

## Home Charge Device (HCD) The most important accessory for any electric vehicle and PHEV



### **Safety. And much more.**

The Home Charge Device offers maximum safety to charge any compatible electric vehicle (EVs/PHEVs), because its hardware and software is personalized to a specific car brand, model, plug (Type 1/2/3 or CEEplus Plug) and to a specific national grid.

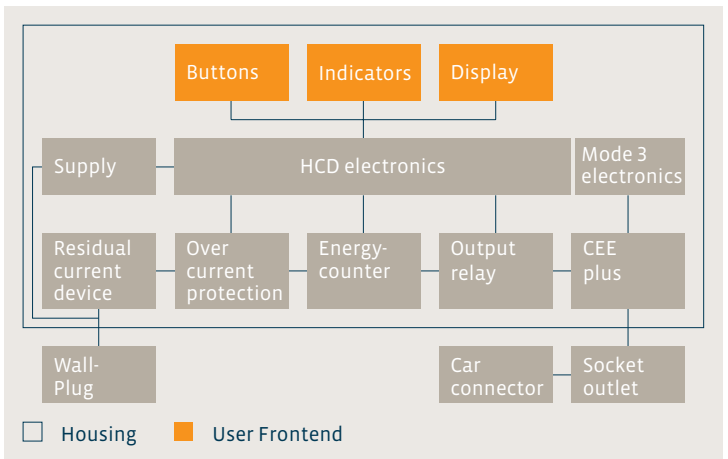
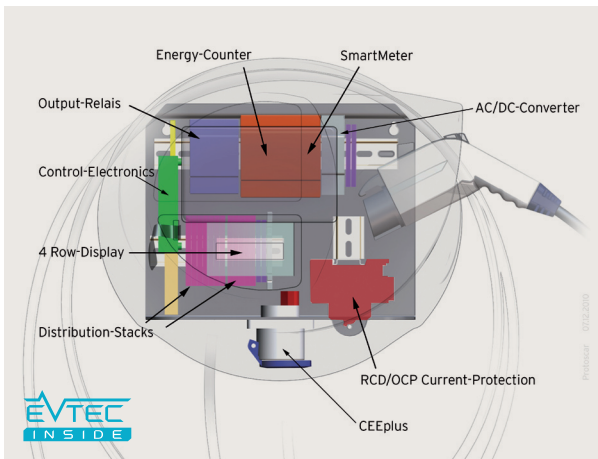
Electric plugs are available everywhere, but not all of them can withstand the full power required by an electric vehicle charger. The HCD allows to automatically adapt according the limitations of the available infrastructure. The HCD is to be considered as “snow chains”: because it is personalized, it follows the specific car once the car changes to a second user. This is why the HCD is conceived as a mobile device, and can easily be hanged up on the wall (in the garage or outside, since the HCD is conceived both, for indoor and outdoor use).

The concept is to offer to the user the possibility to order at the same time the HCD equipment device and its proper installation, including a relevant check of the existing electric domestic installation.

### **Safety features**

The following safety features are integrated in the HCD:

- Residual current device/over current protection
- Earth monitoring between HCD and car before and during the charging process
- Mode 3 communication with the car
- Power interruption after an error or interruption of connection



## HCD advantages for different stakeholders

### For the user

- Up to 1/3 faster charging time becomes possible (e.g.: Mitsubishi i-MiEV in CH charging at 230V / 14,5A instead of 10A, resp. 6h instead of 8h)
- Maximum comfort is granted: no adapter needed, always ready to charge (with no need to grab the cable from the car's luggage compartment, each time)
- Timer function for "start time" selection is implemented (lower overnight pricing)
- Automatic power cut before unplugging
- Information display for energy counter and charging time

### For the car manufacturer/importer

- Car specific charging protocol is implemented (100% guaranteed compatibility)
- Charging process complies with all (safety) legislations
- Easy "function add-ons" for the car are available ("system seller")
- Personalized branding reinforces long term brand loyalty

### For the grid operator

- Smart Meter integration becomes possible (possible future option)
- Peak shaving and load levelling becomes possible thanks to interruptibility (possible future option)
- Specific rates/mixes for e-mobility could be implemented
- Overview of energy used for e-mobility becomes possible

## HCD Technical specifications (base version)

<b>Grid side of the HCD</b>	Input Power	230V/16A
	Plug	CEE, 1-Phase 16A (IEC 60309-2)
<b>Car side of the HCD</b>	Output Power	230V/16A
	Socket outlet	CEEplus, 1-Phase 16A (IEC 60309-2) with 4 additional Contacts
	Fixed cable and Connector	Fixed cable: 5 m Type 1/2/3 or CEEplus
<b>Safety</b>	<ul style="list-style-type: none"> <li>• RCD (Residual Current Device)</li> <li>• OCP (Over Current Protection = circuit breaker)</li> <li>• Mode 3 Communication</li> <li>• Earth monitoring between HCD and Car</li> </ul>	
<b>Dimensions</b>	Width: 44 cm; height: 38 cm; depth: 18 cm	
<b>Weight</b>	7,4 kg	
<b>Housing</b>	IP44 (also for out-door use) HS grade (according UL 95)	
<b>Standards</b>	IEC 61851-1, 21, 22; IEC 62196-1. CE mark	
<b>(Optional) Also available with:</b>	3 phase up to 22 kW RFID Gateway	

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