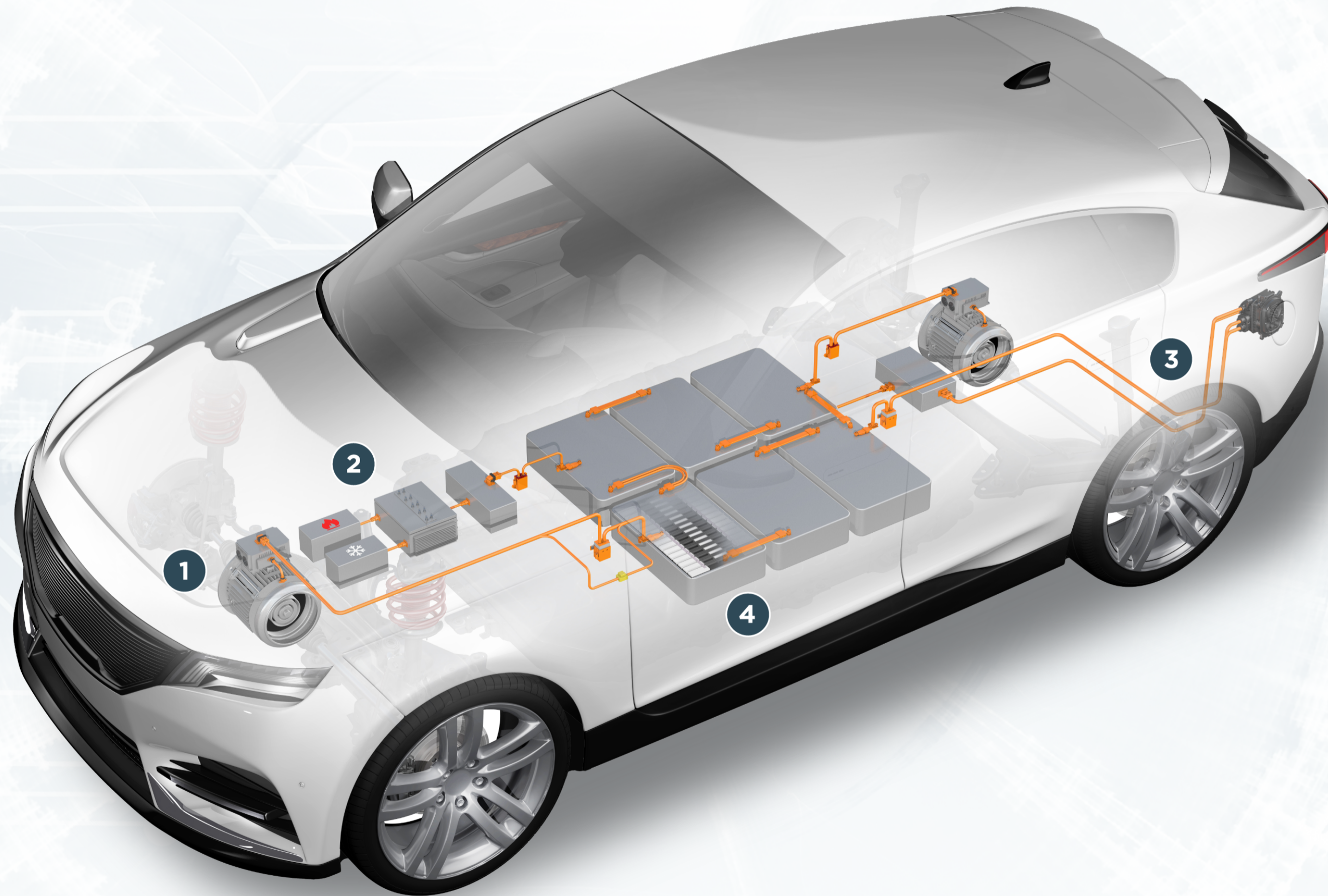


# E-MOBILITY SOLUTIONS FOR THE AUTOMOBILE INDUSTRY



## KEY APPLICATIONS

CLICK AND JUMP TO

1 E-drive Systems

2 Auxiliary Systems

3 Charging Path

4 Battery Systems

Application Tooling

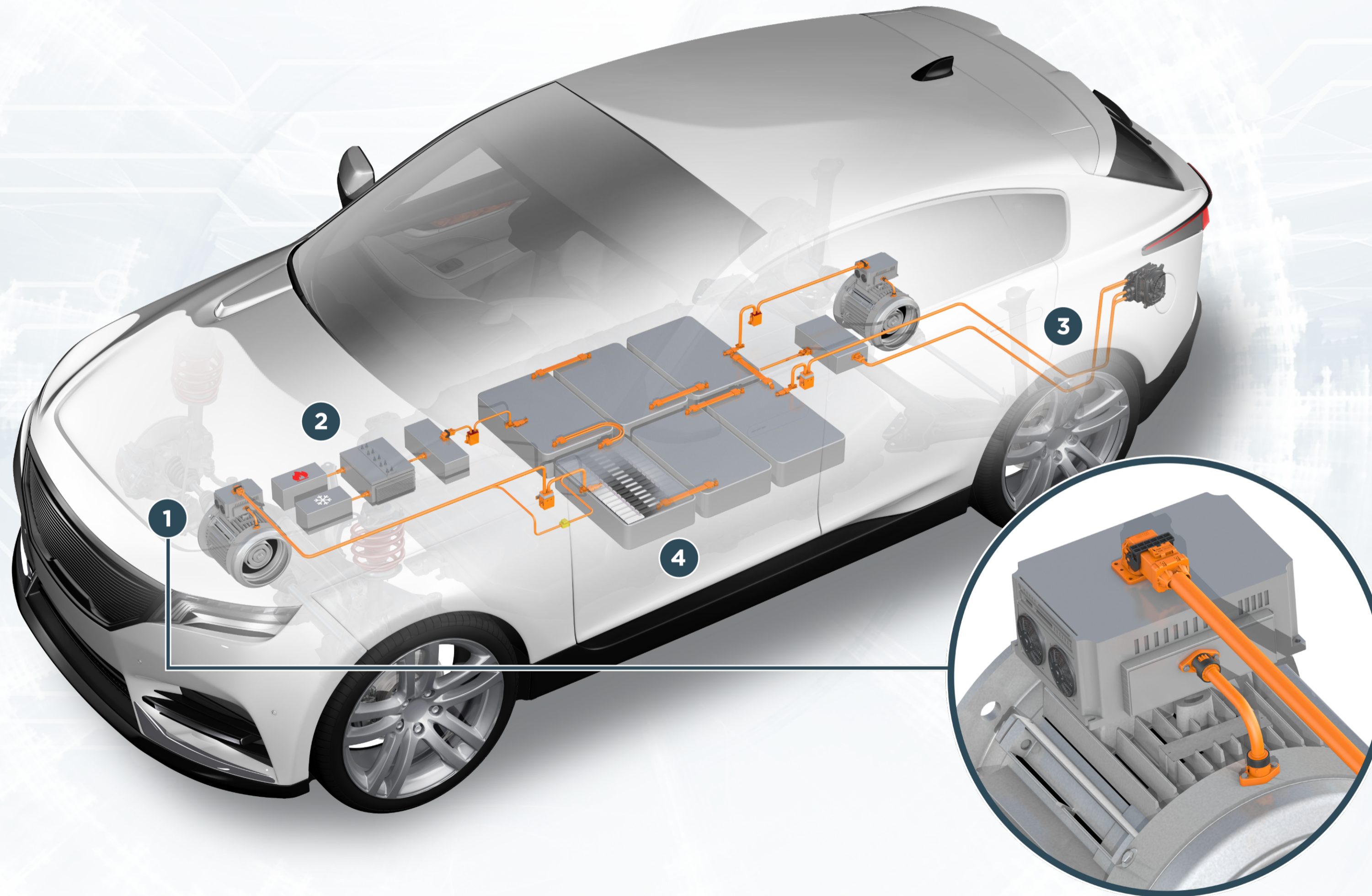
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# E-MOBILITY SOLUTIONS FOR THE AUTOMOBILE INDUSTRY



## 1 E-DRIVE SYSTEMS

Click on the image to learn more!



### HVCSJ Series High-Voltage Interconnection System

- Level-3 vibration protection for e-motor applications
- Four size variations; rated for up to 450 A
- 90° & 180° plug configurations; welded or crimped terminals
- Accepts 10 mm<sup>2</sup> to 120 mm<sup>2</sup> wire (Cu or Al)



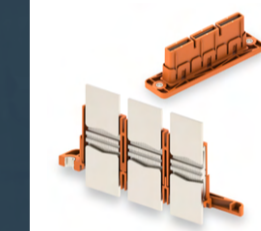
### HC-STAK Series High-Voltage Interconnection System

- Unique fork terminal design for high performance
- Up to 64 independent contact points
- Rated for up to 1000 VDC and 407 A at 85° C
- Accepts 25 mm<sup>2</sup> to 95 mm<sup>2</sup> wire size range



### AMP+ HV 2100 Series Interconnection System

- Rated for up to 1000 VDC and 372A at 85°C
- Robust design for harsh environments
- Optimized size and routing flexibility
- Shielded and unshielded options available



### HC-STAK Busbar Connection System

- Ideal for tight spaces, like between the inverter & e-motor
- Simplifies busbar-to-busbar connectivity
- Rated for up to 1000 VDC and 400 A
- Mates with 2.5 mm- and 3.5 mm-thick busbars



### AMP+ HV 800 Series Interconnection System

- Options rated for 650, 850 and 1000 volts
- 250 A maximum current rating at 85°C
- Simplified assembly with lever assist
- Wide temperature and wire size ranges



### AMP+ IPT Shielded Ring-Tongue Connector

- IP6K9K and Class 4 vibration level ratings
- 1-, 2-, and 3-position housings
- 360° EMC shielding
- Wire-to-device flexibility



### E-motor Temperature and Position Sensors

- Highly accurate: ±1% (temp) or ±1° (position)
- 10K ohms resistance at 25°C (position)
- Robust construction and stability
- Reluctance resolvers & eddy current sensors available

CLICK AND JUMP TO

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BACK TO START

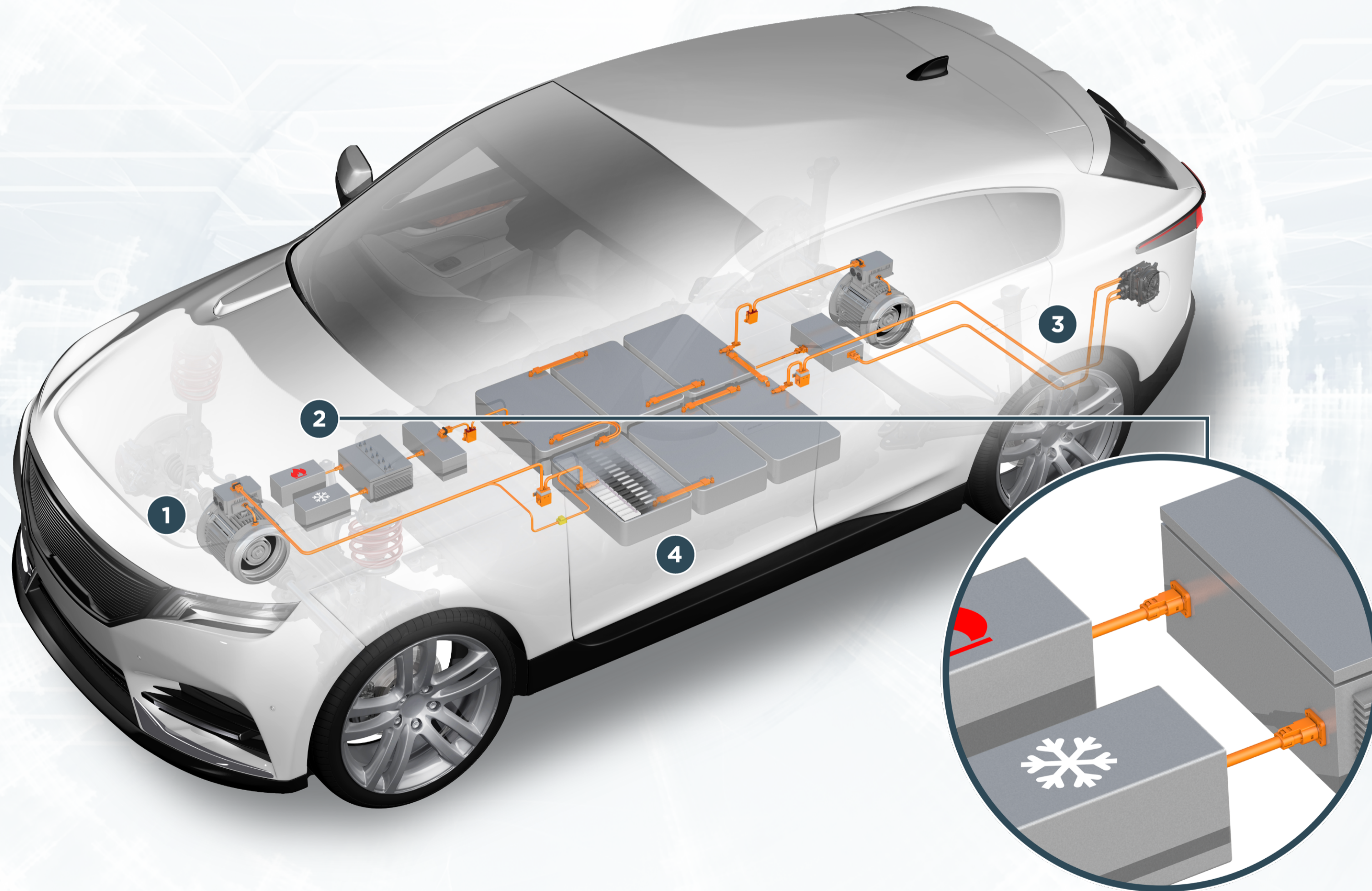
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# E-MOBILITY SOLUTIONS FOR THE AUTOMOBILE INDUSTRY



## 2 AUXILIARY SYSTEMS

Click on the image to learn more!



### AMP+ HV 1200 Series Interconnection System

- PCON 12 high-power terminals
- Current capability of up to 100 A at 85°C
- Single header for 90° and 180° plugs
- Designed for safety and reliability



### AMP+ HV 630 Series Interconnection System

- Current capability of up to 48 A at 85°C
- 2- and 5-pin options with internal HVIL
- No tool required to unmate
- Advanced high-voltage distribution



### AMP+ HV 280 Series Interconnection System

- Discrete header design unique to industry
- More than 3,000 combination options
- Rated for up to 850 V and up to 40 A at 85°C
- Improved manufacturability and packaging

CLICK AND JUMP TO

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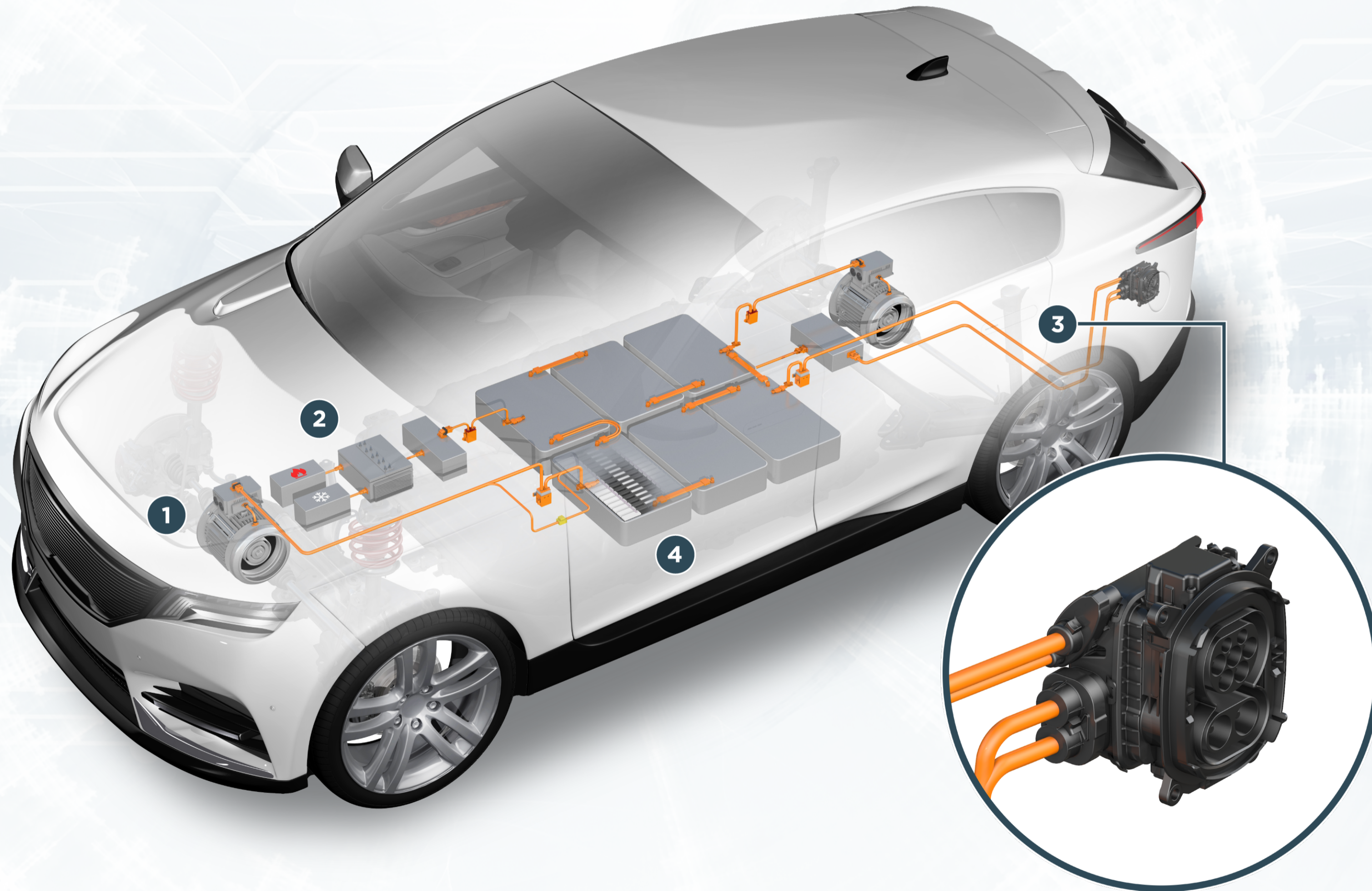
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# E-MOBILITY SOLUTIONS FOR THE AUTOMOBILE INDUSTRY



## 3 CHARGING PATH

Click on the image to learn more!



### AMP+ CI 500 Charging Inlet Series

- Smarter, faster, safer charging for EVs
- Supports DC high-powered charging up to 500 A
- Capable of transferring 350 kW in 17 minutes
- Modular, highly customizable design



### AMP+ CI 250 Charging Inlet Series

- Supports DC high-powered charging up to 250 A
- Type GB DC for use in China
- Modular, highly customizable design



### AMP+ CI 200 Charging Inlet Series

- Supports DC high-powered charging up to 200 A
- Integrated actuator and NTC sensor
- Flexible designs with available 180°, 90°, left-, and right-exit cable outlet versions
- Variations for all standards and geographies



### AMP+ CI 32 Charging Inlet Series

- Rated for up to 250 VAC and 32 amp AC-only charging
- LED charge status indicators
- Variations for all standards and geographies



### AMP+ Charging Inlet Locking Actuators

- Actuator pin locks charging plug to inlet
- Prevents accidental removal for greater safety
- 12 configurable, "plug-and-play" designs
- Durable for up to 80K charge cycles

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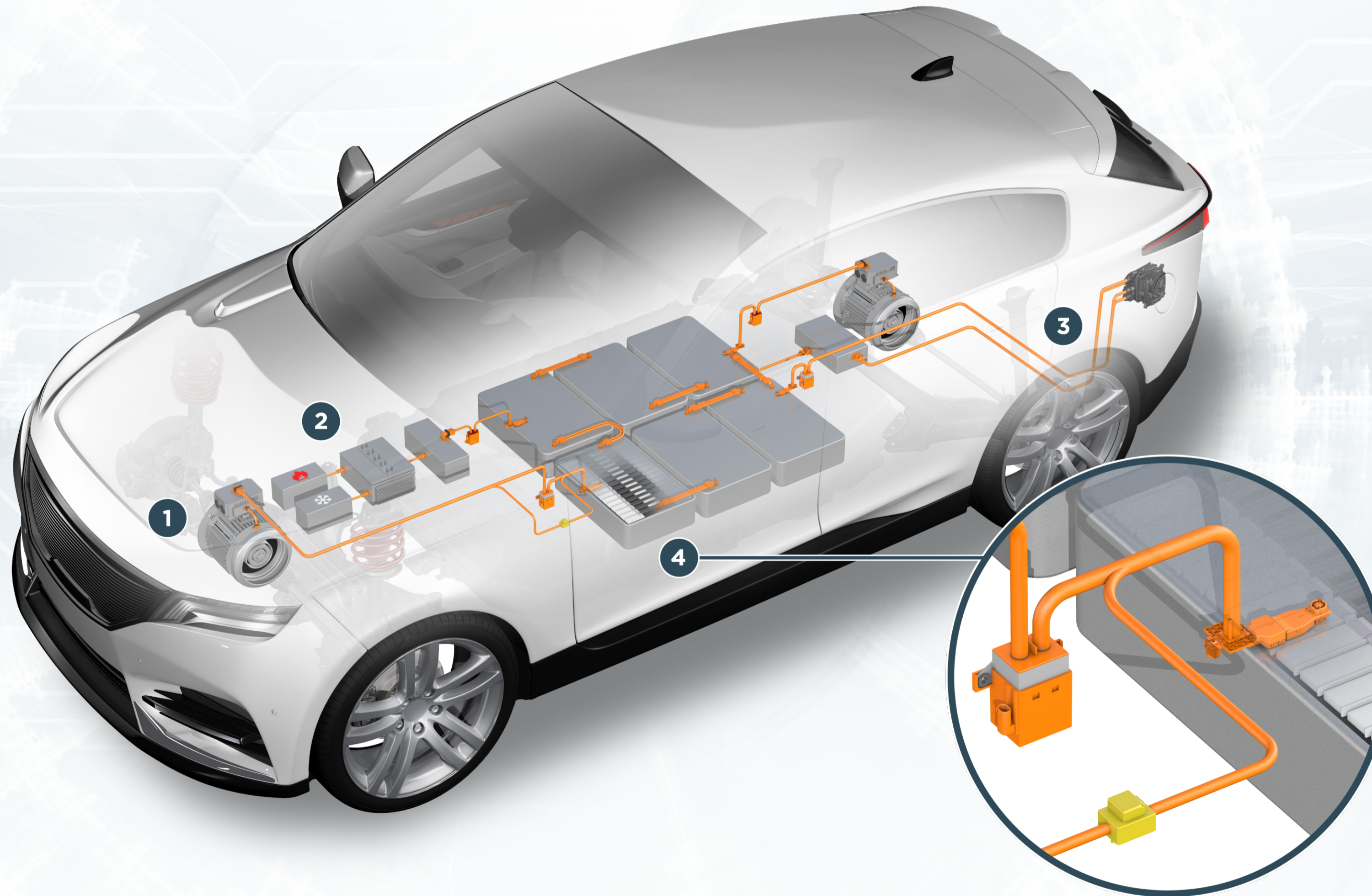
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# E-MOBILITY SOLUTIONS FOR THE AUTOMOBILE INDUSTRY



## 4 BATTERY SYSTEMS

Click on the image to learn more!



### BCON+ High-Voltage Battery Connection System

- Solutions for modules, control boxes, and terminal-to-busbar assemblies
- High-power (500 A continuous) with very low losses
- Compact, flexible, and easy to handle
- Highly durable and touch-safe



### EVC Series High-Voltage Contactors

- Voltage ratings up to 800 VDC
- Current capabilities up to 500 A
- Short circuit carry currents up to 17 kA
- Ideal for main circuit, auxiliary load, and AC and DC charging path protection



### Miniaturized Battery Management System Connectors

- Up to 70% reduced packaging space
- Supports 0.5 mm blade size and a wire size range of 0.13 mm<sup>2</sup> to 0.35 mm<sup>2</sup>
- Meets LV214, USCAR, OEM specifications, UL 94 V0
- Solutions for flat flexible cables (FFC)
- SMT & TH, 90° or 180° pin orientation



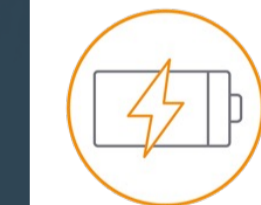
### Current Sensors

- Optimized for EV battery sensing
- High accuracy and measurement ranges
- Fast response time
- Includes active, passive, and hall current sensors



### ERNI Connectivity Solutions

- Solutions for many requirements with a wide range of connector variants
- Highest plug-in safety and reliability
- LV214 and USCAR vibration resistance
- V0 flammability level



### More Battery Solutions

- TE's catalog of cell-to-cell, module-to-module, cell-to-pack, and cell-to-vehicle innovations provide solutions that improve power-to-weight-ratio, time-to-recharge, total range capabilities, and more.

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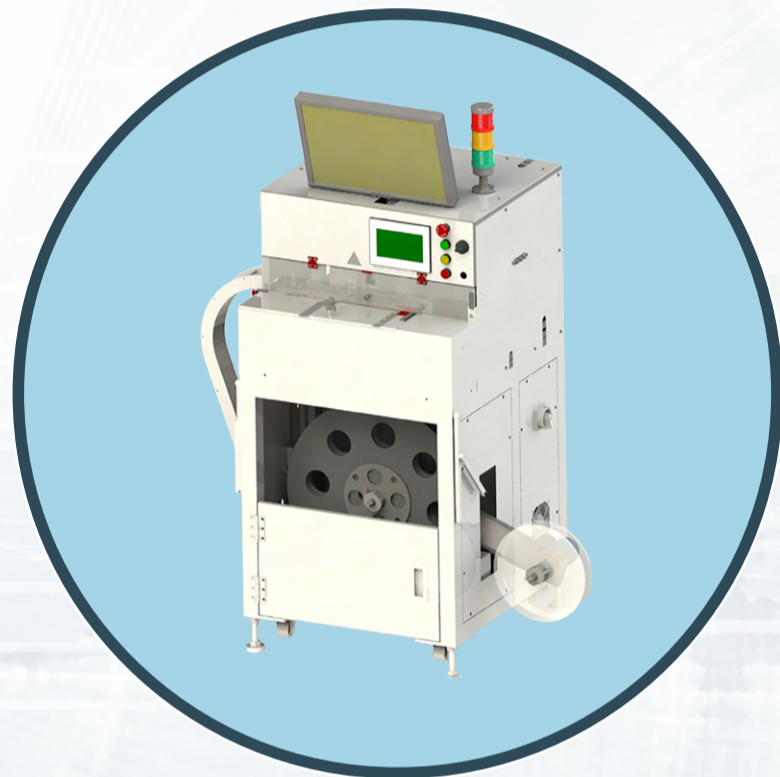
HV-CP



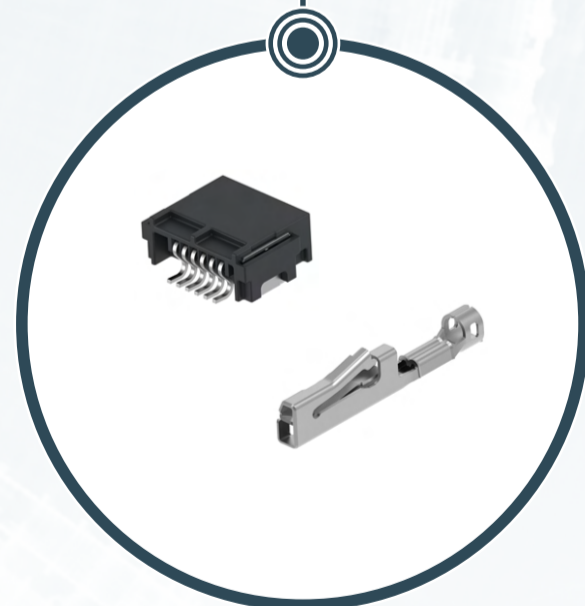
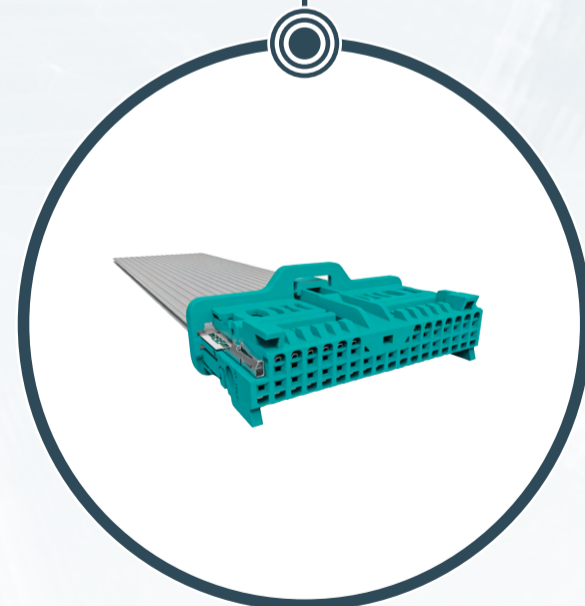
High-Voltage Wire Termination



Flat Flexible Cable Processing



Ocean 2.0 Crimp Applicator



## APPLICATION TOOLING

Click on the image to learn more!



**High-Voltage Cable Processing (HV-CP)**

- Processes 8 mm<sup>2</sup> to 120 mm<sup>2</sup> multi-layered HV cables
- Average cycle time < 30 seconds
- Cable position monitoring for accurate processing
- Industry 4.0 ready



**High-Voltage Wire Termination (HV-20T)**

- Ability to process wires up to 120 mm<sup>2</sup>
- Greater manufacturing flexibility
- Integrated vacuum system
- Industry 4.0 ready



**Flat Flexible Cable Machine (FFC)**

- Crimping rate of approx. 3 contacts/sec
- Programs pitches from 1.27 mm to 5.08 mm
- Programmable pin number, cable alignment, and individual wire positions



**Ocean 2.0 Crimp Applicator**

- 360° wire crimp height adjustment helps minimize errors
- Pinned baseplate design helps prevent misalignment
- Protective black nitride coating on select components
- Easy-to-access screws allow faster applicator setup and adjustment



**Portable Tools**

- Hand, battery, pneumatic, and hydraulic solutions available
- Repeatable quality crimp
- Modular design, ergonomic, and easy to use
- Available for select terminals only

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