Insertion Force) design results in less wear on the FPC contacts and increases mating cycle count.



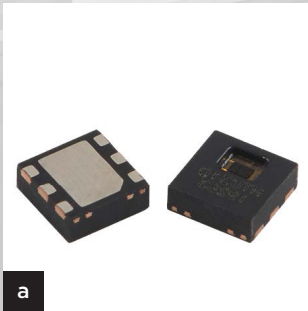
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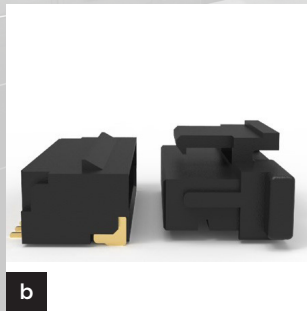
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CONNECTED HOME

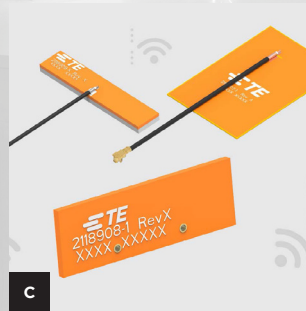
With our global network of engineers, TE can help turn your vision for connected home applications into a reality. With a broad range of connectivity and sensor solutions for home appliances and devices, lighting, HVAC, security, and more, TE is the ideal partner to help you bring your products to market fast.



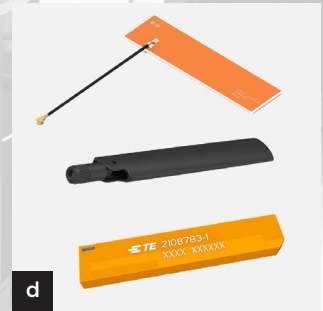
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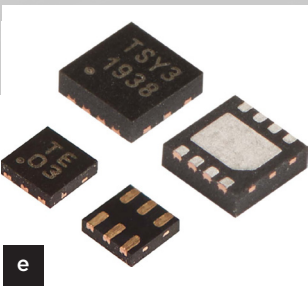
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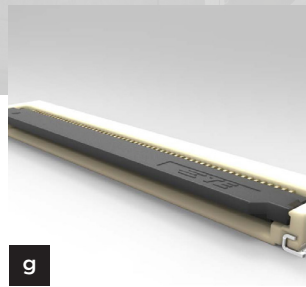
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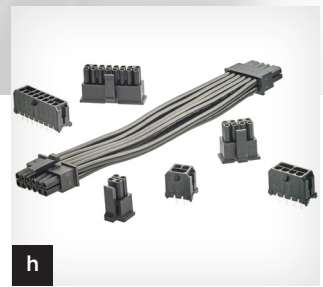
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a. [HTU31 Humidity and Temperature Combination Sensor](#)

One of the smallest and most accurate humidity sensors on the market that combines multiple functions and various interfaces (I²C, analog, voltage output) with an application-friendly operating voltage range (3.3-5.5V with 5V typical).

b. [1.0mm Locking Wire-to-Board Connectors](#)

Addresses the needs of low-profile applications that require a reliable, secure wire-to-board signal or low-power connection. A locking feature strengthens the mating connection between the plug assembly and the receptacle and provides an audible and tactile click feedback when mating.

c. [TE Antennas for Wi-Fi 6E](#)

Can support triple bands, including the new 6 GHz band, with quick time-to-market.

Enables new applications and services, greater network flexibility, and faster speeds with reduced latency in end devices and applications.

d. [TE Antennas for 5G, NB-IoT and LTE-M](#)

Provide a variety of band solutions ranging from 600 MHz to 6 GHz. They can address wide frequency band and various bandwidth demands from cellular Internet of Things (IoT) devices, helping to enable lower latency and higher peak data rate connection of 5G network communication.

e. [TSYS03 Miniature Digital Temperature Sensor](#)

With its industry leading ultra-compact size of 1.5 x 1.5 mm, the TSYS03 enables lower thermal response time, offering an ideal solution for precise temperature sensing in applications with space constraints.

f. [2.5mm Sealed Signal Double Lock Connectors](#)

Provide IP67 rated water and dust protection and offer features designed to make assembly easier for operators - including a snag-proof latch, polarized terminals, and optional TPAs.

g. [Locking Flexible Printed Circuit \(FPC\) Connectors](#)

Secure the FPC cable into the connector, preventing accidental de-mating in rugged environments. A ZIF (Zero Insertion Force) design results in less wear on the FPC contacts and increases mating cycle count.

h. [ELCON Micro Wire-to-Board Power Solutions](#)

Provide a high current up to 12.5A per pin in the standard industry footprint of 3.0mm with virtually foolproof mating.



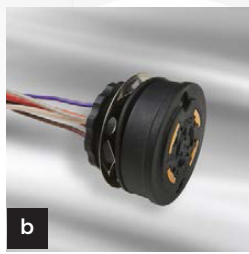
SOLID STATE LIGHTING

TE is a leader in the development of next generation Solid State Lighting (SSL) solutions. From outdoor luminaires to commercial refrigeration, new technologies drive lighting innovation. Whether you are creating a new system or enhancing an existing design, TE provides a wide range of new energy-saving solutions.



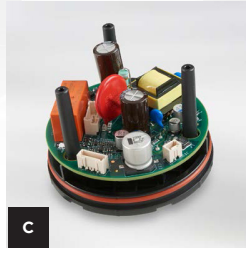
a. [LUMAWISE Endurance N ANSI C136.10 Receptacle Assembly](#)

ANSI C136.10 compliant receptacle offers three robust twist lock contacts to provide a reliable power connection to lighting control modules. Ideal for outdoor commercial and utility lighting.



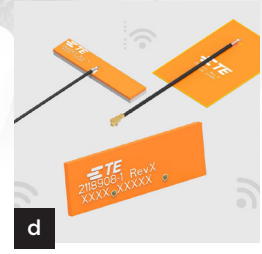
b. [LUMAWISE Endurance N Tool-less Rotatable Dimming Receptacle Assembly](#)

ANSI C136.41 compliant rotatable and hand rotatable up to 355° degrees for outdoor luminaires that require a NEMA based socket. Prevents wire tangling and/or stress inside the lighting fixture.



c. [LUMAWISE Endurance N Enhanced Base](#)

A network lighting control (NLC) base assembly which provides AC power switching and DC power supplies necessary for complex network lighting control solutions, creating a platform to de-risk project schedules and cost of design changes of NEMA/ANSI street and outdoor network lighting control solutions.



d. [TE Antennas for Wi-Fi 6E](#)

Can support triple bands, including the new 6 GHz band, with quick time-to-market. Enables new applications and services, greater network flexibility, and

faster speeds with reduced latency in end devices and applications.

e. [TE Antennas for 5G, NB-IoT and LTE-M](#)

Provide a variety of band solutions ranging from 600 MHz to 6 GHz. They can address wide frequency band and various bandwidth demands from cellular Internet of Things (IoT) devices, helping to enable lower latency and higher peak data rate connection of 5G network communication.



f. [LUMAWISE Type Z LED Holders](#)

Provide a quick and easy solderless connection to Chip-on-Board (CoB) LED arrays and are designed to enable customers to develop Zhaga compliant modules. Standard and low-profile Type Z50 LED holders feature snap-in LED retention that secures the LED in the holder during assembly and establishes proper positioning in the fixture.



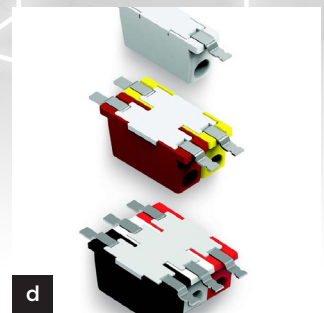
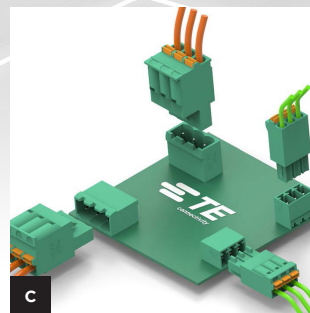
g. [LUMAWISE Endurance S Keyed Connectors](#)

Feature expanded electrical ratings plus alternate key combinations for protected mating. The compact design is UV resistant, appealing to the eye and can be mounted facing upward, downwards or sideways.



INTELLIGENT BUILDINGS

As today's buildings become increasingly efficient and connected, TE offers many solutions to solve complex connectivity challenges. Our new products seamlessly integrate controls and transmit power and data across multiple building systems, from environmental and illumination controls to people flow, convenience and service equipment, delivering safer and more secure living and working spaces.



a. TE Antennas for Wi-Fi 6E

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c. BUCHANAN Push-In Clamp PCB Connectors

Enable tool-less wire insertion of ferruled and unferruled wires. This saves up to 80% installation labor time vs. traditional screw-clamp termination, leading to important cost savings. The design of the PCB Connectors in 3.5 mm and 5.0 mm pitch consists of two-piece plug connectors with mating straight and right angle shrouded headers.

d. BUCHANAN WireMate ITB Modular Poke-in

Easy-to-use poke-in and wire release features help shorten installation time and provide extra flexibility for reuse and wire

replacement. The reduced profile of the connector takes only 2mm in height above the PCB top surface while horizontal wire insertion minimizes space usage beneath the PCB.

e. SOLARLOK 2.0 Connector

A tool-less field installable product using Insulation Displacement Contact (IDC) technology. Offering the installer an easy, quick and reliable connection from the PV Cable to the PV Panel. This incorporates the SOLARLOK 1500V PV4-S interface and meets the latest solar PV needs. SOLARLOK 2.0 connectors are available in both male and female versions and are gel-filled, which is a unique feature in the Solar market to ensure IPx8 water ingress protection.



VALUE ADD

ASSEMBLIES

Critical to the performance of system to system connection, TE's design experience supports complete performance, efficiency and applied cost savings. For essentially any subsystem including control boards, power systems, cable assemblies, controllers, timers or sensors, TE products enable a broad range of solutions.



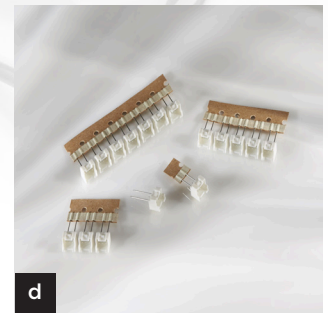
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a. [TE RBK-X1 Processor for Raychem Heat Shrink Products](#)

A semi-automatic unit designed specifically for sealing wire bundles, splice, and ring terminals. It includes long-life heating elements, operator key lock/password protection levels, individual selections for installation times, temperature and product size information.

b. [TE Antennas for 5G, NB-IoT and LTE-M](#)

Provide a variety of band solutions ranging from 600 MHz to 6 GHz. They can address wide frequency band and various bandwidth demands from cellular Internet of Things (IoT) devices, helping to enable lower latency and higher peak data rate connection of 5G network communication.

c. [BATTU Dual Wall Heat Shrink Tubing](#)

Flame-retardant, adhesive-lined tubing product specifically designed for power cable to terminal applications in harsh environments. Made from a polyolefin jacket with a thermoplastic adhesive inner wall and provides excellent electrical isolation, mechanical protection and moisture-resistance.

d. [Economy Power 2.5 Connectors](#)

The Economy Power 2.5 (EP 2.5) connector is a single row or dual row crimp connector system. Based on a 2.5mm (0.098") centerline pitch, it is a very compact solution. EP 2.5 connectors provide a comprehensive connectivity solution with vertical and right angle headers, optional TPA retainers, wire-to-wire and wire-to-board options.

e. [RZF Power Relays](#)

This compact relay offers through-hole technology (THT) printed circuit board (PCB) terminals plus top-mounted 0.187 x 0.020 in (4.8 x 0.5 mm) quick connect tab terminals for load connections. Its lowprofile design results in a mounted height about 19 percent less than that of some previous generation PCB relays with similar features and top mounted tabs.



e

FACTORY

AUTOMATION

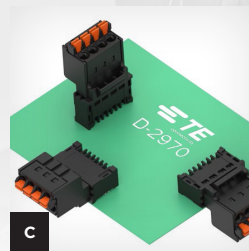
As production environments become increasingly automated and decentralized, even the smallest connections are mission critical. TE delivers new innovative solutions to connect, power and control every aspect of production—from machinery to process optimization on the circuit board to the most unforgiving factory floor.



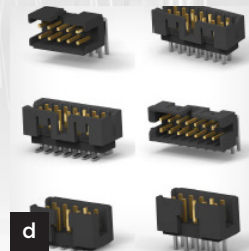
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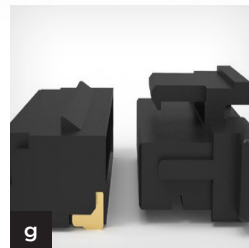
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a. M3200 Compact Industrial Pressure Transducer

A compact Industrial Pressure Transducer specially designed to measure liquid or gas pressure even for aggressive media such as contaminated water, steam, and mildly corrosive fluids.

b. Potter & Brumfield Solid State Relays SSRMP Mini Puck Series

Load ratings ranging from 10/16/25 AMP @ 240/ 480VAC, unlimited number of switching operations, added along with the ability of high-speed switching prevents interference of external signals.

c. Dynamic Series D-2970 Flex Push

A compact 5-mm pitch wire-to-board PCB connector with field-installable, time-saving push-in clamp termination. Features center-locking lever with clear, tactile, and audible mating feedback to ensure safe mating.

d. AMPMODU 2 mm Shrouded Headers

Features a double row configuration and are available in vertical and right-angle orientations. Options include both through-hole and surface mount terminations. Occupy 38 percent less space on a PCB than the standard 2.54 mm [0.100"] centerline.

e. AMPMODU 2 mm Wire-to-Board Crimp Receptacles

Occupy 38 percent less space on a PCB than traditional 2.54 mm [0.100"] centerline connectors. Includes standard and detent latching housing styles along with contacts for wire ranges 30 - 24AWG [0.05 - 0.22 mm²].

f. High Power Pin & Socket Connectors

Offers flexible design options for applications up to 350A. Easy installation is enabled by an optional floating feature on our ICCON Insert

products that allows for +/- 1mm radial misalignment when mating two printed circuit boards (PCBs) or busbars.

g. 1.0mm Locking Wire-to-Board Connectors

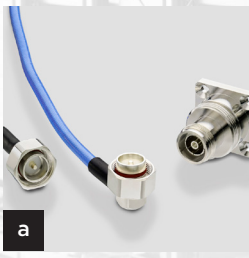
Addresses the needs of low-profile applications that require a reliable, secure wire-to-board signal or low-power connection. A locking feature strengthens the mating connection between the plug assembly and the receptacle and provides an audible and tactile click feedback when mating.

h. T2212 Thermal Transfer Printer

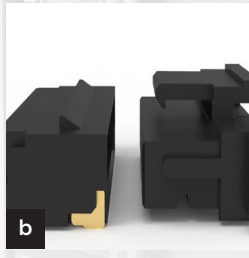
Specially designed to print on a wide range of TE labels, cable markers, and identification marker sleeves. Features new full-color touch screen interface, with intuitive icon-based setting adjustments.

DATA COMMUNICATION ARCHITECTURE

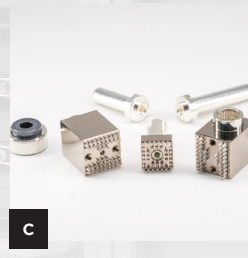
The dramatic increase of information flow around the globe has driven the need for communication equipment and architectures that support higher density and faster speeds. As a leader in the industry, TE supports these trends with connectors and cables capable of 10- to 25- Gbps and beyond. TE drives standards and protocols, expertise in signal integrity, and has a broad portfolio of connectivity solutions for every level of data communication.



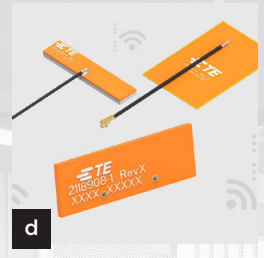
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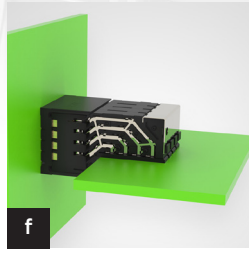
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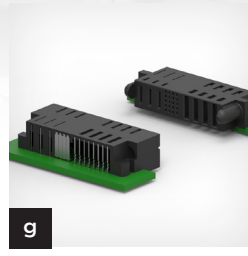
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a. [4.3-10 RF Connectors & Cable Assemblies](#)

The newest addition to TE's portfolio of rugged input/output (I/O) connectors and cable assemblies for communication infrastructure. About 35% smaller and 60% lighter than existing 7-16 RF interconnects.

b. [1.0mm Locking Wire-to-Board Connectors](#)

Addresses the needs of low-profile applications that require a reliable, secure wire-to-board signal or low-power connection. A locking feature strengthens the mating connection between the plug assembly and the receptacle and provides an audible and tactile click feedback when mating.

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e. [TE Antennas for 5G, NB-IoT and LTE-M](#)

Provide a variety of band solutions ranging from 600 MHz to 6 GHz. They can address wide frequency band and various bandwidth demands from cellular Internet of Things (IoT) devices, helping to enable lower latency and higher peak data rate connection of 5G network communication.

f. [STRADA Whisper R Backplane Connectors](#)

A critical upgrade path from 56G PAM-4 to 112G PAM-4, making future data center system upgrades easier. A newly-optimized footprint helps ensure low cross talk noise and enables the migration path to 112G.

g. [MULTI-BEAM Plus Power Connectors](#)

Address the market need for higher power and higher performance with the highest current per power contact

up to 140A/contact and 100A/contact with four adjacent power contacts.

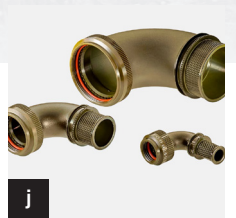
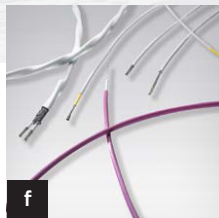
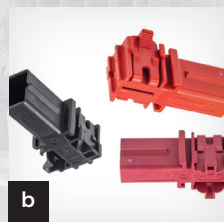
h. [High Frequency RF Connectors and Testing Cable Assemblies](#)

Support up to 67 GHz and can provide the reliable, high performance required by test & measurement and other demanding applications. This new RF product line is one of the highest performing in the industry, with extremely low insertion loss and VSWR.

HARSH

ENVIRONMENTS

Electronic components are expected to work in more extreme conditions than ever before. Withstand these rugged environments with TE's new products that provide protection against the most challenging situations your application may experience including vibration, moisture, debris and sunlight.



a. [SUPERSEAL Pro 2 Position Sealed Connector for Inline Applications](#)

A high-value connector for lower vibration chassis applications specially designed to maintain electrical performance in sealed inline applications. Constructed from UL 94 V0 flame-retardant material.

b. [PCON 12 One-position 90° Unsealed Connector](#)

Offers a one-position, unsealed power connection with positive and negative markings on each connector. Its 90° terminal orientation makes it ideal for establishing power connections in extremely cramped in-cabin spaces.

c. [EB16 Optical Single Mode and Multimode Pin and Socket Termini](#)

Size 16 optical contacts, fit-form compliant with MIL-DTL-38999 Series I and Series III and MIL-STD-1760 lanyard release size 16 AWG cavity.

d. [KILOVAC K250 High Voltage DC Contactor](#)

Hermetically sealed and designed for harsh environments. It is rated at 250 amps continuous, with an isolation voltage of 1000 Vdc, offering bi-directional power switching capability.

e. [TE Antennas for 5G, NB-IoT and LTE-M](#)

Provide a variety of band solutions ranging from 600 MHz to 6 GHz. They can address wide frequency band and various bandwidth demands from cellular Internet of Things (IoT) devices, helping to enable lower latency and higher peak data rate connection of 5G network communication.

f. [SPEC 55 Low Fluoride Wire and Cable](#)

Offers a wire insulation system that mitigates the concern for corrosion of components due to outgassing, in confined areas. TE's fluoride off-gassing values typically run in the single digits, which is important to Space, Launch and Missile Platform customers.

g. [M12 Industrial Ethernet Cable Assembly Connectivity](#)

Features 360-degree shielding against EMI for complete protection for data transmission, and are rated IP67 for resistance to dust and water. The assemblies are overmolded in either PVC or halogen-free polyurethane (PUR) cables,

h. [M12 X-code Field Installable Cable Plug](#)

Easy to install in the field without the chance of dropping parts into places where they can not be recovered from. The cable leads can be stripped at arbitrary length (no measuring upfront required).

i. [Industrial Resolvers For More Reliability And High Precision](#)

Provide a complete range of general market solutions, which can be applied in a variety of applications. Due to its design, the hollow shaft resolver boasts of a service life above average. Reliability as well as high precision and low space requirements supplement its favorable characteristics.

j. [Swept Elbow Backshells](#)

Designed with a smooth internal bore and a continuous bend radius. Available in the band termination (BT) style, these backshells offer up to a 20% weight savings over traditional backshells.



Industry 4.0: Accelerating the Next

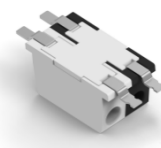
INDUSTRIAL REVOLUTION

In industrial facilities and on offshore platforms around the world, a bold vision for automating and integrating complex production processes is taking shape. Increasingly, manufacturers are looking to integrate digital technologies that increase flexibility, improve efficiency, prevent unexpected downtimes, and accelerate production. At the center of this evolution, known as Industry 4.0, is interoperability, an opportunity to create customer value by enabling reliable machine-to-machine (M2M) capabilities, deep learning from manufacturing processes, and greater control of innovative technology, including robotic systems and automated guided vehicles (AGVs).

DISCOVER WHAT'S NEW:

DESCRIPTION	PART #
BUCHANAN WireMate ITB Modular Poke-in	8-2834334-2
M12 A-code Male R/A to Female R/A Cable Assemblies	T4162224005-005
M8 Female Right Angle Single Ended Cable Assemblies	T4051420003-001
GNSS GPS AND GLONASS SMD ANTENNA	2118900-1
CAGE ASSY 1X6 QSFP DD HS EXTRUSION SAN	2342891-2
RCPT CONN R/A SMT 76 POSN QSFP D	2318579-1

LEARN MORE:



[BUCHANAN WireMate ITB Modular Poke-in - 8-2834334-2](#)



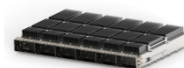
[M12 A-code Male R/A to Female R/A Cable Assemblies - T4162224005-005](#)



[M8 Female Right Angle Single Ended Cable Assemblies - T4051420003-001](#)



[GNSS Antenna - GPS/Glonass, PCB, Surface Mount - 2118900-1](#)



[CAGE ASSY 1X6 QSFP DD HS EXTRUSION SAN - 2342891-2](#)



[RCPT CONN R/A SMT 76 POSN QSFP D - 2318579-1](#)

INTEGRATING PRODUCTION SYSTEMS:

- Our broad portfolio of solutions enables manufacturers to operate factory machines and offshore equipment that can share data across platforms, predict maintenance requirements, automate complex repeatable processes, and coordinate always-on, on-demand operations, transforming mass-production facilities into customized-manufacturing factories and subsea platforms into real-time exploration and production networks.
- Industrial production is increasingly driven by greater automation, safety and energy efficiency. You can count on TE to work with you every step of the way to meet those requirements by developing solutions for all aspects of your production processes. Because TE designs and manufactures solutions that connect and protect the flow of power, data and signal — in every aspect of our lives.

INNOVATIVE SOLUTIONS

Whether you are designing a new system or enhancing an existing design, TE is your solution provider for electromechanical and electronic components.



Terminals and Splices

Discover terminals and splices that help reduce cost and enhance productivity



Drones

Develop cutting-edge drone technology



Relays

Help increase reliability and enhance productivity in your applications



Connected Home

Turn your vision for connected home applications into a reality



Power

Drive design solutions with TE's array of power products



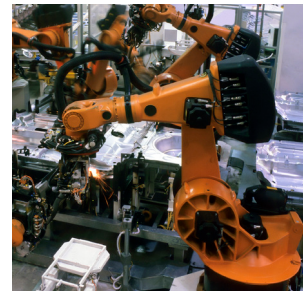
Wearable Devices

End-to-end connectivity for your wearable devices



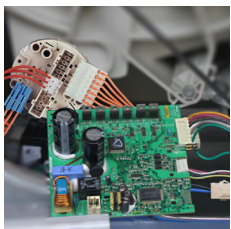
I/O Communications

Satisfy needs of diverse markets and solve size and data rate challenges



Motion & Drives

Save power and reduce applied cost while increasing system reliability



Subsystem Design

Support end products across many industries



Industrial Control

Reliable, quick to install and industry-proven components



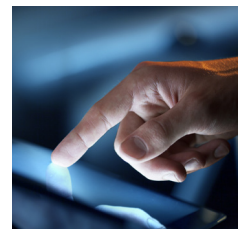
Building Safety and Security

Stay ahead of the trend for increased building intelligence



Material Handling

Save on system maintenance costs and down time



Portable & Handheld Devices

Ease the transition to higher data rates, increased protection and smaller packaging





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