

A close-up photograph of an electric vehicle (EV) charging station. The charging cable is plugged into the station, and the background is blurred, showing other vehicles in a parking lot. The lighting is bright, with a soft glow around the charging point.

# EMPOWER THE FUTURE OF EV CHARGING INFRASTRUCTURE

## Connect with TE Connectivity

For electric vehicle supply equipment OEMs, TE Connectivity (TE) is a connectivity leader because it has both the broad portfolio and the expertise to meet the wide spectrum of customers' international AC and DC charging needs.

- **Charging that can meet higher current demands and differences in current between regions**

TE relays are available in different power levels — up to 500A — and deliver high performance and reliability. Our DC charging station relay/contactors manage both high-power output and wide-range current regulation, providing solid protection in fast-charge mode.

- **More voltage delivered in a small envelope**

Our solutions include a power resistor with high-voltage resistance and a compact design, high performance product switching and dielectric capability, plus dedicated terminal blocks with a high-voltage rating up to 1800VDC.

- **Fast charging time**

The broad TE product portfolio gives engineers what they need to design e-mobility infrastructure — including designs with strict requirements for current, voltage, and thermal resistance.

- **Safe charging**

Our high-quality design provides a long, stable electrical switching life so customers can rely on it, even in emergency cases.

- **Greener, more sustainable solutions**

The TE Dynamic Series portfolio of signal and power connection options, including products with 3-100A “wire-to-wire” and “wire-to-board” capability, delivers a more sustainable and environmentally cleaner alternative for electric vehicle and charging solutions.

- **Cleaner power on the charging pile**

Our 3-phase filter reduces electromagnetic interference on power entrance to the charging pile.

Looking for industry-leading technology; a safer, more reliable charging circuit connection; and dedicated, engineer-to-engineer EV charging support?

Let's connect.

[industrial-marketing@te.com](mailto:industrial-marketing@te.com)

# AC Charging Station Solutions

## Temperature-Rise Resistance and Small Size

The AC charging solution has significant cost advantages with great battery life and security. For establishing a wide and accessible network of charging stations across the country, the trend is to mainly rely on AC charging supplemented by DC charging. The AC charging station supplies AC-controlled power to the vehicle-mounting charger of electric vehicles, and thus has stricter requirements for current, temperature, and voltage of the connectors.

TE offers several relay and connection solutions for AC charging stations and demonstrates excellence on space utilization, device performance, safety protection, and other aspects.



# DC Charging Station Solutions

## Independent Charging Connection

The DC charging station is a power supply unit capable of supplying DC power to an electric vehicle. It features a high charging speed, high-input voltage, and large-output current, and has very high requirements for heat dissipation, safety, and reliability of the components.

TE's DC-charging station connector handles both high-power output and wide-range current capability, providing a solid protection for the fast-charge mode.

TE meets the requirements on the safety measures for the DC-charging vehicle interface and the compatibility with the charging interface, meeting the development needs of the charging pile companies to a maximum extent.



# Relays & Contactors



## Potter & Brumfield Relay T92 Series AC

The T92 series is widely used in charging guns and charging stations.

### Benefits

- Strong switching capability
- Save installation space with a small relay solution
- Reinforced insulation to achieve high reliability

### Features

- Rated current: 30A/40A/50A; rated voltage: 250VAC/400VAC
- Certified by TV-10 (141A impulse current)
- Maximum operating temperature: 85°C
- PCB-, QC-, or flange-mounted terminals available



## Potter & Brumfield Relay T9V Series AC

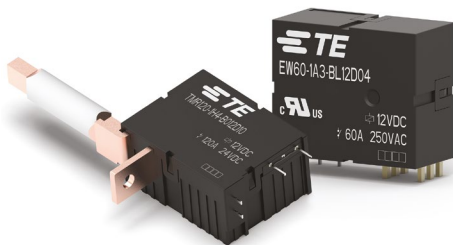
The T9V series is specially designed for the applications in the charging pile industry to replace the traditional AC contactor and reduce the large space needed for installation. It has the overall dimensions that are compatible with T9S to facilitate the upgrade and use of customers, and can meet the new national standards on 40A current.

### Benefits

- Meet the new national standards
- High performance specifications

### Features

- Switching current up to 40A
- Nominal voltage up to 277VAC
- Contact spacing: 1.5mm/1.8mm
- Low temperature rise, and the maximum industrial temperature up to 105°C
- Certified by UL/VDE laboratory



## Power Latching Relay EW/TMR Series AC DC

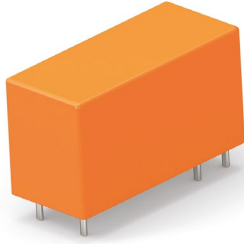
Power latching relay EW and TMR series has approximately 60 to 120Amp switching capability to successfully switch in high-power charging station and they save the space and control power for the charger designer.

### Benefits

- Easy for design with customized terminal
- Low heat rise with bi-stable structure
- Auxiliary contact available for monitoring

### Features

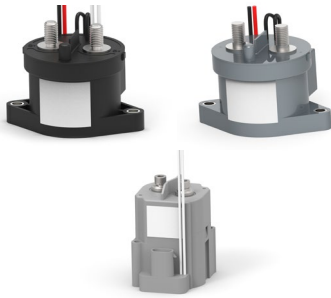
- Rated current: 60-120A
- Rated voltage: 277VAC or 24VDC
- Ambient temperature up to 85°C
- Meet IEC62055-31 UC2 / UC3 requirement



## SCHRACK RTH Power Relay

### Features

- 1 pole 16A, 1 form C (CO), or 1 form A (NO) contact
- Ambient temperature: 105°C
- Sensitive coil: 400mW
- 5kV/10mm coil-contact
- Reinforced insulation
- WG version: Product in accordance to IEC 60335-1



## IHV Series High-Voltage DC Contactor

IHV Series is widely used in high-voltage control and protection systems, charging stations, large-scale photovoltaic/energy-storage inverters, and energy storage systems.

### Benefits

- Broad portfolio with current 50A-350A
- Auxiliary contact monitoring
- Electromagnetic compatibility
- Power consumption: 1.7W
- Small size, light weight

### Features

- Energy-saving mode for coil input voltage
- Continuous (carry) current up to 500A at 85°C
- Switching voltage up to 1800V
- Flexible mounting direction
- Hermetically sealed

# Board Connectivity



## Dynamic Series Connectors AC DC

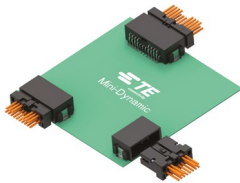
TE's Dynamic Series connector solutions range from signal level circuitry to power circuit connectivity – all in a ruggedized, industrialized package. It is specially tailored to meet the requirements of miniaturization, high density and high reliability in the field of industrial automation. It can be used in a wide range of products and is suitable for various wire-to-wire, wire-to-panel, and wire-to-board applications in control cabinets.

### Benefits

- Easy plug-in and pull-out and reduced installation and maintenance time
- High electrical reliability
- Improved productivity with reliable and safe connections

### Features

- 3A-100A, W-W & W-B, crimping-mount, and spring-style
- “Case-style” contact terminals
- Multiple plating options, locking structure (maintenance-free)
- X / Y / XY key structure, with different color codes



## Dynamic Mini Series Connector

### Benefits

- UL 94V-0 flame retardant plastic for more safety
- Superior profile design for more possibilities in the space
- Sunken unlocking structure to prevent accidental unlocking
- Halogen-free materials with plastic shell at board end to fulfill future demand

### Features

- LV214 compliance for automotive-grade reliability
- Secondary locking design for greater reliability
- Surface-mount design, suitable for re-flow solder process



## Dynamic D-1000 Connector

Dynamic D-1000 Connector series consists of 3 different pitch sizes: 2mm standard type, 2.5mm high-voltage type, and 3.5mm type. It is also engineered to safely transmit signal in the harsh environment with a broader position range from 2 to 40 pins, gold and tin plating contact to meet various needs. Highly reliable and compact design to fit for EV charging applications.



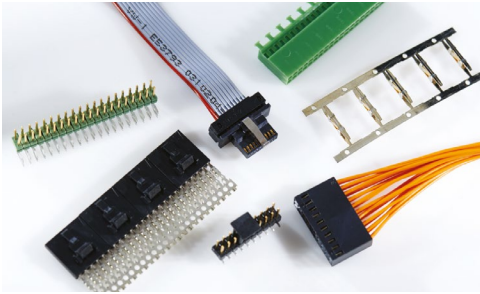
## Dynamic D-3000 Connector

Dynamic D-3000 Connector series, pin layout comes in three types: standard 3.81mm pitch, high voltage 5.08mm pitch type, and 7.5mm spring clamp type which can carry up to 15A current. The 3-contact-point design provides high reliability in a real-world environment. It is also a safe choice; empowered by not only the high-level anti-flash housing material but also by the First-Mate-Last-Break (FMLB) design to provide protections for operators.



## Dynamic D-5000 Connector

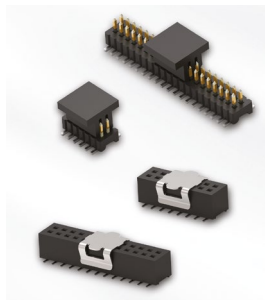
Dynamic D-5000 Connector series, designed for a safer and more reliable power connection, can carry up to 45A current with silver-plated or gold-plated contacts to meet various requirements. It is recommended for applications with a supply side in the IP20 apparatus, providing protection from the approach of the finger.



## Board Signal Interconnect System AC DC

AMPMODU interconnect system is a comprehensive family of modular signal interconnects for board-to-board, wire-to-board, and wire-to-wire applications from 1-mm (0.039-inch) to 3.96-mm (0.156-inch) centerlines.

The breadth of AMPMODU components, combined with its small, compact footprint make it a solid interconnect system for a wide range of applications and systems requiring Printed Circuit Boards (PCBs), enabling space savings and high-quality design.



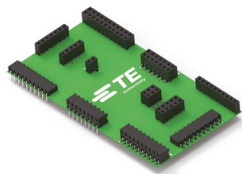
### AMPMODU Small Centerline Connector (1.0mm)

#### Benefits

- 85% space savings on PCB with 1-mm centerline as compared to 2.5-mm [0.1-inch] connectors
- Reliable signal transfers through two points of contact even in severe shock/vibration applications
- Improved durability and corrosion resistance with gold plating

#### Features

- Mounting style: surface mount
- Mounting angle: vertical
- Housing material: high-temp thermoplastic (LCP)
- Connector size: double row, 5-100 per row
- Solderability: re-flow capable up to 260°C



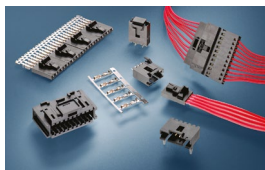
### AMPMODU 2mm Connector

#### Benefits

- Both board-to-board and wire-to-board solution
- Detent latch and positive latch options for wire-to-board locking
- Less PCB occupancy and less coupling size, suitable for high-density wire-to-board applications

#### Features

- All series can be through hole reflow or SMT process for PCB mounting
- Dual-beam contact design with four types of plating options
- Various packaging options for different manufacturing processes



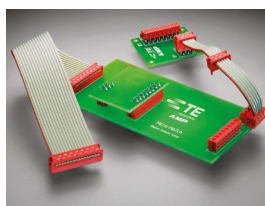
### AMPMODU MTE Connector

#### Benefits

- Assembly designs offer latching and polarization
- Coupling shrouds permit ganging of smaller receptacle and pin assemblies with guide ribs to form larger single or double row latching connectors
- High temperature option is SMT compatible

#### Features

- Available in three platings
- Applicable sizes 2-25 positions per row
- Swage option on posts provides retention in PC board



### Micro-MaTch Connector

Our Micro-MaTch wire-to-board and board-to-board ribbon cable connectors provide a proven reliable connection. Its unique contact-spring system help prevent fretting corrosion by absorbing movements between male and female contacts.

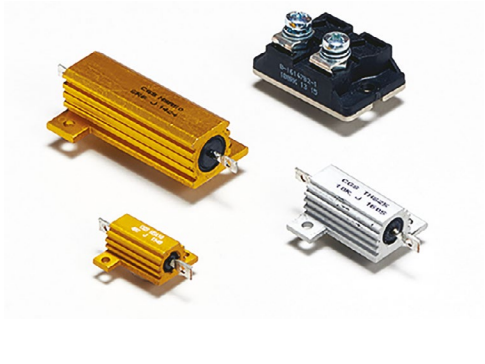
#### Benefits

- High vibration resistance
- Fretting-corrosion resistant
- Vertical or right-angle mating for board-to-board connection.
- Wire-to-board connection by 1.27-mm ribbon cable or discrete wires

#### Features

- Tin plated contact design with gas-tight connections
- Extremely high cost efficiency
- Over 30 years of history and rich application experience in automotive electronics applications

# Passive, Filter, & Switch



## Power Resistors AC DC

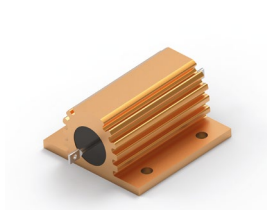
The power resistor is widely used in railways, vehicles, and industrial sectors, and is applicable to various power applications (pre-charge, discharge, brake, etc.); mature product, complete range, and customizability.

### Benefits

- High impact resistance
- Small size
- High-voltage resistance and high reliability

### Features

- Power range of 5W-300W
- Withstand impacts 25 times the rated power in one second
- High operating voltage (up to 2500V at HSC300)



## Aluminum-Housed Power Resistors, HS Series

The HS series is a range of extremely stable, high-quality wire wound resistors capable of dissipating high power in a limited space with relatively low surface temperature.

### Features:

- Large range on the market: 5W-300W
- Specializing the standard: Low resistance, low inductance, and higher voltage versions available



## High Power Resistors, SQ Series

The SQ series resistors are wound or deposited on a fine non-alkali ceramic core design, which provides a resistor with high insulation resistance, low surface temperature, excellent T.C.R., and entirely fire resistant construction. These resistors are ideally suited to a range of areas, such as EV charging applications where low cost and efficient thermal performance are important design criteria.



## Corcom Filters AYA Series AC DC

AYA series is designed for 3-phase, four-wire, WYE applications. Good attenuation over the complete frequency range of 10kHz to 30MHz and fit for EV charging power system.

### Features:

- UL recognized
- Cost-effective, universal 3-phase filters
- Two different mounting styles available



## ALCOSWITCH Anti-Vandal Switch Series AC DC

AV series, the Anti-Vandal switch, is designed for security and reliability in a variety of applications. AV switches are sealed to IP67 and available in single- and double-pole configurations.

### Benefits

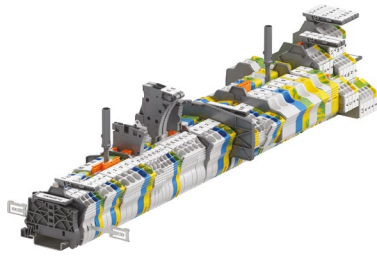
- An easy user interface
- Enable flexibility with various pushbutton symbols
- Ease of installation with available flying lead terminations

### Features:

- RoHS Directive 2002/95/E compliant
- REACH compliant and Pb free
- UL (E46765) for AV19, AV22 series
- Operating temperature: -20 to +55°C



# Electrical



## ENTRELEC Terminal Block AC DC

Innovative product families share rich accessories, including PI-spring (or in-line) connection (compatible with both in-line and spring styles), screwed wire-pressing frame connection and plug-in connection that meet the needs of various EV charging applications.

### Benefits

- Used in harsh environments and harsh applications

### Features

- Rated voltages of 1500V DC based on IEC and 1000V DC based on UL



## PIDG Terminals and Splices AC DC

PIDG terminals and splices are designed for uniform reliability in the difficult circuit environments.

### Benefits

- Insulation repels hydrocarbons (greases, oils, etc.) and has high dielectric strength
- Funneled wire entry prevents turned back wire strands and permits rapid wire insertion during high-speed production
- Serrations in wire barrel give enhanced electrical contact and tensile strength with the conductor

### Features

- Nylon or PVC insulation, tin plating
- Copper insulation support sleeve
- Vibration resistant; wire can bend in various direction without damage



## Identification Solutions AC DC

Designed for the most rigorous indoor or outdoor use, TE's portfolio of identification solutions features flexible options and provides a "marked" difference. TE pioneered the heat-shrinkable printable markers, which comes in a wide variety of configurations, colors, and sizes for high-performance applications such as military grade, low fire hazard, fluid resistant, high temperature, and commercial use.



## SOLISTRAND Terminals and Splices AC DC

SOLISTRAND terminals and splices are specifically engineered to provide reliable and long-lasting performance in the harsh environments.

### Benefits:

- Brazed seam for uniform metal strength around the entire barrel area to withstand harsh industrial environments. Brazed seam also reduces the chances of pinched wires
- “W” crimp provides excellent electrical performance and higher tensile strength
- Dimples or serrations inside the wire barrel provide substantial tensile strength and excellent electrical contact area after crimping
- Bell mouth on barrel entrance makes insertion of wires easier

### Features:

- Uninsulated, tin plating
- Temperature rated up to 170°C
- UL Listed, CSA certified
- Corrosion and vibration resistant, superior tensile strength



## ENTRELEC DBL Distribution Block Range AC DC

DBL distribution blocks are engineered with an outstanding compact and modular design, allowing easy installation combined with a great flexibility of use. They are used in applications such as industrial and commercial panels power distribution units (PDU) and commercial panels.

### Benefits:

- 3-in-1 product configuration
- Save up to 50% more space compared to copper bars
- Easy to install with reduced assembly time by fastening and isolating components
- Easy identification

### Features:

- Rating from 80A to 500A
- Interlocking function for multiple pole assembling
- Two directions opening, snap-on and reversible cover
- Optional input for easy jumpering



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