eVolve Rapid Master/Slave

The most cost-effective multiple charging solution

Application

The eVolve Rapid series is designed to bring fast charging in a reduced format to all those places where the AC charging is not enough, improving the charging speed of electric vehicles without large investments.

Moreover, it has the capability to minimise the initial investment (CAPEX) and the operating expenses (OPEX) when several chargers are required, this solution is a combination of a Master charger and a set of Slaves controlled by this Master. The whole system works as if all the chargers had smart capabilities.

Concept Design

Thanks to Circontrol's years of experience in the field of slow and/or semi-fast public charging, as well as its fast-charging Raption series, the eVolve Rapid series has been launched as a fast-charging solution that is perfect for small private locations and features two models for wall or floor installation (wallbox and post).

Designed to reduce charging times for electric vehicles with larger batteries, which will go from having a range of just over 40 or 60 km (depending on the model) if charged on AC for one hour to being able to travel nearly 150 km with the same charging time and the same enclosure.

Product highlights

- Using a typical AC enclosure with a small size, eVolve Rapid is able to charge at 25kW in DC for any electric vehicle with fast charging, **reducing its charge time by half or even two thirds**, increasing user satisfaction.

- eVolve and eVolve Rapid are able to be used as master or slave in the same environment, moreover, Raption could be used as a master of them. **This allows a mixed charge system of Master /Slave and AC/DC charging environment** which is the perfect combination to set any charger hub adapted to any need or scenario.

- A **single modem** in the Master unit can be used for remote connection and back-office system integration (by means of OCPP 1.5, 1.6J or future 2.0), so communication fees are also reduced avoiding extra OPEX cost.

- The Master can operate up to 6 eVolve Rapid Slaves and/or 8 eVolve Slaves (max. 18 charging points including the Master) managing all charges and user authentication **from a single point**.

- For car parks without OCPP backend system, standalone configuration offers a load balancing feature for AC chargers and **user control through RFID**.

- Its lockable front door, with **security acces key**, enables easy access to the inside of the charger for faster installation and maintenance. The charger can also be installed next to a wall to optimise available space.

- Developed with **future-proof Raption 100 technology** to charge using a **broad voltage scale** (from 200 to 920 V), it is capable of charging both new small electric cars and heavy vehicles such as electric buses and trucks.

- Its **8" daylight readable touchscreen** not only provides clear charging instructions (e.g. incorrect EV shift position to start the charge) and operating status (e.g. reserved charge point) but also allows the user to select from several languages.

- **Integrated contactless payment system:** Offers an easy, intuitive and contactless card payment experience.

- To comply with the most demanding requirements regarding billing, the eVolve series includes **MID certified metres**.

General Specifications

AC Power Supply	3P + N + PE
AC Input V	400V +/- 10% three-phase
Power Factor	> 0.98
Efficiency	94% at nominal output power
Frequency	50 / 60Hz
Required power supply capacity	27 kVA
Maximum AC input current	39 A
Maximum output power	25 kW
Maximum output current	70 A
Output voltage	150-920 Vdc
Compliance	CE / Combo-2 (DIN 70121; ISO15118) IEC61851-1; IEC61851-23 IEC61851-21-2
Enclosure material	Aluminium & ABS
Enclosure rating	IP54 & IK10
Operating Humidity	Up to 95%
Ambient temperature storage	-40 C to +60 C
Lights for status indication	RGB colour indicator
Enclosure door lock	Security key lock
Enclosure access	Frontal door
Charge cable length	5.5 metres
MID	Class 1 - EN50470-3

Master	
Network connection	10/100TX (TCP-IP)
Interface protocol	OCPP 1.5 / 1.6J / 2.0 HW Ready
Display HMI	8" anti-vandal touchscreen
RFID Reader	ISO/IEC 14443 A/B MIFARE Classic/DESFire EV1 ISO 18092 ECMA-340 NFC 16.53MHz
Wireless communication *(only available in Master)*	EMEA - 4G LTE/WiFi Hotspot/ GPRS/GSM

Slave	
Master Communication	Ethernet UTP

Optional devices	
Customisation	Frontal labelling
Wireless communication *(only available in Master)*	LATAM/APAC - 4G LTE/GPRS/ GSM
Network hub RFID Extension *(only available in Master)*	Switch TCP ethernet 8 ports
	Switch TCP ethernet 12 ports
RFID Extension	Legic Advant / Legic Prime ISO 15693 / ISO 18092, Sony FeliCa
Contactless payment*	Integrated credit card payment terminal
Slave communicaction	Wifi 802.11 b/g/n

Ask for availability

Model Specifications

Models	Post Master CCS	Post Slave CCS	Wallbox Slave CCS
Safety Protections	RCD type B 30mA MCB curve C	RCD type B 30mA MCB curve C	-
Operating Temperature	-35 C to +45 C (Low Temp. Kit)	-35 C to +45 C (Low Temp. Kit)	-5 C to +45 C
Environment	Outdoor	Outdoor	Indoor
Dimensions (W x H x D)	382 x 1750 x 236 mm	382 x 1750 x 236 mm	382 x 984 x 236 mm
Weight	75 kg	75 kg	52.6 kg
Cable support	Integrated connector holder and cable roller	Integrated connector holder and cable roller	Cable roller
Connection	CCS2	CCS2	CCS2

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rev. 0.1