

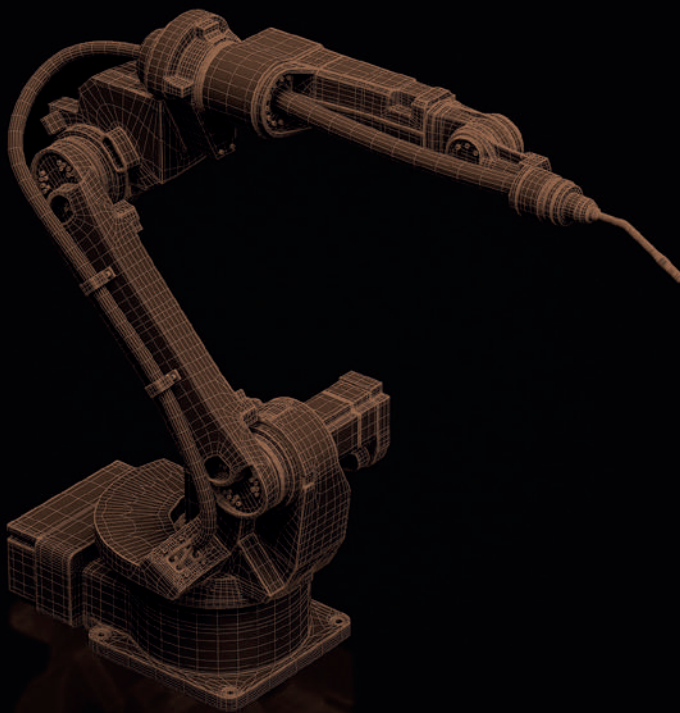


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Automation & Control Solutions





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The Specialist in Electronic Component Distribution

Why Choose TTI?

Why Buy from TTI?

Founded in 1971, TTI has steadily grown to become a world leading specialist distributor of electronic components. The company was founded on the premise that passive component purchasing could be made more efficient by offering product specialisation, customer-driven service and proprietary supply chain solutions.

Product Knowledgeable Experts

Our unique specialisation enables us to provide significantly better product knowledge to support manufacturing from design chain to supply chain. TTI's commitment to this specialty and our customers is as dedicated today as always.

Broader and Deeper Inventories

TTI maintains extensive inventories, stocking more than 850,000 part numbers globally – that's more connector, passive, electromechanical, discrete, sensor and power supply inventory available than from any other source.

Leading Edge Technology Products

TTI partners with manufacturers that lead the industry in new component technologies and can help solve any design challenge. We ensure the very latest and most technologically-advanced products are readily available from stock.

Supply Chain Excellence

From technical application advice to customised logistical solutions; TTI can add value throughout the supply chain by reducing acquisition costs, improving material flow through forecast analysis, provide safety stock and reduce receipt handling through consolidated shipments. We provide the BOM coverage necessary to deploy comprehensive supply chain solutions that reduce total cost of ownership and mitigate line down risk.

Global Distribution Centres

Our European headquarters is located just outside of Munich, Germany in Maisach-Germlinden. In total, we have 22,000m² of dedicated warehouse space and local sales and technical support in over 40 locations across Europe.

TTI has more than 111,000m² of automated warehousing in North America, Europe and Asia. All are linked into a global warehouse management system that provides superior customer service and overall business efficiencies. Wherever you are in the world, TTI can support you.

Quality and Reliability

TTI is the first distributor to have all global warehouse locations ISO registered and currently are certified to ISO 9001:2008 and ISO 14001:2004 Standards. TTI Europe is also certified to EN9120/EN9100, IECQ-CECC and ISO/IEC 27001:2005 Standards. Additionally, all of our European sales branches are certified ISO 9001:2008. TTI has one global documentation system that ensures that every TTI branch and warehouse in the world follows the same processes.

Year after year, customers rate our inventory availability, on-time delivery and accuracy among the very best in the industry – contact us today to find out what a true specialist has to offer.

About TE Connectivity

TE Connectivity (NYSE: TEL) is a \$12 billion global technology leader. Our connectivity and sensor solutions are essential in today's increasingly connected world. We collaborate with engineers to transform their concepts into creations – redefining what's possible using intelligent, efficient and high-performing TE products and solutions proven in harsh environments. Our 72,000 people, including over 7,000 engineers, partner with customers in close to 150 countries across a wide range of industries. We believe every connection counts – www.TE.com.



Global Distribution Centres with more than **111,000m²** of automated warehousing in North America, Europe and Asia.





Connectors

Heavy Duty Connectors – HDC

Heavy Duty Connectors for harsh environments. Beside the well-known standard connectors (6–24 pins), the product range also offers product series featuring a high number of pins (up to 216) and high current connectors of up to 500A. The housings are made from aluminium die-cast or thermoplastic with a degree of protection IP 65–69k. EMI-shielded and corrosion-protected variants are completing the product range.

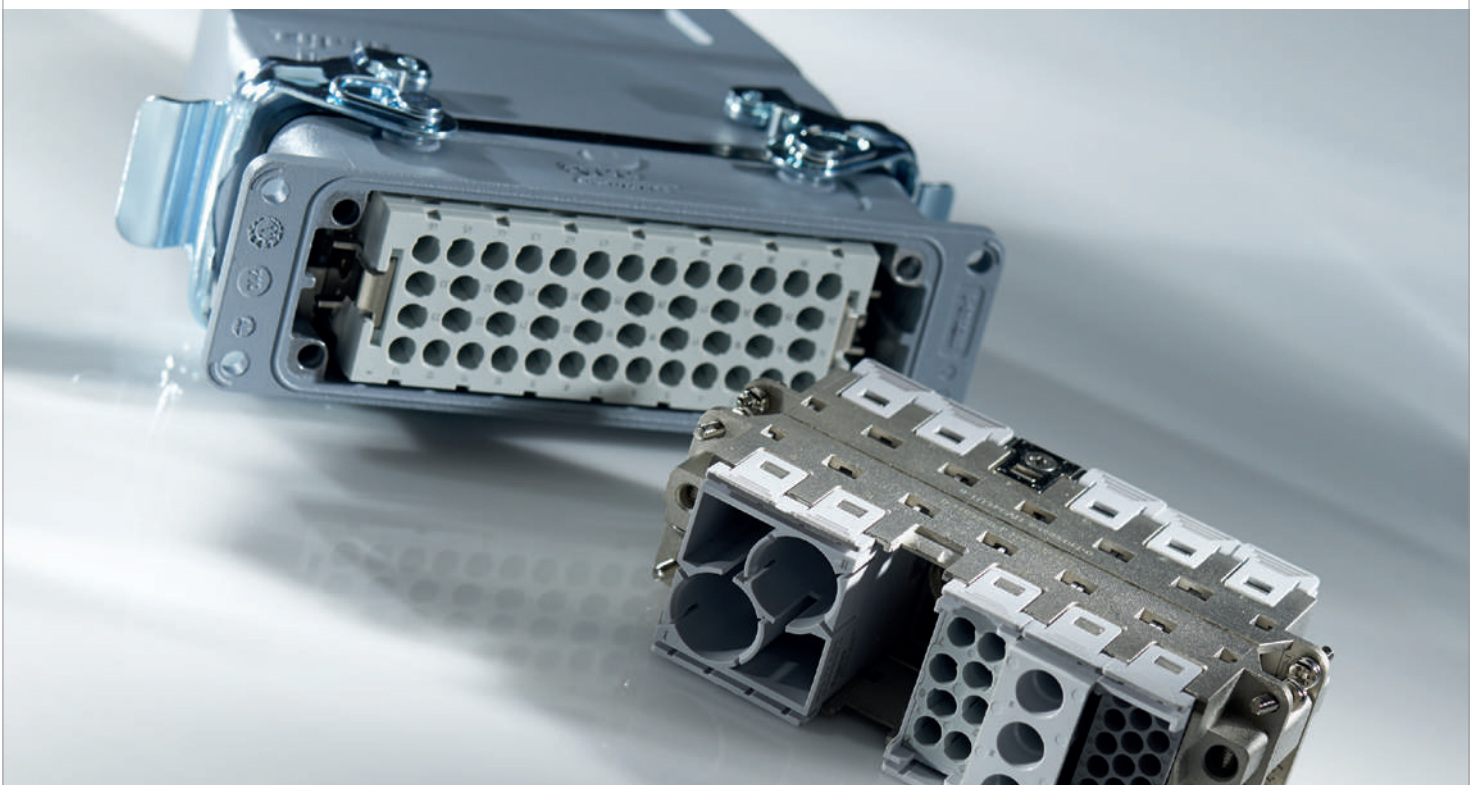
Features & Benefits

- Designed for reliably performing under the most demanding operating and harsh environmental conditions
- Rectangular, multiple position pin and socket connectors. Each connector is designated by four components: base, hood, and male and female modular inserts
- Most popular housing shell sizes are 1, 3, 4, 5, 6, and 8
- Modular systems offer power and signal transmission in one connector
- Pin and socket insert with fixing frame (housing), top or bottom of which can be assembled
- Choice of loading pin and socket insert in a fixing frame

Applications

- Machinery
- Automation
- Robotics
- Rail
- Energy distribution
- Renewable energy
- Construction machinery
- Professional light and sound

These heavy duty connectors are used in machinery equipment, factory automation, power management and railway applications.



Standard Contact Systems up to 10A

The 1.6mm contacts are available in a machined version (HN.D series), as well as in a stamped version (HD series) and are designed according to DIN 43 652.



Features & Benefits

- Stamped contacts – processing advantages because they are available on the reel
- Increased resistance towards tensile strain due to insulation crimp
- Purchasing advantages of up to 50% (vs machined contacts)
- Machined contacts – high mechanical safety
- Silver or gold plated surfaces
- Wire sizes from 0.14mm²

Contact Systems up to 16A



Features & Benefits

- 2.5mm contacts of the HE and HA series are available in screw, cage clamp or crimp versions, both gold and silver plated
- 2.4mm contacts HVT-crimp are available with up to 48 pins
- All contact carriers are laser printed and made from V0 plastics
- The contacts are available with gold or silver plated surfaces
- All types are also available for the so-called inverse mounting, i.e. installation in add-on hoods from the back of the mounting side

Contact Systems up to 20A – 40A



Features & Benefits

HSK series (crimped)

- Loose pieces
- Gold and silver plated
- 1.5 – 10.0mm²

HSM contacts (crimped)

- Loose pieces
- Gold and silver plated
- 0.75 – 10.0mm²



Connectors

Contact Systems up to 20A

Features & Benefits

- Crimped contacts HGO
- Available on the reel (suitable for high volume production)
- Tin plated
- 0.2 – 4.0mm²

Contact Systems up to 40A – 63A

Features & Benefits

HSS series (crimped, power contacts)

- Loose pieces
- Gold and silver plated
- 2.5 – 16mm²

Applications

- Welding robots
- Milling drives
- Inverters
- Generators, cabinets

Power Contact Systems > 150A



The so-called coil-spring contact does not follow the traditional contact geometry and therefore positively influences various parameters.

Features & Benefits

- The mechanical strength is increased because a solid machined part is used as socket contact which offers maximised protection
- The current carrying capacity is increased by using a contact spring with optimum outlines
- The spring is used to reduce the mating forces, which increases the number of mating cycles

- It also facilitates practical handling
- A divided contact system (crimp and contact area) enables the pre-wiring and offers retrofitting
- Available for up to 150A/1000V as well as 350A/3000V (rated values)

Applications

- Bogie wiring with corrosion protected IP68 hoods, whereby 1 drive is wired via 1 connector

Hoods & Housings



The hoods and housings offer an extremely impact-resistant and robust surface due to a powder coating that enables the usage in rough environments and are available in many versions.

Features & Benefits

- Standard powder silver-grey coating
- EMI protected housing for all EMI critical applications (EMV series)
- High pressure and anti-corrosion HIP-K series – excellent protection against corrosion (ASTM B117-09 1000h) and environmental influences due to hard anodic oxidation layer (hard coating)
- Protection IP20 up to IP68/IP69 for permanent protection against water and foreign substances
- Locking systems available as double-clip version, side clip, central lever (for industrial applications with limited space) and screws for IP68/IP69 protection
- Weight reduction through aluminium and zinc die-cast
- Environmental approval according to EN68
- High vibration and shock as well as access protection:
 - Physical shock proof: 5g
 - Vibration proof: 5-150Hz
- Impact test: free fall test according to IEC60512-5
- Special cable thread for reliable fit of the cable gland and the gasket
- Cable thread up to size M63 for large cable diameters and extra stiff cable
- Angled cable entry (wedge shape hoods) for optimised cable management and improved wiring space

High-Protection Hoods



The HIP and EMV series are pressure-tight hoods for connectors, sockets and add-on versions for demanding environmental conditions. The IP68 sealed products (HIP), interference and corrosion protected versions (EMV-K) as well as corrosion and rockfall-safe products (HIP-K) offer various benefits.

Features & Benefits

- Allow numerous termination threads (PG, metric, NPT)
- Screws and other locking elements made from stainless steel
- HIP-K series is considered rockfall-safe
- Inexpensive socket housing due to die-cast parts for all sizes
- Add-on housing which can be mounted from the backside
- Central locking clip available as option
- Wedge shape for improved assembly handling



Connectors

Connectors

Inserts

The laser-printed inserts offer a permanent and a clear marking and are available for screw crimp and cage clamp termination.



Features & Benefits

- Screw termination series (contact included in the insert): HA, HE, HEE, HSB, HMX 4/8
- Crimp termination series: HA, HE, HG-Q, HVT, HN.D, HDM, HSS (Power), HF (Power)
- Spring clamp termination series: HA, HE
- Combination inserts for signal and power contacts in one insert – HMX series
- HVS modular system
- Inserts for up to 3000V; 350A; 216 contacts or up to 150mm² wire cross section
- Series have certified approval according to VDE, UL as well as CSA and flame-retardant materials according to UL94-V0

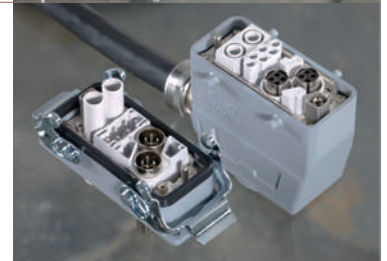
HVS Modular Systems

The High Variable System (HVS) offers more than 50 different modules and can be used as stand alone unit, without industrial connector enclosures.



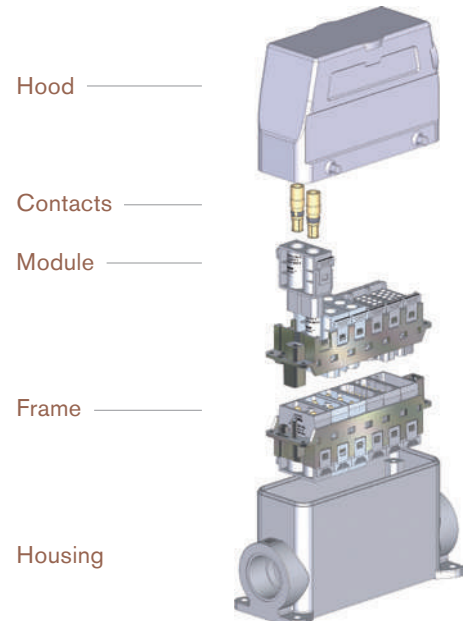
Features & Benefits

- Broad product portfolio allows customised interface solutions
- Highest modularity >50 different modules, including power, signal, pneumatic, fibre, quadrax, twisted pair
- Crimp termination contacts and spring clamp
- Integrated Protection-Earth-Contact increases safety for users and equipment
- Tool-free and easy assembling of the components
- Fits into all HTS hoods and housing
- Male and female in 1 frame possible
- Laser printed inserts made of V0 material
- Cavities can be left free for upgrading



Applications

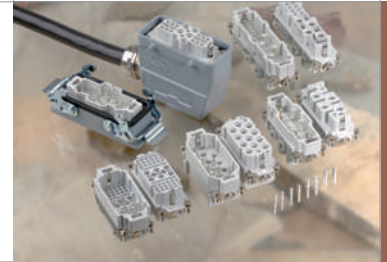
- Inverters
- Slip-rings
- Pitch-drives
- Hybrid interfaces
- Robot control





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HMX Inserts



Connectors

Features & Benefits

- Hybrid construction, allowing power and signal transmission in one mono-block insert
- Screw and spring termination
- 10A-80A / 400V – 690V
- 2 – 24 positions for wires 0.5 – 16mm²
- V0 Material
- UL approved
- 5line systems (3 phases, 1 neutral, 1 ground)

Applications

- Industrial machinery
- Railway
- Material handling

High-Power Connectors – HF Series

The HF8 and HF12 hoods are an evolution of the HIP and EMV product family, focusing on generously dimensioned assembly space. These series offer a sealed system up to 150°C with high and standard add-on hoods.



Features & Benefits

- Contact system with coil spring technology
- Mating force reduced by about 30%
- Reduced weight through aluminium die-cast
- Increases mating cycles by about 50%
- Allows wire cross sections of up to 150mm² (ground)
- Nominal voltage up to 3000V and nominal current up to 350A
- Additional wiring space and improved performance
- Excellent EMI features and corrosion protection
- IP68 rating for permanent protection against water and foreign substances
- Cable thread up to size M63 for large cable diameters

Applications

- Rail
- Machinery



Connectors

Series HG-Q – Plastic IP65 Connectors



Features & Benefits

- Weight reduction
- Re-forced and demountable locking device

Hoods & Housings

- Plastic PA 6.6 GF25 reinforced; standard (black) and EMI protection (silver/metallised)
- IP65 protection in locked position

Inserts

- HG-Q 4+2 (+ grounding)
- HG-Q 8 (+ grounding)
- HG-Q 10 position
- HG-Q 5 – size 1, 3/4 (+ grounding), 5 (+ grounding), 7/8 (+ grounding)

Applications

- Pick/place units
- Entertainment systems
- Drives

ARISO Contactless Connectivity

A hybrid interconnection system, based on both contactless power and contactless data technology, which can easily connect over a short distance without physical contact.

Where traditional connectivity reaches its limits due to space restrictions, vibrations, dust and dirt, contactless connectivity can provide highest design flexibility and help reduce maintenance and installation efforts. ARISO Contactless Connectivity can replace complex and expensive harness constructions and slip rings – enabling connectivity where connections were not possible before. With ARISO Contactless Connectivity, issues typically affecting connectivity in harsh environments, such as water, dust or vibrations, will no longer impact the reliable delivery of power, data and signal.

Features & Benefits

- Freedom of movement that includes tilt, angle and misalignment
- Design flexibility and cost savings by transfer of power and signal through fluids and walls
- Easy, on-the-fly connections – e.g. connecting remote IOs or sensors on moving machine parts
- Rotational freedom that enables faster rotation with more than 360°
- Unlimited mating cycles in wet and dusty environments for reduced maintenance costs
- Safe and reliable connections in harsh environments through vibration resistance and fully sealed couplers



Industrial Mini I/O Connectors

Big on Reliability, Small in Size. When it needs to be small, it needs to be mini. TE's Industrial Mini I/O connector provides increased reliability and vibration resistance at a quarter the size of an RJ45.

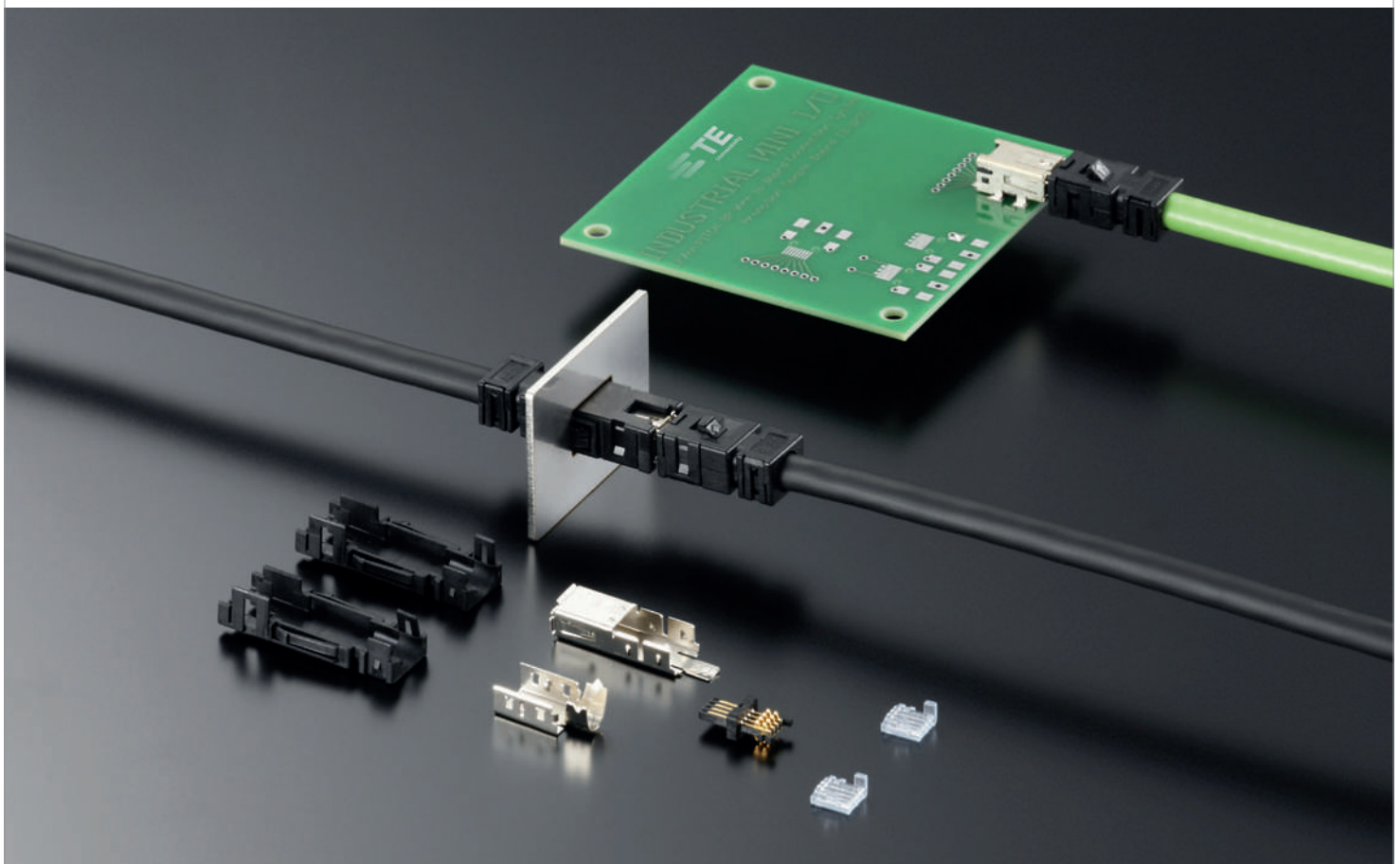
More reliable than RJ45. With only one quarter the size of conventional RJ45 plugs, the Industrial Mini I/O connector provides critical space saving on a PCB – space that can now be used more efficiently. Accidental unplugging of a network connection due to shock, vibration or pulling on cords causes expensive downtime in an industrial environment. The Mini I/Os unique locking system is specified to 100N of pull force. With its innovative piercing termination, the Mini I/O Field Installable version decreases the time usually needed to terminate the wires through soldering and with an easy to use hand tool, the field assembly in virtually any environment is now possible.

Features & Benefits

- Small, compact size (space savings) solution that allows for increased design flexibility
- Time saving wire termination
- Enables wire-to-wire connections
- Keying interface to prevent mis-mating
- Intermateable with receptacles of various configurations (SMT, Right Angle, Straight, TMT)
- Reliable connections in industrial and vibration-prone environments

Applications

- Industrial communications
- Motion and drives
- PLCs
- Robotics





Connectors

Industrial Ethernet RJ45 Variant 14

TE's Industrial Ethernet RJ45 connectors offer a ruggedised design for use in Industrial Ethernet applications and are equipped with a robust and fast termination technology, utilising the company's common core design in the RJ45 Modular Plug Series.



ODVA Variant 14 for harsh environments. TE also offers an easy-to-install rugged connector series that meets the Profinet requirements/standards. Next to the line of plastic Variant 14-Compliant connectors, TE provides its IP67 Metal Shell connector system that also includes customisable cable assemblies. Designed for use in the harshest environments, the connector features a quick-connect push pull coupling mechanism per the IEC 61076-3-117 Variant 14.

Features & Benefits

- IEC 61076-3-117 connection system
- Sealed IP67 solution in metal or plastic
- Push Pull locking provides reliable sealing in harsh environments
- Pass through product variants available

Applications

- Factory automation industry
- Motion and control, and robotics
- Industrial ethernet systems
- Industrial printers and diagnostic equipment
- Industrial PC solutions, PLCs
- Industrial data network systems
- Industrial control cabinets and units

USB 3.0 Connectors

TE's USB 3.0 connectors meet all standards of the USB Implementers Forum, Inc. (USB-IF).



It supports a five gigabits per second (Gbps) data rate for fast syncing on the go—a 10x performance increase over USB 2.0. The high-performance USB 3.0 connector is backward compatible with USB 2.0 while offering optimised power efficiency. It eliminates device polling and reduces active and idle power requirements. According to the USB-IF, the standards body controlling the USB specification, the USB connector is the most popular form of interconnect in the consumer electronics marketplace today, based on broad proliferation, versatility, and ease of use.

Features & Benefits

All the features of USB 2.0, and much more:

- Allows unit load of 150 mA (50% increase from USB 2.0 minimum unit load)
- Offers up to 6 unit loads (900 mA, an 80% increase from USB 2.0)
- Up to 80% more power than USB 2.0
- Minimises user wait-time
- Backward compatible
- Minimise connector form factor variations
- Ease-of-use aspects
- Optimised power efficiency
- Plug-and-Play capacity



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Industrial USB Connectors

TE's USB connectors are ideal for all industrial USB applications where a high locking force or a sealed design for the use in industrial applications is required.



Connectors

TE offers a broad range of USB connectors. The IP20 series features an integrated locking mechanism with audible and tactile feedback, creating an excellent interconnect solution for internal USB cable routing without having to worry about the plug coming loose during transit and use. A sealed and highly reliable version (IP65/IP67) for rugged and harsh environments is also available.

Features & Benefits

- USB 2.0 standard, USB type A and B connection system
- Rugged IP20 and Sealed IP67 solution
- Integrated locking mechanism provides excellent strong lock strength
- Secondary locking with metal spring accomplishes higher locking strength
- Available pass-through receptacle style
- Audible bayonet locking function provides reliable connections in harsh environments
- Intermateable with existing USB Type A receptacles
- Bulkhead receptacle mounts to either outside or inside panel cutout
- Protective cover available for the receptacles

Applications

- Factory automation industry
- Industrial printers and diagnostic equipment
- Industrial PC solutions, PLCs
- Industrial data network systems
- Industrial control cabinets and units
- Motion and control, inverters and robotics
- Fieldbus systems

Full Size USB

- Series A receptacles
- Flat, right angle and vertical board mount
- Series A receptacles
- Series A plug kit
- Right angle and vertical board mount plug kits
- Locking receptacles
- Vertical and right angle, through-hole receptacles
- Latching plug kits
- Vertical and right angle, board mount plug kits
- Series B receptacles
- Right angle and vertical board mount receptacles

Mini and Micro USB

- Mini USB
- Vertical and right angle board mount receptacles and plug kits
- Micro USB
- Right angle and vertical Micro USB receptacles and plug kits



Connectors

M8/M12 Connector System

TE Connectivity's M8/M12 Connector System for machine industrial automation and control applications provides a solution that safely and reliably ensures the communication in industrial environments. Designed to IEC-61076-2-101, this connector system also finds applications outside of its traditional industries where a compact, reliable connection system with environmental protection is required. TE's solution includes an extensive connector range of receptacles, cable assemblies and IO boxes, and provides users with an interface that supports higher bandwidth needs meeting the requirements of up to 10 Gb/s.



TE's broad product portfolio provides customers with shielded and unshielded cable assembly options in both Cat5e and Cat6A cable types. For re-wiring on site, a range of field serviceable connectors are provided that include male and female connectors in 2, 3, 4, 5, 8 and 12 positions and Y connectors. Additional styles are available on request including alternative mounting arrangements for panel mount connectors and double ended cable assemblies.

Features & Benefits

- X-coded connectors support higher bandwidth needs of up to 10 Gb/s
- Easily installable connector system
- Environment protection IP67 and IP68
- Connector ranges include male and female connectors in 2, 3, 4, 5, 8 and 12 positions and Y Connectors
- Alternative mount arrangements for solder cup or PCB
- Panel mount and distribution version available
- Shield reliable
- All connectors also available with silver plated contacts for higher conductivity
- Quick and secure connection
- Backwards compatible
- M8/M12 Connector System provides full industry standard solution including quick turn, prototype cable assemblies
- Reliable communication with reduced downtime in industrial and harsh environments.

Applications

- Industrial automation
- Automobile manufacturing
- Machine tools
- Semiconductor manufacturing
- Factory automation machines
- Manufacturing of solenoid and sensor valves

One complete solution for your requirements:

- Broad range of straight, angled, LED and multi-position field installable and board connectors that are easily intermateable
- X-coded connectors support higher bandwidth needs of up to 10Gb/s
- Customised cable assemblies offer a solution for your specific needs in different lengths, temperatures or flexibility
- Passive distribution boxes offer reduced cabling and increased ease of installation and maintenance

M8/M12 The codings

Coding	Description	
A-coding	Actuator-sensor plug connections for DeviceNet, 10 link and Profibus	
B-coding	Fieldbus connections for Profibus and Interbus	
D-coding	Industrial Ethernet, Profinet, Ethernet/IP and EtherCat	
S-coding	Motor, Frequency-convertors, motor operated switches, PSUs for Power, 620 V, 12A	
T-coding	Fieldbus comp, passive distribution boxes, motors, PSUs for Power, 63V, 12A	
X-coding	Cat6A, high-speed 10Gbit rugged industrial Ethernet applications IEC 61076-2-109	



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Circular Plastic Connectors (CPC)

Circular Plastic Connectors (CPC) enable engineers to design rugged products quickly and affordably by offering a versatile range of power and signal connectivity solutions. These connectors meet rugged and space-saving requirements and are designed for either IP65 or IP67 sealing when needed.



With their circular design, CPCs eliminate rectangular connector waste when space saving is critical. Customers can speed up their go-to-market, reduce installation time and can select from a broad portfolio to move from idea to design to production faster. In case of a hybrid approach requirement, customers can quickly pair power and signal for a variety of input and output requirements. The lightweight, all-plastic shell is a lower cost alternative to metal. The removable crimp contacts replace coupling rings and thus make repair easier and decrease downtime.

Features & Benefits

- Lightweight, all-plastic and metal-shell connectors
- Quick connect/disconnect capability with thread assist, positive detent coupling
- Built-in pin and socket protection

- Polarised for proper mating of connector halves
- Removable contacts and replaceable coupling ring make field repair easy

Applications

- Energy management systems
- Power generator
- Material handling
- Agriculture equipment
- Industrial machinery
- Rolling stock
- Forklifts
- Robotics
- Many more
- Medical instrumentation and equipment

UV-Resistant Sealed Circular Plastic Connectors (CPC)

Now offering housings with UL F1-rated material and environmental sealing. The new Sealed CPC using UL F1-rated resin is ideal for UV resistance in outdoor applications.



The UL F1 rating meets industry standards for long-term UV exposure, making the housings suitable for outside applications where parts are subject to frequent or extended periods of exposure to sunlight. The new CPC is sealed to IP67 with no additional enclosure needed to protect the mated connector from water exposure, making it easier to install and lowering the cost of installation. The circular configuration requires less space than a rectangular style connector with an equal number of contacts for an efficient use of space on your equipment.

Receptacle and plug housings accept Type III+ signal contacts and/or AMP POWERBAND (size 8) contacts. The housings come in three series designed to handle standard signal, power with current up to 50A per contact and combinations of signal and power in the same housing. All housing variations include sealing to IP67. Mounting options include panel mount and free-hanging.

Features & Benefits

- Lightweight, all-plastic and metal-shell connectors
- UL 94V-0 rated and made of stabilised, heat resistant, self-extinguishing thermoplastic material
- Quick connect/disconnect capability with thread assist, positive detent coupling
- Built-in pin and socket protection
- Polarised for proper mating of connector halves
- Removable contacts and replaceable coupling ring make field repair easy

Applications

- Industrial machinery, factory automation; material handling equipment
- Rail and transit vehicles and systems
- Medical instrumentation and equipment
- Communication equipment, networking, data storage, computers and peripherals
- HVAC, commercial and building equipment
- Lighting and signage
- Motor vehicles – auto/bus/truck; off-road and recreational vehicles; agricultural machinery; construction equipment
- Aerospace and defence equipment



Connectors

Circular Hybrid Connector (CHC)

TE Connectivity (TE) introduces the Circular Hybrid Connector – CHC with 8 power and 4 data contacts for Industrial Ethernet Connections, the Circular Hybrid Connector has been designed for machine automation applications that require a higher performance data connection and power of up to 10 Amps.

The connector provides highly reliable connection technology and meets the demanding durability and quality requirements of real-time ethernet applications in industrial automation. Combining power supply and data into one single connector provides customers with greater flexibility in machine architecture. With VARAN-bus standard compatibility, the connector supports, for example, fast change over times of molds in molding machines, and simplified cabling reduces installation time by up to 50%.

Features & Benefits

- Extremely robust contact design for longer durability with stainless steel locking lance and multiple contact points
- Hybrid design, combining power and data communication

- Gold, silver and tin plated contacts for industrial automation requirements
- Radial sealing elements provide IP65 sealing performance
- Turning catch-lock ensures safe locking even in high shock and vibration applications

Applications

- High-performance process control systems applications
- Machine automation applications
- Factory automation systems
- Stand-alone or remote power units
- Molding machines, transport and sorting machines
- Control valves and control units
- Motors





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Dynamic Series Connector

Dynamic Series is a broad product family that provides connector solutions ranging from signal level circuitry through power circuit connectivity in a ruggedised, industrialised package. The connector family is designed for use in control system applications and is suitable for a wide range of applications requiring high density, signal and power applications.



Connectors

Dynamic Series consists of wire-to-board, wire-to-panel and wire-to-wire connectors with diverse housings available to meet most applications. Standard crimp and spring clamp variations of parts are available. The standardised contacts limit the amount of application tooling required.

Connector System

• Signal Application Connectors

Meet the Dynamic Series Signal products – TE's robust connector family for signal lines for both wire to board and wire to wire applications.

• Power Application Connectors

Our power connectors reflect our strong focus on customer success and provide an efficient and reliable device connection solution for you and your customer.

• Special Components

Dynamic Series also covers a wide range of expanding connector types to meet non-standard solutions. This includes IP67 sealed signal types, connector for branching power and pneumatic add-ons. Mounting and installation accessories are also part of our portfolio.

Product Applications

- Industrial control
- Human machine interface (HMI)
- Data communication
- Motion and drives
- Production equipment
- Robotics
- Servo drives
- Elevator/escalator
- Power distribution
- Industrial process controls
- Factory automation computers
- Numeric controllers
- Variable frequency drives
- Switching power supplies

Features & Benefits

• High Performance Contact

- Large high performance contact area prevents chance of disconnection over time
- Box contact provides three points of contact to ensure the constant flow of electricity and minimises costly downtime associated with contact failures
- Made of high conductivity material
- Gold plated versions available

• Robust Housing Structure

- Vibration resistant designed to withstand the most demanding and inhospitable environments
- Full box housing design leads to long service life and great electrical integrity
- Robust retention legs and contacts provide additional strength, acting as a strain relief and ensuring reliability
- Clear visible circuit numbers

• Secure & Fast Installation

- Housings are keyed preventing mis-mating and misalignment, simplifying and reducing installation/maintenance time in the field for service engineers
- Positive audible locking sound when inserting the connector provides assurance of positive mating
- Coordinated colours and designs on both headers, receptacle housings and tools prevents human errors and increases throughput during manufacturing processes

• Flexibility

- Diverse housings and different position sizes support maximum design flexibility
- Tooling options available for semi-automated termination, as well as hand tools for field termination and repair



Connectors

CHAMP Connector Series

Designed for high-density applications, these I/O product board-to-board and wire-to-board plugs and receptacles are highly durable and available in position ranges from 20 to 200.



Features & Benefits

- Ribbon style contacts and fully shrouded housings
- Plug and receptacle in both vertical and right angle mounting
- Shielded system with IDC termination
- Reliable and durable connections
- Design flexibility in different configurations
- Space saving

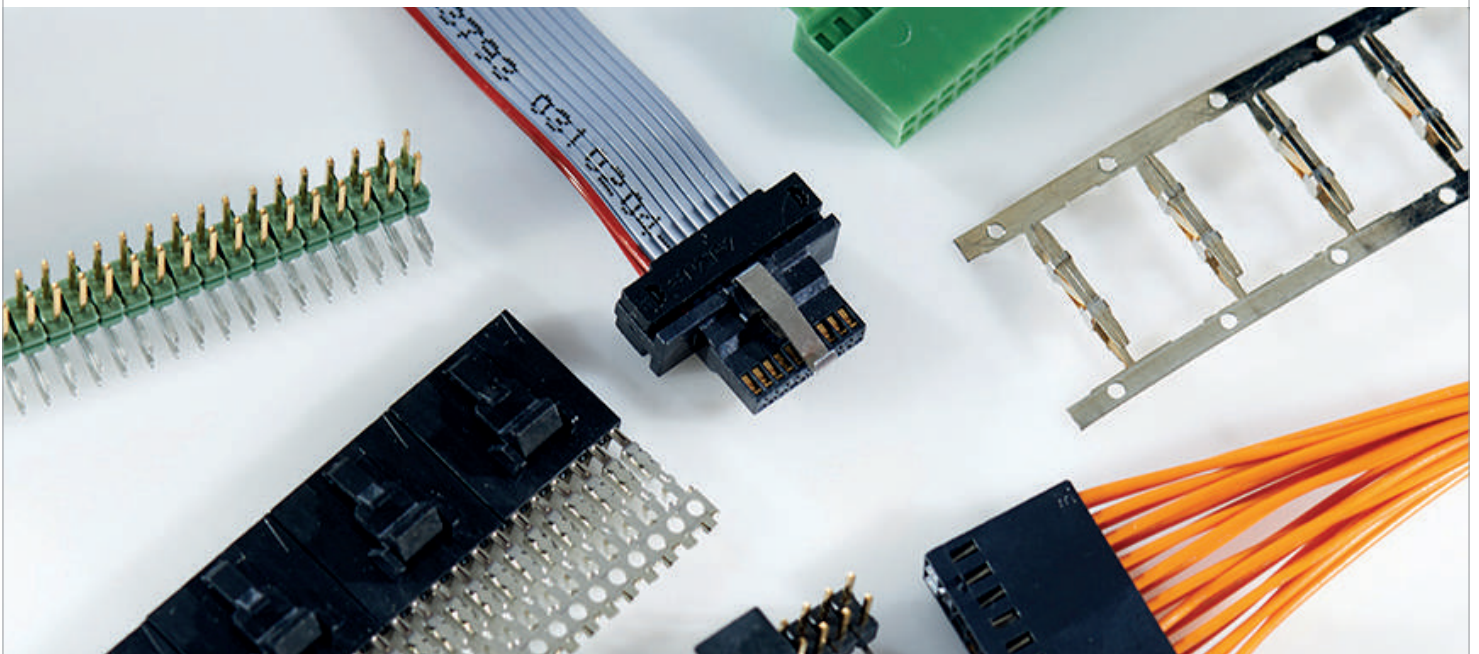
Applications

- Industrial machinery
- Test and medical instruments
- Network bridges, routers and hubs

AMPMODU Interconnect System

The AMPMODU system gives you what you need – design flexibility and high reliability. The signal standard for Automation and Control applications.

TE's AMPMODU interconnect system is the signal standard for Automation and Control applications. Reliable and economical, it includes board-to-board, wire-to-board and wire-to-wire connectors. The large variety of components and application possibilities, combined with small size and outstanding quality, make it the ideal interconnect system for a wide range of industrial applications and systems.



AMPMODU 50/50 Grid

A small System with great Benefits. A variety of components possibilities, combined with small size and outstanding quality, make AMPMODU 50/50 Grid suitable for high density systems.



Parallel stacking in 3 different heights or mating with latched cable assemblies make for a reliable connection. The polarised housings add user safety and contact protection. The dual beam contact is reliable and well suited for applications subject to severe shock/vibration while the ribbon cable connectors save board space and aid in production efficiencies.

Features & Benefits

- Categorised in three groups: board mount headers, board mount receptacles, and cable to board receptacles
- Available in double row, vertical or right angle, shrouded, from 10 up to 100 positions
- Formed from high conductivity copper alloy and selectively plated with gold for higher performance and reliability
- Housings on all board-mounted assemblies are made of high temperature tolerant materials, all available in SMD technology and incorporate stand-offs for free drainage of flux cleaning solutions
- Integral latches for positive locking to shrouded mating headers

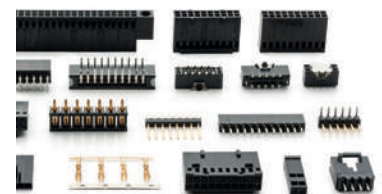
- Suitable for high density systems
- Mechanical hold downs to aid in solder processing
- Three available board stack heights offer flexibility in mezzanine application architecture

Applications

- Storage equipment
- Medical equipment
- Automotive controls/infotainment system
- Servers
- Test/measurement devices
- Factory automation
- Robotics
- Telecommunication equipment
- Appliances
- Aerospace and defence equipment test/measurement devices
- Factory automation
- Telecommunication equipment

AMPMODU Mod IV V

A System with Benefits. The AMPMODU IV & V interconnects mate to AMPMODU breakaway, shrouded and unshrouded headers with a .025" (0.64) square post.



The connectors include AMPMODU IV & V wire-applied crimp contacts and housings with three levels of contact mating pressures with single and double row configurations available in .100 CL.

Features & Benefits

- Wire-to-board system
- Polarisation
- Strain relief
- Mounting ears and detent
- Keying plugs available

Applications

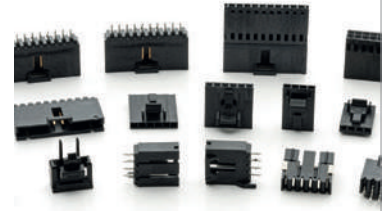
- Automotive controls
- Computers
- Medical instruments
- Vending
- Instrumentation and test equipment
- Telecommunications
- Storage equipment
- Appliances
- Gaming and video equipment



Connectors

AMPMODU MTE

A System with Benefits. The AMPMODU MTE with the coupling shrouds permit ganging of receptacle assemblies for dual-row configurations. Additionally, panel mount versions are also available.



Features & Benefits

- Assembly design offers latching and polarisation
- Coupling shrouds permit ganging of smaller receptacle and pin assemblies with guide ribs to form larger single or dual row latching connectors
- Available in three platings
- Swage option on posts provide retention in PC board
- High temperature option is SMT compatible to 265 degree wave

Applications

- Automotive controls
- Instrumentation and test equipment
- Telecommunications
- Storage equipment
- Appliances
- Medical instruments
- Vending appliances
- Copiers

AMPMODU System 50

A compact System with Benefits. The variety of components possibilities, combined with small size and outstanding quality, make AMPMODU System 50 suitable for high density systems.



The polarised housings help prevent incorrect mating and add user safety and contact protection. The dual cantilever contact beam with built-in anti-overstress feature is reliable and well suited for applications subject to severe shock/vibration.

Features & Benefits

- The variety of components and application possibilities, combined with small size and outstanding quality, make AMPMODU System 50 suitable for high density systems
- Polarised housing helps prevent incorrect mating
- Shrouded housings add user safety and contact protection
- Integral latches provide locking
- Contact insulation support is well suited for applications with long life cycles
- The dual cantilever contact beam with built-in anti-overstress feature is reliable and well suited for applications subject to severe shock/vibration

- Ribbon cable connectors saves board space and eliminates problems of latch height compatibility
- Besides Ribbon cable connections, also Flat Flexible Cable products available

Applications

- Storage equipment
- Medical equipment
- Gaming equipment
- Automotive controls
- Servers
- Test/measurement devices
- Factory automation
- Telecommunication equipment



AUTHORIZED DISTRIBUTOR

AMPMODU Headers

AMPMODU Headers provide a wide variety of rugged and reliable .100" x .100" (2.54 x 2.54) centreline configurations utilising .025" square posts.

Header options include single row and double row layouts with through-hole, press fit, and surface mount PCB application capabilities. Vertical and right angle header orientations can be supplied in gold and tin plating.

Types & Benefits

Types:

- Standard
- Breakaway
- Reeled breakaway
- Shrouded
- Stacking

Benefits:

- Economical
- Convenience
- Fewer PN's to stock
- Pin protection
- Flexibility in board architecture

Applications

- Automotive controls
- Computers
- Medical instruments
- Vending
- Instrumentation and test equipment
- Telecommunications
- Storage equipment
- Appliances

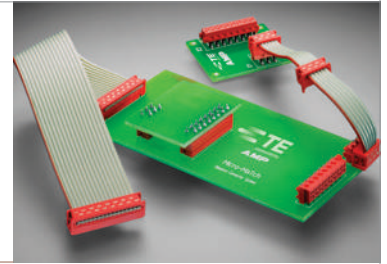


Connectors

Connectors

Micro-MaTch Interconnection System

Miniaturisation and the trend toward higher density of electronic functions on a substrate led to the introduction of smaller interconnection systems.



TE's Micro-MaTch interconnection system enables design engineers to cover multiple signal applications with one of the smallest flat ribbon cable connections. The connector family, with its contact spacing of 1.27mm, fully complies with the electronic packaging requirements of today and the future. The system offers a range of board and wire connectors, enabling a variety of wire-to-board and board-to-board interconnections. The Micro-MaTch contact concept is essentially different from other systems available. By its design, the traditional failure mode in tinplated connections, fretting corrosion, is prevented. Due to an additional positioning spring in the female part, relative movements caused by vibrations/thermal expansion between male and female contacts are absorbed. By preventing movements on the contact spot, a gas tight connection can be guaranteed under all circumstances. The contact spring is located in the board connector and not in the cable connector, which is usually the case. The counterpart, incorporated in the cable connector, is a simple pin, either with an insulation displacement section, suitable for the mass termination of cable or with a kinked solder leg to be soldered onto a PC board.

Features & Benefits

- One of the smallest systems available at 1.27mm
- High performance/cost ratio
- Wire connectors supplied on-tape and suitable for mass termination of 28AWG (0.08mm² to 0.09mm²) ribbon cable

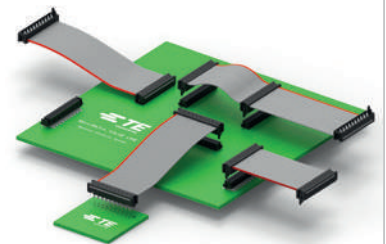
- Tin plated contact design
- Minimum contact force of 2.0N
- Fully plated contacts: no bare edges and no migration of corrosion products
- Full range of application tooling from hand tool to fully automated equipment
- Contact spring design prevents fretting corrosion and allows for cost-effective, longer-lasting connection
- High force contact system eliminates unnecessary movement in high-vibration applications
- Product breadth provides a variety of product design options
- Tooling options provide manufacturing application flexibility
- Insulation displacement contact (IDC) allows for labour cost savings
- Polarisation pin and audible snaplatch support alignment and prevent mismatching

Applications

- Communication systems
- Production equipment
- Robots and motors
- Control cabinets
- Monitoring
- Material handling
- Industrial equipment

Micro-MaTch Value-line

TE Connectivity added a new series of Micro-MaTch connectors to the well-established Micro-MaTch family: "Micro-MaTch Value-line". This new series features a more economical design and meets the needs of less demanding applications in the Industrial, Consumer and Datacom industry.



The Micro-MaTch Value-line is built around the existing high quality Micro-MaTch connector system and has been developed to suit environments where a broad temperature range, many mating cycles and vibration resistance are less relevant. On a pitch of 1.27mm, Micro-MaTch Value-line offers a variety of wire-to-board inter-connections.

Features & Benefits

- Cost effective wire-to-board system with tin plated contact design
- Miniature connector system to save space on the printed circuit board
- All connectors supplied on Tape & Reel and suitable for automatic placing and termination

- Highly reliable gas tight and corrosion free connections between wire and insulation displacement contacts
- Full range of application tooling from hand tool to fully automated equipment
- Cable connectors accepting all standard ribbon cable

Applications

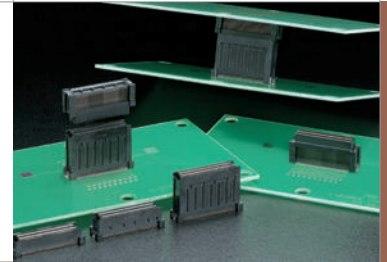
- Communication systems
- Production equipment
- Robots and motors
- Control cabinets
- Monitoring
- Material handling
- Industrial equipment



AUTHORIZED DISTRIBUTOR

Micro-Stack Interconnection System

Micro-Stack interconnection system enables design engineers to cover stacking signal applications with a unique floating mechanism, easing the restraints of board design/mounting, and extended life cycle.



The receptacle side has a separate structure, and the tolerance between units of the floating unit is $\pm 0.3\text{mm}$ in the x-y directions when the connector is mated, which will ease constraints in device design and manufacture. Automatic mounting by chucking the connectors will reduce costs. In addition, the connector features a two-point contact structure between the roll sides and ensures high contact reliability for tough factory environments.

Features & Benefits

- Increase signal counts while realising miniaturisation
- Compatible with automated assembly processes

- Anti-vibration design by refined wipe length and contact force
- Unique floating mechanism
- Extend product life-cycles with renewed cost-effectiveness structure
- Full automation to keep the assembly competitive

Applications

- Factory automation
- Industrial
- PLC

Terminal Blocks

TE's terminal blocks offer the design engineer a reliable connector system with a variety of connection styles and range of centrelines.



This solution is used for a range of data, signal and power applications. The Eurostyle features a rising cage clamp which promotes numerous reliable connections and disconnections at field installations. This offering provides class leading quality and many different design opportunities. The centrelines range from 6.35mm – 14.3mm and include a variety of banner strip connector options in dual barrier, tri barrier and double row connectors.

Features & Benefits

- Multiple wire access angles (90° and 270°) to header interface
- Mates with industry standard headers on the same centreline spacing

- Fast wire connections
- Custom marking and printing available
- Available in additional colours
- Wide range of wire-to-board and wire-to-wire terminal blocks
- Custom solutions available
- Accessory options available to improve interconnect performance

Applications

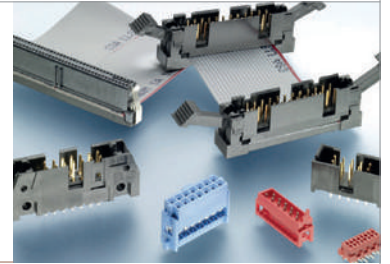
- Factory automation
- Industrial



Connectors

Ribbon & Flat Cable Products

Ribbon Cable connectors are wire-to-board devices used to make the transition between cable and PC board circuitry.

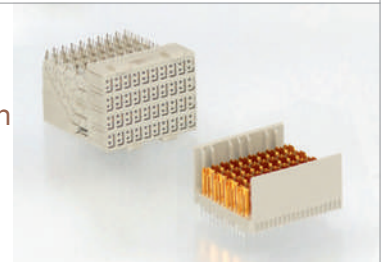


They find heavy use within equipment to connect one board to another or one subsystem to another. TE has a broad portfolio of ribbon and flat cable products. Flexible Film Cable (FFC) Products

- Flexible Printed Circuit (FPC) Connectors
- Flat Ribbon Cable
- FLEXSTRIP Jumpers
- AMP-LATCH Connectors

High Speed Communication Products

TE's newest products provide technical leadership to meet the communication industry's need for higher bandwidth, longer reach, higher density and lower noise with next generation signal, fibre optic, copper and power solutions.



TE is committed to meeting customer needs as requirements for increased interconnect performance intensify, not only with brand new, state-of-the-art designs but with enhanced versions of existing connector families as well.

- MULTIGIG VITA 41/46 Products
- Z-PACK Connectors
- AdvancedTCA (ATCA)
- MULTI-BEAM XL Connectors

Wire-to-Wire & Wire-to-Board Connectors

TE offers an extensive range of interconnect solutions for wire-to-wire and wire-to-board applications using both crimp and IDC technologies.



A wide range of circuit positions and wire sizes can be accommodated and additional retention mechanisms, strain reliefs and sealing features are available across multiple product families.

- SL 156 Connectors
- AMP CT Connectors
- MTA 100/156 Connectors
- MATE-N-LOK Connector Systems



AUTHORIZED DISTRIBUTOR

The Power Triple Lock Connector System

The Power Triple Lock connector system has been developed for improved power and signal applications.



The Power Triple Lock connector system has many added customer benefits for performance assurance including 3 in 1 reliability, 4 keying/colour options, and 3 housing materials with high temperature material standing up to 150°C temperature.

The Power Triple Lock connector system is available in three levels of housing materials with keying/colour code to prevent mis-mating on the assembly line: Standard 105°C – natural, purple, blue, yellow; high temperature up to 150°C – light grey; and glow wire – dark grey, brown, green, orange.

Features & Benefits

- Audible 'lock' latch provides positive feedback when cap and plug are mated, while the ribs surrounding the latch prevent wires from becoming snagged underneath the latch

- Optional Connector Position Assurance (CPA) ensures that once engaged the Power Triple Lock connector system cannot be mistakenly disengaged
- Optional Terminal Position Assurance (TPA) ensures that contacts are fully seated within the housing and provides an added measure against contact backout

Applications

- Appliances
- Garage door openers
- Automotive
- Commercial building
- HVAC
- Industrial machinery
- Rail

CoolSplice Connectors

A series of insulation displacement connectors (IDC) to make connecting of wire-to-wire simple.



Both connectors can be used to make a fast connection between wires or between flat-ribbon cable and wire. The connectors are designed to be used with most common hand tools to make the electrical termination simple and cost efficient. TE design engineers also put a lot of effort in the ease of use of these connector products. With no training, it is possible to make perfect connections and in 2 simple steps, the termination can be made.

Features & Benefits

- Easy factory or field installation, due to simple push button termination
- Insulation displacement technology eliminates the need to pre-strip the insulation
- Independent terminations for left and right sides of connector
- Available in unsealed and sealed configurations (IP65 and IP67 rating) which provide waterproof protection
- Slim-symmetrical glossy appearance with transparent cover for a visually controlled termination and inspection
- Internal strain relief prevents wire back-out from the contact



Relays

TE's relay solutions include key electromechanical switching components used within safety relay circuits.

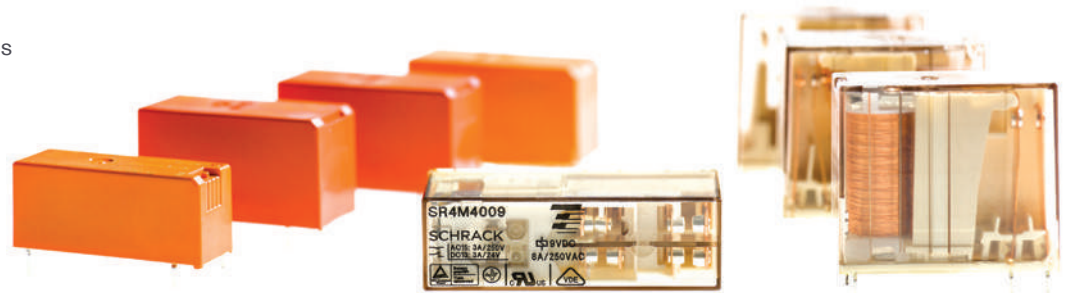
They are designed to switch outputs of safe PLCs for automation and control or to monitor machines and processes. That's why force guided relays are essential for safety control applications. They help protect people's lives when danger needs to be switched off – safely. Whether the application is a basic pump control circuit, a complex interface with a programmable logic controller or a safety circuit, industrial machinery designers specify components from TE relay products.

Applications

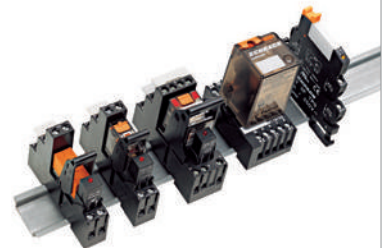
- Motion and drives
- Industrial networks
- PCBs

Features & Benefits

- Forcibly guided contacts according to EN 50205
- 2/4/6 pole
- Segregated contacts
- Small size
- Safety within motion and drives
- Space saving



Panel Plug In (PPI)



Features & Benefits

- Plug-in or panel-mount
- 1, 2, 3 and 4 pole versions
- Transparent covers
- Dry circuit to 32A switching ability
- Manual operator options for testing
- Mating sockets available

Applications

- Elevator/escalator
- Light controls
- Building energy management
- Solar
- Security/access controls/fire detection and alarm

SNR Interface



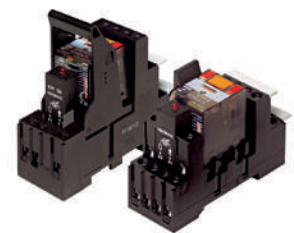
Features & Benefits

- 1-pole 6A, 1 Form C (CO), 1 Form A (NO)
- Cadmium-free contacts, AgNi 90/10 for AC loads
- Only 5mm wide
- Flat version available
- Sensitive coil 170mW
- Reinforced insulation (protection class II)
- Reinforced coil pins for DIN rail socket
- High function and packing density

Applications

- Interface technology, slim coupling elements
- PLC
- Timer modules
- Centralised and decentralised heating controls

PT Interface



Features & Benefits

- 2, 3 or 4 Form C (CO) contacts
- 2-pole 12A, 3-pole 10A or 4-pole 6A
- DC or AC coil
- Mechanical indicator, optional electrical indicator and free-wheeling diode
- Shockproof test button, optionally lockable
- Overall height only 29mm
- Switching capacity up to 3000VA
- Low coil power loss (750mW/1000mVA)

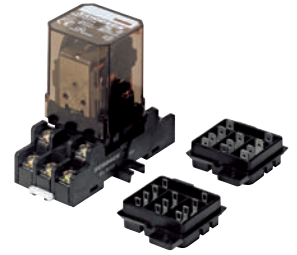
Applications

- Universal use in control and mechanical engineering



Relays

RM Interface



Features & Benefits

- Power relay RM 2/3/7
- 2 and 3-pole 10/16A, 2 Form C (CO) or 3 Form C (CO) contacts
- Switching capacity up to 6000VA
- Power relay RM 5/6 3mm 2 and 3-pole 10/16A, 2 Form A (2 NO) or 3 Form A (3 NO) contacts
- 3mm contact gap
- Power relay RM 8
- 2-pole 25A 2 Form C (2 CO) contacts
- Power relay RM C/D
- 1-pole 30/32A 1 Form X, bridge contact, NO or 1 Form Z, bridge contact, NO + N Switching capacity up to 7500VA

- Mechanical indicator
- Test button
- Plug-in or PCB terminals, attachment with tongue, DIN rail mounting
- DC or AC coil for all versions

Applications

- Elevator controls, power supplies
- Pump controls
- Cleaning machines, heating/cooling equipment

XT Interface



Features & Benefits

- 1-pole 16A, 2-pole 8A, 1 Form C (1 CO) contact or 2 Form C (2 CO) contacts
- DC or AC coil, sensitive coil 400mW
- Reinforced insulation, protection class II (VDE 0700)
- 4kV/8mm coil contact assembly
- Manual test button, optionally lockable

- Version with mechanical and/or electrical indicator available
- Suitable for TE standard RT sockets
- Recyclable packaging

Applications

- Switchgear cabinet controls, mechanical engineering and construction

MT Interface



Features & Benefits

- 2 Form C (CO) or 3 Form C (CO) contacts
- 2/3-pole 10A
- DC or AC coil
- Mechanical indicator as standard
- Electrical indicator optional

- Test button system with shockproof actuation from the front and integrated, lockable test button

Applications

- Mechanical engineering and construction



Passives

Every electrical or electronic device has connections that are a potential source for electromagnetic or radio frequency interference (EMI/RFI).

No matter how simple or sophisticated the device, for proper operation it counts on the flow of power and data that is free from interference. TE is a world leader in EMI/RFI filtering solutions with over 50 years of experience developing Corcom RFI filter technology for electronic devices. Established in 1955 with the introduction of the first available selection of standardised filter products, the Corcom name is recognised worldwide. TE continues that legacy today with its focus on the design and production of the highest quality products. TE offers an expanded catalogue of over 70 filter series that are suitable for a wide range of applications across multiple industries.

Custom Product Design & Engineering Services

TE is well suited to design a custom filtering solution for any unique application. Custom solutions can accommodate unique mechanical requirements and provide filtering in ranges not offered in our standard product. Our regional EMI/RFI testing facilities can help provide a high degree of confidence that a product which passes our in-house testing will pass agency testing at in a reduced



Corcom Medium P Series



Features & Benefits

- Suitable for applications with increased attenuation requirements in higher frequencies where a smaller size is desirable
- Multiple configuration options to fit your customers' unique design requirements
- Snap-in or flange mounting design with a choice of vertical or horizontal mounting ears offers different mounting options and increased design
- Compact design ideal for small applications
- Dual stage electrical setup helps improve the performance of the filter

Applications

- Switch mode power supplies
- Vending and service machines
- Computing and accessories
- Home applications
- Gaming equipment
- Fitness equipment
- Measuring and test equipment
- Instrumentation

P-Series (Representing Power Entry Modules)



Features & Benefits

- Offers most popular features in a small footprint design
- Provides all five power entry functions in a compact 10A module
- Snap-in or flange mounting
- Standard IEC 60321-1 C14 power inlet
- Both North American and European fusing capabilities
- Two voltage selection options
- Optional DPST on/off switch
- Filter options for general purpose, medical and high-performance RFI filtering
- Modular construction allows selection of the required power entry feature without altering the panel cutout

EMC-Series (Representing 1-Phase Filters)



Features & Benefits

- Compact dual stage filter series
- Cost effective design
- Current rating up to 30A
- High differential mode attenuation in the lower frequency range
- High common mode performance
- Ideal for switching mode power supplies

Corcom FB Series



Features & Benefits

- Designed to bring lighting devices, fluorescent lamp and related lighting ballasts in compliance with international EMI requirements
- Screw mount design allows for easy installation in light fixtures using industry standard stamped nuts
- Compact size enables the FB series to fit standard lighting tracks in compact applications

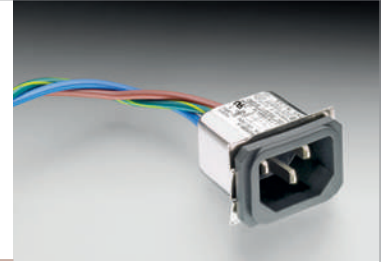
Applications

- Fluorescent ballasts
- LED displays
- Office and hospital lighting
- Architectural lighting
- Outdoor lighting and signage
- UV curing lights
- Lower current industrial applications (AC or DC rated)
- Wide range of other single phase applications



Passives

SRB-Series (Representing IEC Connector Filters)



Features & Benefits

- One of the smallest depth RFI filter available on the market
- Complete shielded design
- Wide range of capacitor values
- Attenuates coupled EMI up to 300MHz
- Full range of mounting and termination options
- Unique vertical and horizontal orientation slide in mounts eliminates the need for mounting hardware
- Minimal to low leakage current versions are suitable for medical equipment

BCF-Series (Representing 3-Phase Filters)



Features & Benefits

- Compact book-form design
- Insulated high quality safety terminals for in and output
- Very high common and differential mode performance over the complete frequency range
- Current rating up to 180A
- Low weight and cost effective design

Medical Power Line Filters

The 20A medical power line filters, H, HQ, HT, HX series are suitable for use in medical equipment with previously offered current ratings of 3A-15A and are suitable for medical applications with increased current ratings that require minimal leakage current. The 20A medical power line filters are designed for chassis or panel mounting configurations.



Features & Benefits

- Minimal leakage current suitable for medical equipment
- Compliant with internal spacing requirements for UL60601-1, 3rd edition for medical applications
- Size and cost effective design
- Flange mounting the same as the EC, ED and EF Series
- Easy to connect and mount design
- Capacitive input provides maximum filter performance
- UL Recognised, CSA Certified and VDE Approved

Applications

- Dialysis machines
- Diagnostic equipment
- Medical laser
- CAT scanners
- MRT scanners
- Dentist equipment
- Operating room equipment
- Physical therapy equipment

Passives - EMI Filter

Due to a growing need for thinner devices with multiple antennas, higher data rates, and increased operating frequencies, modern mobile devices require better solutions for reducing or limiting the effect of electromagnetic interference (EMI).

Board Level Shielding (BLS)

These shields are stamped one-piece and two-piece metal cages that help provide isolation of board level components, minimise crosstalk, and reduce EMI susceptibility without impacting system speed. Although we use standardised materials and offer common design features and options, every BLS project is customised to fit your design requirements.

Features & Benefits

Board Level Shielding

- Two-piece solution (minimum 0.85mm height)
- One-piece solution (minimum 0.7mm height)
- Standardized materials and thicknesses
- Use of standardised features includes: corner shape, carrier attachment, SMT (castellations), bending radii, pick and place features, through holes, locking holes, locking and contact dimples

Applications

Board Level Shielding

- Phones
- Tablets
- Wearables
- Consumer electronics
- The Internet of Things
- Point of sale equipment
- Routers





Cable Assemblies

Cable Assembly

TE Cable Assemblies takes care of its customers, with total solutions that fit precise needs. With our decades of experience, global expertise in development and manufacturing, and worldwide network of competence centres, TE Cable Assemblies creates customised solutions and standardised products that work exactly as they should.

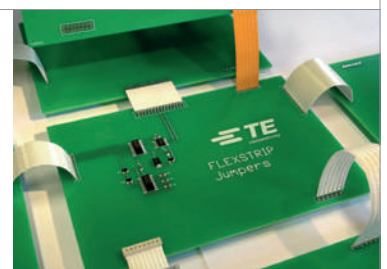


Combining Power with Flexibility. TE Cable Assemblies is on hand to identify our customers' needs and objectives, map out the issues that need resolving, and quickly take all the steps necessary to move from design into production. To provide fully integrated solutions, TE engineers in cable assemblies development work hand in hand with development teams dedicated to connectors – our engineering teams can leverage our vast portfolio of connectors to make sure any solution provides a perfect fit for a customer's needs. And when it comes to creating the assemblies themselves, numerous automatic and semi-automatic manufacturing technologies are at our disposal – cutting & stripping, soldering, IDC insulation displacement, over-molding, and more. TE Cable Assemblies' manufacturing footprint is global too – wherever you are, we are well placed to respond to your needs in terms of flexibility, reliability, and lead times.



FLEXSTRIP Jumpers

FLEXSTRIP jumpers provide a secure and reliable multi-conductor board-to-board connection.



As an alternative to conventional point-to-point wiring, TE's FLEXSTRIP jumpers offer a flat conductor construction that provides unrivalled flexibility and resistance against vibration and high flexing cycles. Especially in applications that require a reliable high performance interconnect, the FLEXSTRIP jumpers can be repeatedly flexed without failure. Available in a wide range of board-to-board jumpers to suit all standard PCBs, this solution does not require any crimping or cutting and so ensures an easy assembly and soldering process, as well as low installation costs.

Features & Benefits

- Versatile and highly flexible board to board jumper system
- Provides connections between PCBs, within a piece of equipment without wire stripping or preparation
- Lowest installed cost because no crimping or cutting is required

- Four insulation materials for high commercial, automotive as well as military/aerospace applications (Nomex, Teflon, Polyester and Kapton)
- Nine conductor pitches
- Various lengths from 0.5" to 30" in .100" increments
- Various pin lengths to suit all standard PCBs
- One piece copper construction with round copper conductors rolled flat for high flex life, tin-plated for easy soldering
- Round-to-flat design provides vibration resistant reliability and life

Applications

- Computers
- Handheld terminals
- Bar code readers
- Printers
- Consumer devices
- Automotive
- Industrial machinery
- Household appliances

Cable Identification & Sleeves



AUTHORIZED DISTRIBUTOR

Fluid Resistant Heat Shrink Sleeve

D-SCE markers are used to identify wires and cables where exposure to organic fluids, especially oils is required. D-SCE markers are designed to operate in these conditions at elevated temperatures for extended periods of time, making them ideal in aerospace, rail and construction industries.



Features & Benefits

- Ladder formatted
- 3:1 Shrink Ratio
- Wide range of sizes for several wire and bundle diameters
- Resistance to organic fluids, common fuels, lubricants and solvents
- Thermal transfer printable
- Formatted to print both sides for maximum data content and readability
- Print quality and permanence

Applications

- Rail – trains and trackside
- Aerospace
- Military
- Infrastructure



High Temperature Heat Shrink Sleeve

HT-SCE wire markers are designed for use in high temperature applications or where extreme resistance to fuels, lubricants and cleaning solvents is required. They are also ideal for applications in which low-vacuum outgassing is of high importance.



Features & Benefits

- Ladder formatted
- 2:1 shrink ratio
- Wide range of sizes for several wire and bundle diameters
- High continuous operating temperature
- Extreme fluid resistance
- Low-vacuum outgassing
- Print quality and permanence
- Formatted to print both sides for maximum data content and readability

Applications

- Military
- Aerospace
- Marine
- Infrastructure
- Space





Cable Identification & Sleeves

ZHD

Low fire hazard, fluid resistant heat shrinkable wire identification sleeves.



Until now, heat shrink cable identification systems were either low fire hazard or diesel resistant – but never both. ZHD changes all that. The development of ZHD was driven by the Rail industry. A revolutionary material, created in response to a clearly identified need. It's the first and only low fire hazard, diesel resistant heat shrink cable identification solution available in the market today – which meets the EN 45545-2 standard for fire safety in rail vehicles.

Using our extensive industry knowledge and research, we have developed a unique cable identification product which no other provider has been able to deliver to the industry. One that addresses two key challenges in a single solution.

Features & Benefits

- Meets industry standards, including EN 45545-2
- Environmentally friendly to UNIFE standards
- Single product enables inventory reduction
- Decreases set-up and change-over frequency
- EN45545-2 Hazard Level 2 for fire safety in rail vehicles
- Zero halogen material
- Diesel resistant and flame resistant
- Low smoke and toxicity
- Temperature range of -55 to 125°C (-67°F to 257°F)
- Sleeve diameters from 2.4mm (3/32") to 38.1mm (1 1/2")
- Shrink ratio of 2:1



AUTHORIZED DISTRIBUTOR

Low Fire Hazard Heat Shrink Sleeve

HX-SCE wire markers are designed for use in applications where limited fire hazard characteristics are necessary. The Zero Halogen material coupled with low smoke and low toxic emissions make this product best used in enclosed spaces such as mass transit, marine and industrial solutions.



Features & Benefits

- Ladder formatted
- 2:1 shrink ratio
- Wide range of sizes for several wire and bundle diameters
- Low fire hazard properties
- Low smoke, low toxicity, low flammability
- Excellent print permanence
- Formatted to print on both sides for maximum data content and readability

Applications

- Rail
- Marine
- Infrastructure

Military Grade Heat Shrink Sleeve

TMS-SCE wire markers are designed to meet the wire and cable marking needs of manufacturers with high performance requirements. TMS-SCE markers sleeves can be used in a wide variety of applications. All TMS-SCE meet the performance requirements of SAE-ASM-DTL-23053/5 class 1.



Features & Benefits

- Ladder formatted
- 2:1 and 3:1 shrink ratio
- Wide range of sizes for several wire and bundle diameters
- Lightweight for aerospace applications
- Military specification material
- Excellent print permanence
- Quick recovery for heat sensitive areas
- Formatted to print on both sides for maximum data content and readability

Applications

- Aerospace
- Military
- Marine
- Rail



Cable Identification & Sleeves

Low Fire Hazard Cable Marker

HLX cable markers are made from Zero Halogen, low smoke, low toxicity, UV stabilised polyolefin sheet, formed into punched organised cable markers. They are used for identification of cables and wire bundles by computer based printing. Ideal for applications where limited fire hazard characteristics are necessary.



Features & Benefits

- Pre or post termination assembly
- Suitable for large wires and cable bundles
- Can be printed through TE recommended printers
- Low fire hazard properties
- Low smoke, low toxicity, low flammability
- Excellent print permanence

Applications

- Rail
- Aerospace
- Infrastructure

Snap On Wire Markers

STD snap on markers are convenient and easy to use. These markers are supplied on a 'wand' applicator that simplifies and reduces installation time, and saves costs of marking. Designed to stand the test of time, preventing costly re-work before the life of the equipment ends.



Features & Benefits

- Secure grip for positive fixing to cable
- Supplied on a wand for application
- Pre-printed and available in all letters, numbers and characters
- Resistant against oils, cleaning agents, fuels and chemicals
- Colour coded options
- Ease of use during application
- Guaranteed strength, stability, low moisture absorption and resistance to chemicals
- Applicator has slit to prevent over-expansion of the marker during application
- Post termination

Applications

- Commercial
- Infrastructure

Labels



AUTHORIZED DISTRIBUTOR

TE is a world-class supplier of industrial identification products. The company's philosophy is to provide the total solution for every customer's product, process or system identification needs. Whether it is barcoded polyester or polyimide labels for a high volume printed circuit board application, low fire hazard wire markers for a mass transit electrical installation or pre-printed nameplates and asset tags for equipment designation, TE provides the complete solution.



Using the highest quality materials and production processes, TE ensures the best solution for applications and complete customer satisfaction. The company's identification products deliver the best in cable and wire identification and include high-performance product lines such as Polyvinyl Fluoride (PVF), Polyvinyl Chloride (PVC), Heat Shrinkable Identification (HSI) and Thermofit Marking System (TMS).

Features & Benefits

- Matt or glossy
- Chemical resistant
- UV resistant inks and materials
- Precision die-cut shapes and sizes
- Custom graphics and designs
- Safety for all industrial applications
- Reliable performance
- Wide range of materials, sizes and formats

Applications

- Industrial
- PCB and component identification
- Safety and warning
- Automotive
- Many others

C-Wrap Side Entry Repair Sleeve

The repair sleeve delivers an environment resistant repair to damaged primary wire with nicks, chaffed and radial cracks, while providing superior long-term performance.



The easy-to-install solution consists of two pieces, the outer tubing and adhesive. The C-Wrap device is small in diameter and short in length, providing easy installation. With its wrap-around design, the repair sleeve eliminates the need to de-pin the connector for repair, saving time, cost and manpower. Its environment-resistant qualities prevent galvanic corrosion and allow use in a temperature range of -65°C to +175°C, all while meeting the performance requirements of D-6201.

Features & Benefits

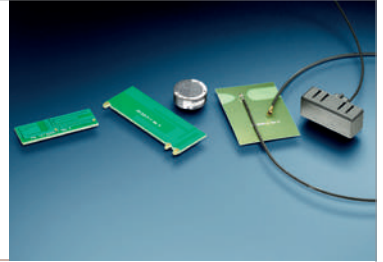
- 150°C rated
- Easy to install: saves time and cost
- Colour-coded to ensure proper sizing for each application
- Long term performance provides a permanent repair
- Low profile (small diameter and short length)
- Side-entry for easy access to damaged wire
- Wrap-around design eliminates de-pinning of connector for repair



Labels

RF, Fibre & Wireless

TE offers one of the broadest ranges of RF connectors and coaxial cable assemblies interconnect products in the market today.



TE has integrated several industry-leading brand names into one cohesive set of RF Coaxial products serving the automotive, broadband, medical, instrumentation, military/aerospace and wireless infrastructure markets.

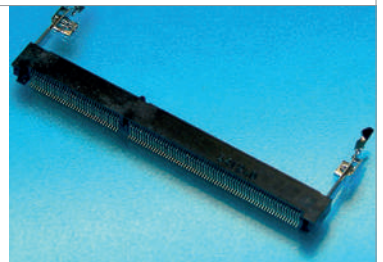
TE designs and manufactures antennas that comply with the most stringent operating requirements. TE is a pioneer of customised embedded antenna solutions to accommodate the wireless industry's move towards increased complexity and demand for miniaturisation combined with the need to integrate a multi-radio environment into one component.

TE is recognised as the world's pre-eminent supplier of fibre optic products and offers an extensive array of optical connectors, backplane interconnects, rugged optics, active, standard, high-density and highspeed optical cable assemblies; complimented with an extensive line of active and passive components, fibre management systems and advanced modules.

- RF Connectors
- Antennas
- Fibre Optic

Memory Sockets

TE's main memory connectors are made to JEDEC industry standards for SIMM (Single In-line Memory Modules) and DIMM (Dual In-line Memory Modules) and have uses across any computer control related application or data storage devices.



TE's removable memory products are primarily geared towards portable electronic devices such as smart phones, MP3 players and digital cameras, but have many other varied applications within industrial / medical etc.

- Dip sockets
- DIMM sockets
- Memory Card Connectors
- Smart Card Connectors
- SIM Connectors

Terminals & Splices

TE's offer in terminal and splices include receptacles, tabs and splices specifically designed for quick connections offering speed of application, uniform reliability and low per line cost.



TE portfolio also includes open and closed barrel terminals and splices to terminate solid, stranded magnet or tinsel wire. Radiation resistant terminals and splices can provide solutions to problems such as vibration and corrosion, when they occur at high temperatures.

- SOLISTRAND
- PLASTI-GRIP
- PIDG
- FASTON
- FASTIN-FASTON
- Positive lock

Automation and Control includes a wide range of industrial applications that span all markets, and at all levels, from the factory floor and process end users, to integrators and large scale OEM production. Industrial production is increasingly driven by greater automation, safety and energy efficiency. TE's broad portfolio of products offers many options to meet custom performance, application and regulation/certification requirements.

Pressure Sensing

- Analogue and digital pressure sensing modules
- Altimeter pressure module
- Media isolated pressure sensing modules
- Heavy industrial pressure transducers
- Miniature pressure transducers
- Corrosion-resistant pressure transducers
- Differential pressure transducers

Fluid Sensing

- Ultrasonic liquid level sensors
- Fluid property sensors
- Submersible pressure sensors

Temperature Sensing

- RTDs
- Thermocouples
- Temperature probes

Motion Control

- String and linear potentiometers
- LVDTs and RVDTs
- Rotary encoders and tilt sensors

Vibration Sensing & Position/Presence, Sensing/Detection

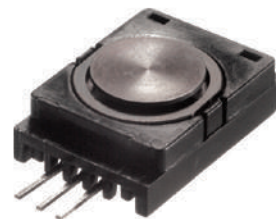
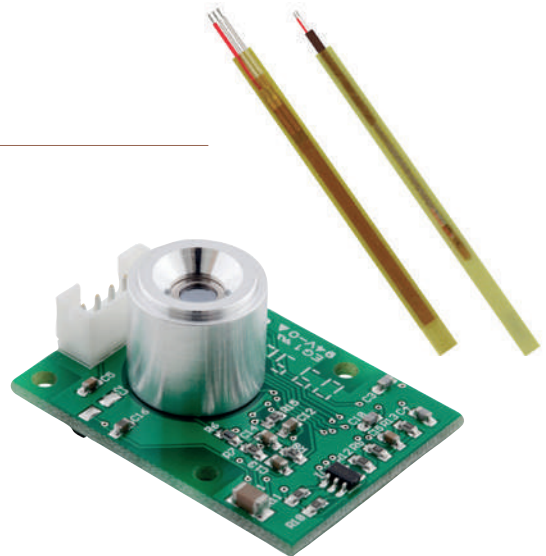
- LVDT
- Load cells
- MR sensors
- Accelerometers
- Inclometers

Force & Torque Sensing

- Load cells and multicomponent force sensors
- Contact/non-contact torque sensors

Humidity Sensing

- Humidity sensing modules
- Digital humidity sensors and assemblies





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