



SOLVING THE TOP 5 CHALLENGES OF ELECTRICAL POWER TRAINS IN WAREHOUSE AUTOMATION

Today's most progressive warehouses rely on fleets of electric vehicles to automate the transportation, organization, and delivery of goods and materials within the facility. From automated guided vehicles (AGVs) and autonomous mobile robots (AMRs) to electric forklifts and automatic storage retrieval systems (ASRS), these new solutions are significantly improving productivity and efficiency for the rapidly growing e-commerce and grocery delivery markets.

But these systems need fast and reliable power distribution to work optimally. Until now, that has not been easy to achieve in a rugged warehouse environment. TE Connectivity (TE) is bringing the expertise and products needed to create a charging infrastructure that is faster, safer, smaller, and more flexible for automated warehouses.

ACHIEVING PROPER POWER DISTRIBUTION CAN BE A CHALLENGE. OUR CUSTOMERS FACE 5 KEY ISSUES:

CHALLENGE

SOLUTION

1. IMPROVED SAFETY

Keeping people and equipment safer by automatically shutting down machines if there is a power problem.

2. POWER EFFICIENCY

Reducing power losses in the system with improved batteries technology, and also with low contact resistance.

3. CIRCUIT PROTECTION

Significantly reducing the risk of a power spike that could damage equipment or sensitive components.

4. IMPROVING COMMUNICATION

Connectivity with increased data rates.

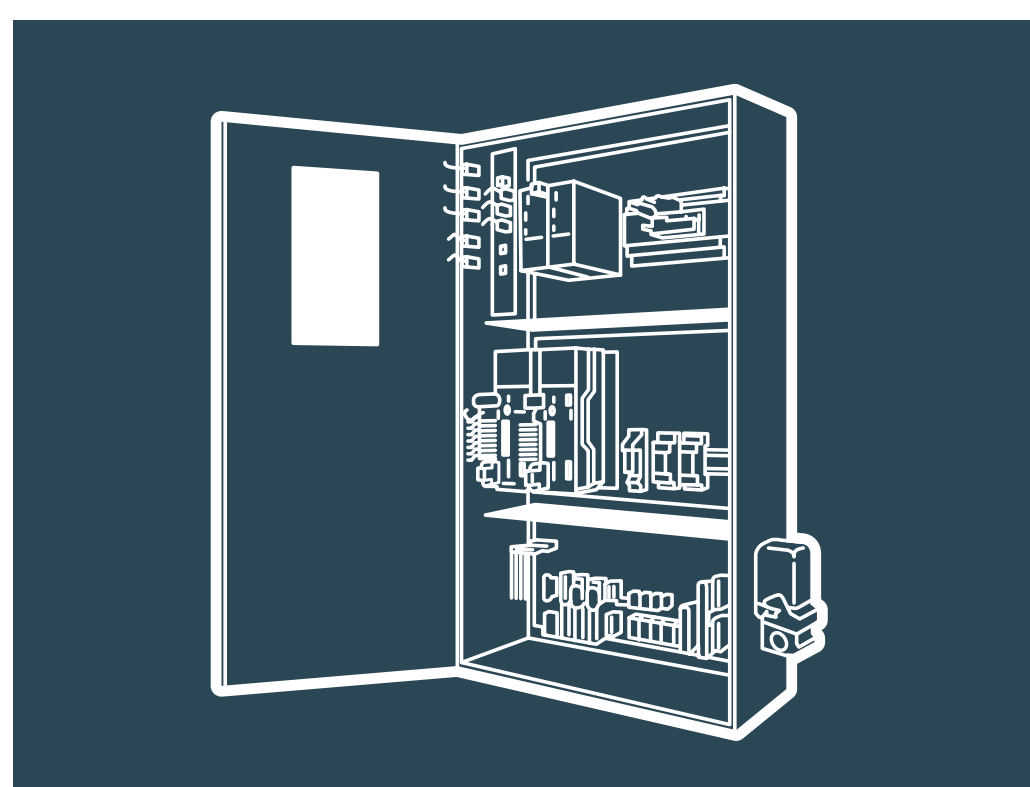
5. FAST CHARGING

Providing quick charging to vehicles as needed, which requires that the system can handle high loads.

ELEMENTS OF THE ELECTRICAL POWER TRAIN

CONTROL CABINETS

The set of electrical devices that monitor, control, or change the flow of electricity through a device are housed within a control panel, which is in turn enclosed within the control cabinet.

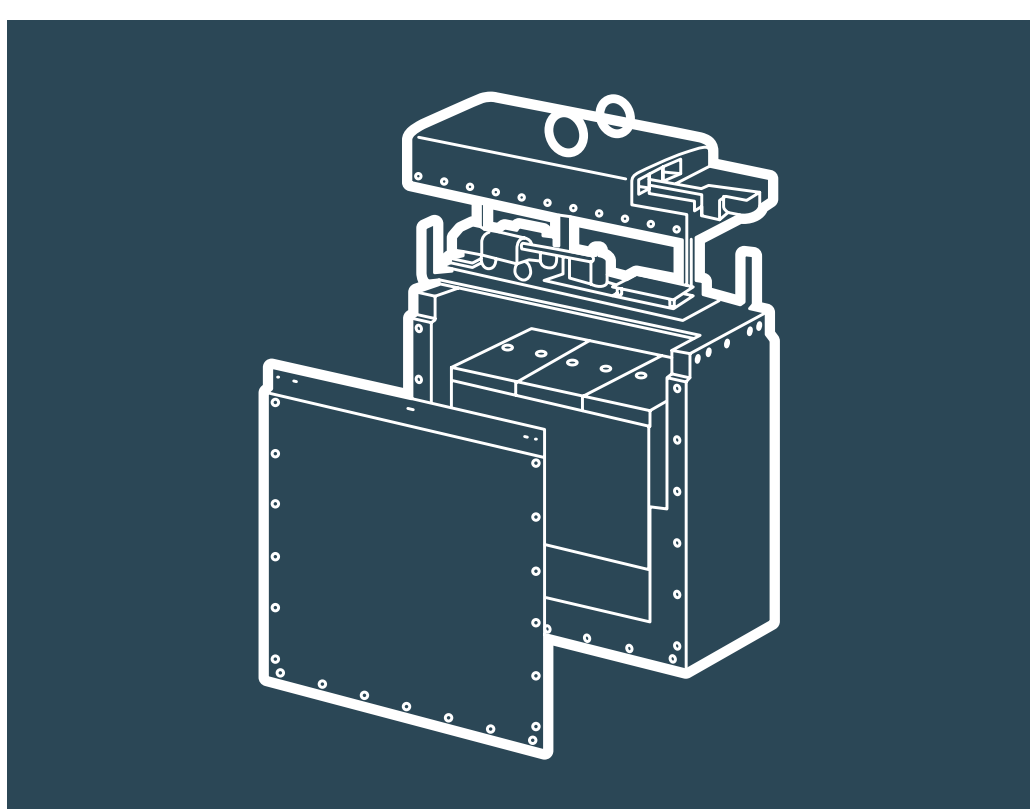


Core Products

- ✔ Terminals and splices
- ✔ Wire management products
- ✔ Identification solutions
- ✔ Cable harnessing
- ✔ ENTRELEC terminal blocks
- ✔ Corcom 3-phase power filters

BATTERY MANAGEMENT SYSTEM (BMS)

A BMS is like the brain of the battery pack. It is a set of electronics that monitors and manages the battery's performance and keeps it operating within its safety margins.

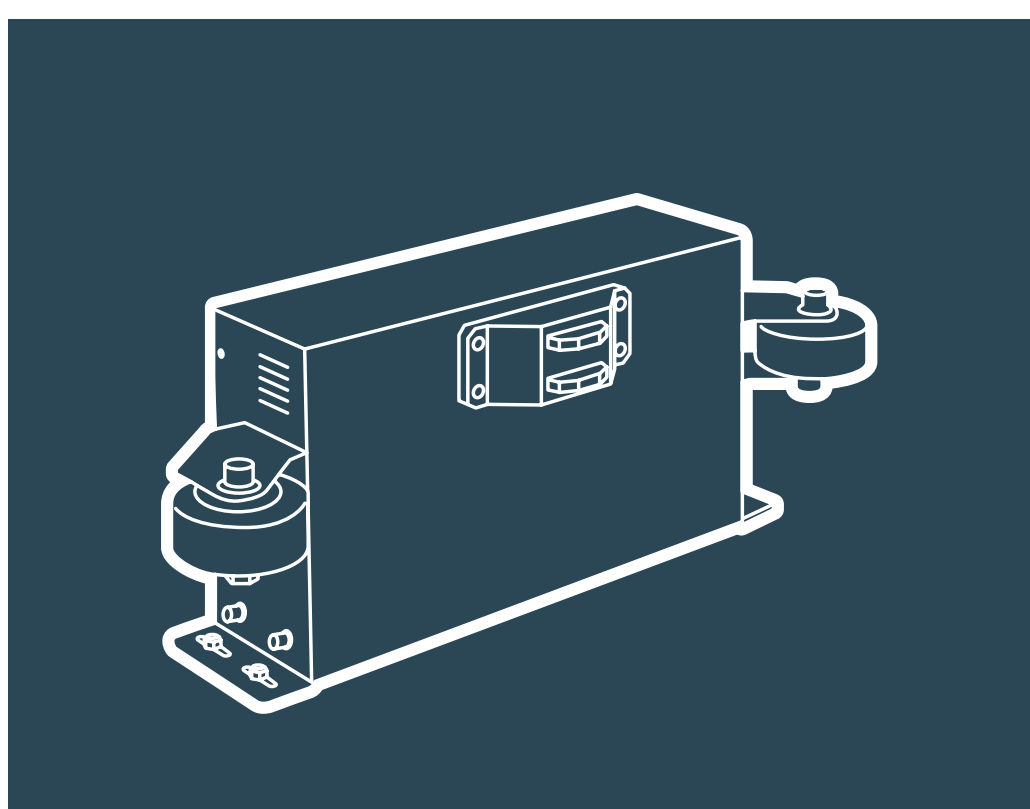


Core Products

- ✔ Integrated cell connection system
- ✔ Terminals for a wide range of wire sizes
- ✔ Wire-to-board and wire-to-wire connectors
- ✔ Flat cable connectors
- ✔ High-voltage DC contactors
- ✔ Solid state relays
- ✔ Power PCB relays
- ✔ Battery charging connector
- ✔ Sealed automotive EV connectors
- ✔ Autonomous charging connectors

CHARGING STATIONS

A charging station supplies electrical power for plug-in electric vehicles such as electric forklifts and AMRs.



Core Products

- ✔ High-voltage DC contactors
- ✔ Solid state relays
- ✔ Power PCB relays up to 50A
- ✔ Cabinet power and signal distribution
- ✔ Power distribution connectors
- ✔ Power distribution blocks
- ✔ Battery charging connector
- ✔ Autonomous charging connectors
- ✔ Power inlet filters
- ✔ AC power line filters
- ✔ DC filters
- ✔ Wire-to-board and wire-to-wire connectors
- ✔ Flat cable connectors

CONNECT WITH US

TE Connectivity makes it easy to take your warehouse automation goals to the next level. Visit te.com/support to chat with a Product Information Specialist and find the expert support you need.