

# SWITCH SOLUTIONS FOR ELECTRIC VEHICLE CHARGING

## Electrical Vehicle Plugs

The electrical vehicles (EV) are now part of our life and charging is a simple task – you simply plug in/out and go.

Similar to phone charging cables, car charging cables tend to have two connectors, one that plugs into the vehicle socket and the other into the charge point itself. But depending on the current, the charging speed or your location, the interface to charge your car is different.

Fortunately, standards are regulating the interfaces, and, even if it will evolve in the coming future, maybe we will reach a common standard for all cars.



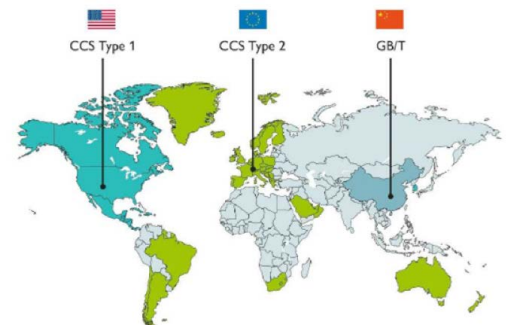
## EV Charging Plugs – Functions

### Plug Switch

Used to detect locking and unlocking when connected to the commercial grid, indoor and outdoor.

There are 3 standards for these plugs:

- IEC 62196-2 (CCS Type 2)
- SAE J1772 (CCS Type 1)
- GB/T 20234-2



### Charging Stations

For interface or on the power board



### HVIL, or High-Voltage Interlock Loop

A safety feature of hybrid and all-electric vehicles that protects people during the assembly, repair, maintenance and operation of a vehicle

HVIL acts as a kind of circuit breaker using a continuous, low-voltage loop that monitors all high-voltage connectors and components in an electric vehicle (EV). If the low-voltage HVIL signal is interrupted for any reason, it indicates that there is an issue with the high-voltage system that should be addressed.

The core of the HVIL is related to the power connectors, but the HVIL control unit can include a switch on cover access to high voltage parts.



**AUTOMOTIVE SOLUTIONS**

**Tactile**

**KSC**

- IP67 with life up to 2 million cycles
- Detect and SPDT versions
- Different sounds and haptics available



KSC

**KSR**

- NC and detect versions available



KSR

**KSJ**

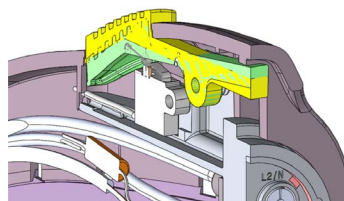
- Multi-directional actuator
- THT switch for side and top actuation
- Detect version available



KSJ

**Purpose Built Developments**

- New combination of existing components to reach your specific mix of force, travel, size and sound
- Snap solutions can be customized to fit the trigger mechanism and integrate optional resistors



**Snap**

All our products can be offered in SPST NO, SPST NC or SPDT configuration

**ZMS & ZMSM**

- IP68
- Compact size with long electrical life
- Specific lever on demand



ZMS



ZMSM

**LCS**

- IP67
- Wide variety of levers and actuators
- Long life and high electrical capacity



LCS

**ZMT, ZMV & ZMW**

- IP67 (Except terminal part. Fully IP67 on potted wire versions.)
- Up to 3 mm silent stroke
- Lever option



ZMW



ZMV

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