Electric Mobility
Smart Devices and Systems

Electric Vehicle Charging

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INTRODUCTION

The electric vehicle is now a reality.

The growing confidence in the use of charging facilities, together with the growing range of increasingly autonomous vehicles, has led to a constant increase in sales of hybrid and electric vehicles, which are now seen as viable options for most drivers.

Circutor’s current charging systems are the result of our wide experience over the years in different areas, offering solutions tailored to match every market need; from the charging point in our personal parking lot to fast and ultra-fast charging solutions intended for long-distance journeys.
Charging modes

**M1 Mode 1**
- Direct vehicle-to-grid connection
- Non-dedicated socket
- Single cable
- Overheating risk

**M2 Mode 2**
- Direct vehicle-to-grid connection
- Non-dedicated socket
- Cable with communications device and charge control

**M3 Mode 3**
- Direct vehicle-to-grid connection
- Dedicated socket with charge control
- Dedicated cable

**M4 Mode 4**
- Indirect vehicle-to-grid connection via external charger
- External direct current socket with charge control
- Dedicated cable

Connector types

**Schuko**
- Maximum voltage: 230 V ac
- Maximum current: 16 A II
- Standards: CEE 7/4

**CHAdemo**
- Maximum voltage: 500 V dc
- Maximum current: 120 A dc
- Standards: IEC 62196-1, UL 2551
- Characteristics: Compliance JEVS G105

**Type 1**
- Maximum voltage: 250 V ac II
- Maximum current: 32 A II (hasta 7.2 kW)
- Standards: IEC 62196-2
- Characteristics: Standard SAE J1772

**COMBO 2 CCS**
- Maximum voltage: 850 V dc
- Maximum current: 125 A dc
- Standards: IEC 62196-2, IEC 62196-3
- Characteristics: Combined AC/DC connector

**Type 2**
- Max. voltage: 500 V ac III / 250 V ac II
- Max. current: 63 A III (hasta 43 kW) / 70 A II
- Standards: IEC 62196-2
- Characteristics: for single or three-phase charging

Charging times

**Stationary charging**
- Devices of: 10 A, 2.3 kW
- They charge from: 75 to 50 km of autonomy in 1 hour

**Regular charging**
- Devices from between: 16-32 A, 3.6-22 kW
- They charge from: 75 to 150 km of autonomy in 1 hour

**Momentary charging**
- Devices from between: 125 A, 50-150 kW
- They charge from: 300 to 1000 km of autonomy in 1 hour
The WallBox range has been designed for multi-user environments. This range is the most versatile in terms of configuration design.

- Outlets with Type 1 cable, Type 2 cable, Type 2 base and/or Schuko cable
- Charging power: 3.6 / 7.4 / 22 kW per socket (depending on the model)
- RFID reader for authentication and charge activation - ISO 14443 A
- OCPP 1.5 / 1.6 communications protocol
- Possibility of adding 3G communications
- Dimensions: 320 x 225 x 130 mm (350 x 442 x 130 mm)

The ePark range is the new generation of devices for multi-user environments.

- Double outlet with Type 2 base
- Charging power: 7.4 kW per socket (14.7 kW total)
- Power balancing between sockets
- Integrated MID-certified energy measurement
- RFID reader for authentication and charge activation - ISO 14443 A
- Independent circuit-breaker and earth leakage protection per socket.
- OCPP 1.5 / 1.6 communications protocol
- Possibility of adding 3G communications
- Dimensions: 200 x 335 x 315 mm

The Urban WB range has been designed for multi-user environments. This product range is the most robust due to its metallic casing.

- Double outlet with Type 1 cable, Type 2 cable or Type 2 base
- Charging power: 7.4 / 22 kW per socket (total 14.7 / 44 kW)
- Power balancing between sockets
- Integrated MID-certified energy measurement
- RFID reader for authentication and charge activation - ISO 14443 A
- Independent circuit-breaker and earth leakage protection per socket.
- OCPP 1.5 / 1.6 communications protocol
- Possibility of adding 3G communications
- Dimensions: 850 x 450 x 290 mm
 Outdoor multi-user car parks

**Urban**

URBAN posts are designed for outdoor charging where the objective is a robust yet attractive unit.

- Double outlet with Type 1 cable, Type 2 cable, Type 2 base and/or Schuko cable
- Charging power: 7.4 / 22 kW per socket (total 14.7 / 44 kW)
- Power balancing between sockets
- Integrated MID-certified energy measurement
- RFID reader for authentication and charge activation - ISO 14443 A
- Independent circuit-breaker and earth leakage protection per socket.
- OCPP 1.5 / 1.6 communications protocol
- Possibility of adding 3G communications
- Dimensions 1550 x 450 x 290 mm

**Urban Master-Slave**

URBAN posts are intended for outdoor charging. There is a master-slave system to manage multiple charging points.

- Outlets with Type 1 cable, Type 2 cable or Type 2 base
- Charging power: 7.4 / 22 kW per socket (total 14.7 / 44 kW)
- Power balancing for all MASTER / SLAVE system sockets
- Integrated MID-certified energy measurement
- RFID reader for authentication and charge activation - ISO 14443 A
- 8” anti-vandal TFT touch screen [URBAN MASTER]
- Independent circuit-breaker and earth leakage protection per socket.
- OCPP 1.5 / 1.6 communications protocol
- Possibility of adding 3G communications
- Dimensions: 1550 x 450 x 290 mm

Installations
RAPTION 50 quick charging units allow vehicles to be momentarily recharged when quick recharging is required.

- Outlets with CHAdeMO cable, CCS COMBO 2 cable and Type 2 cable or Type 2 base
- Charging power: 50 kW en DC and 22 / 43 kW en AC (50 / 72 / 93 kW total)
- Integrated MID-certified energy measurement
- RFID reader for authentication and charge activation - ISO 14443 A
- 8” anti-vandal TFT touch screen
- Independent circuit-breaker and earth leakage protection per socket.
- OCPP 1.5 / 1.6 communications protocol
- Possibility to operate as MASTER in a system with URBANs SLAVE
- Enables wall mount installation
- Dimensions: 350 x 940 x 1800 mm

RAPTION 150 quick charging units offer optimum recharging power available for both existing vehicles and future models, thereby anticipating future market demands.

- Outlets with CHAdeMO and/or CCS COMBO 2 cable
- Charging power: 150 kW
- Integrated MID-certified energy measurement
- RFID reader for authentication and charge activation - ISO 14443 A
- 8” anti-vandal TFT touch screen
- Independent circuit-breaker and earth leakage protection per socket.
- OCPP 1.5 / 1.6 communications protocol
- Possibility to operate as MASTER in a system with URBANs SLAVE
- Dimensions: 378 x 420 x 2067 mm (pump) / 800 x 1000 x 2000 mm (power unit)


Household environment

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**eHome**

The eHome range has been designed to be installed in household environments. Optimised to offer excellent value for money plus a good price/performance ratio, user-friendly and intuitive.

- Outlets with Type 1 or Type 2 cables
- Charging power: 7.4 kW
- End of charge indication
- Adjustable max. power
- Compatible with the CirBEON power manager
- Includes cable holder
- Dimensions: 315 x 180 x 115 mm

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**eNext**

The eNext range is the new generation of devices for household environments. Includes wireless communication for charge control using a mobile application.

- Outlets with Type 1 cable, Type 2 cable or Type 2 base
- Charging power: 7.4 / 22 kW
- End of charge indication
- Adjustable max. power
- Compatible with the CirBEON power manager
- Wireless Authentication
- Charge control app.
- Dimensions: 200 x 335 x 315 mm

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Installations