PRV 2016 -2017

EV Charging Solutions
Electric vehicle charging stations

Fast and slow charging.
Chargers for domestic and public road environment.
Single socket and multisocket solutions.
The range of ZIV PRV charging solutions has been evolving since 2010 to meet the different needs of an expanding market. We present a set of solutions developed in accordance with international regulations that integrate ZIV own technology in control, communications and measuring systems.

<table>
<thead>
<tr>
<th>ZIV - PRV MODELS</th>
<th>PRV-B</th>
<th>PRV-M</th>
<th>PRV - VP</th>
<th>PRV-DC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment</strong></td>
<td>Domestic</td>
<td>Indoor or outdoor</td>
<td>The public highway</td>
<td>Service stations, protected environments</td>
</tr>
<tr>
<td><strong>No. of sockets</strong></td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1 x AC + 1 x DC</td>
</tr>
<tr>
<td><strong>Socket</strong></td>
<td>Hose IEC62196-2 (Type 1 or Type 2)</td>
<td>Schuko Hose IEC62196-2 (Type 1 or Type 2)</td>
<td>Socket IEC62196-2</td>
<td>Hoses IEC62196-2 (Type 1 or Type 2) IEC62196-3 (Combo)</td>
</tr>
<tr>
<td><strong>Casing</strong></td>
<td>Wall</td>
<td>Wall</td>
<td>Floor</td>
<td>Floor</td>
</tr>
<tr>
<td><strong>Power management</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Standard</strong></td>
<td>IEC51851-1</td>
<td>IEC51851-1</td>
<td>IEC51851-1</td>
<td>IEC51851-1, IEC51851-23 (CCS)</td>
</tr>
<tr>
<td><strong>Maximum power per socket</strong></td>
<td>7.4kW (AC single phase)</td>
<td>22kW (AC three phase)</td>
<td>43kW (AC three phase)</td>
<td>50kW (DC)</td>
</tr>
<tr>
<td><strong>Supported Modes</strong></td>
<td>Mode 3</td>
<td>Modes 1, 2, 3</td>
<td>Modes 3</td>
<td>Modos 3, 4</td>
</tr>
</tbody>
</table>

The PRV-M model has a casing for wall mounted installation, both indoor and outdoor. It incorporates an intelligent meter and can therefore be devoted to domestic or public use: public car parks, hotels, shopping and leisure centres, private fleets, residents’ associations, etc.

The PRV-B, model also has a wall casing, although it is only designed for domestic use. It incorporates an intelligent connector and can therefore be used in type II layouts in accordance with ITC BT-52.

The new PRV-VP has been designed to charge two vehicles simultaneously on a public space.

Finally, the PRV-DC enables charging in high-power direct current (50KW), providing a safe, easy and quick service.
PRV-M

Dual socket wall charger
for public and/or domestic use

- Designed for a domestic and/or public environment
- **Maximum power per socket 22kW** (single phase, 32A)
- 2 sockets in Mode 1, 2 or 3
  - Socket IEC62196-2 Type 2
  - Hose IEC62196-2 Type 1 or 2
  - Schuko
- OCPP 1.2 protocol
- Master/slave system
- 3G cellular communications
- Power management
  - Individual of each PRV
  - Of the entire master/slave system
- RFID Authentication
- Charge postponement option
- Tilt sensor
- Battery for extra autonomy
- Memory storage of executed charge operations

Industrial Design Prizes:
- Second Prize IDA (International Design Awards) winner
- DELTA Prizes Selection
- Good Design Award winner

customised
**PRV-B**

Wall charger for domestic use

- Designed for a domestic environment (Private or community parking space)
- **Maximum power:** 4.7kW (single phase, 32A)
- 1 socket Mode 3 with hose:
  - IEC62196-2 Type 1 (Yazaki) or
  - IEC62196-2 Type 2 (Mennekes)
- Contains:
  - LEDs. Information necessary for the user
  - Charge postponement option
    - In hour units
    - With button or similar
  - Key
    - Turn PRV on/off
    - Goal: to restrict use
  - Internal storage of executed charging operations
  - Connector option.
  - 3G cellular communication option.

**PRV-VP**

Dual socket charger for the public space

- Designed for the public space
- **Maximum power per socket:** 43kW (three phase, 64A)
- 2 simultaneous sockets in Mode 3
  - Socket IEC62196-2 Type 2
  - Hose IEC62196-2 Type 1 or 2
- OCPP 1.2 protocol
- Master/slave system
- 3G cellular communications
- Power management
  - Individual of each PRV
  - Of the entire master/slave system
- RFID Authentication
- Charge postponement option
- TILT sensor
- Battery for extra autonomy
- Memory storage of executed charging operations
**PRV-DC**

Dual socket fast charge

- **Maximum power: 50kW (DC)**
- Compact internal distribution
- Small volume to minimise floor occupation and facilitate installation
- Small physical area
- Easy to operate and intuitive user interface
- OCPP 2.0
- Modes supported:
  - Mode 3
    - Maximum power: 22kW
  - Mode 4 (CCS)
    - **Efficiency ~ 95%**
    - High-Frequency Electronics
    - Power converter
- 3G cellular communications
- Power management
  - Individual of each PRV
  - Of the entire master/slave system
- RFID Authentication
- Charge postponement option
- TILT sensor
- Battery for extra autonomy
- Memory storage of executed charging operations
RVE

Electric Vehicle Re-connector

Permits installation of charging points with the ITC-BT 52 Type 2 layout.

- Oriented to OEM market (integration within charging points).
- Controls an external contactor in order to disconnect the charging point in the event of a supply failure, enabling the intelligent meter to reconnect the load from the home.
- Minimum physical area, DIN rail.
- Consumption almost nil (μA).

equema ITC-BT 52 Tipo 2.

OEM Solutions

Intelligent single phase / three phase meter ZIV SCTM and SCTD

Compact WAN router – ZIV EMR

Control module for ZIV CRV charging station