WallBox eVolve Smart
Charging Station for Electric Vehicles

Application

Designed to be installed in both public access environments (urban spaces, shopping centres, parking lots, airports, petrol stations ...) and private ones (companies, community car park sites...) where their intelligent capabilities offer a range of possibilities which improve the user and/or operator experience.

Concept Design

Nowadays, the concept of smart cities demands an innovative design for its urban equipment, especially for EVSE (EV Supply Equipment) due to its innovative aspect. With its stylised shape and modern lines, eVolve series meets this demand.

In the same way, not only external design has been taken into account but also the daily conditions (both operational and environmental) EVSE have to withstand.

Product highlights

For Charge Point Operator / Owner

- The **Embedded Load Management** allows a lower TCO (Total Cost of Ownership) by charging two EVs simultaneously even when the charger is not supplied with its maximum output power

- Its **frontal key-locked door** provides an easy access to the inside of the charger which results in a lower OpEx (Operating Expenditure) due to a quicker installation and service (preventive/corrective). Moreover, it allows the charger to be installed next to a wall, optimising the available space

- About the charger's **housing**, aluminium and ABS plastic have been combined in a robust structural design that provides protection to both mechanical stress and severe environmental conditions, increasing the charger lifespan and avoiding its replacement in just a few years

- In terms of **communication**, either by its Ethernet port (by default) or 3G/GPRS modem (optional) the charger can be connected to a back-office system (by means of OCPP) obtaining benefits such as user management, billing, remote error diagnostic, etc.

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

For Charge Point User

- Clear charging instructions and plug status are shown using a **backlight display**, increasing user satisfaction, especially useful when the charger has been previously reserved by another user

- eVolve series offers a **flexible authentication**, meaning that the user can either authenticate before or after connecting the cable to the EV. Additionally, the authentication process can also be disabled for a 'plug & charge' use mode

- The **Accessibility for the disabled** has also been considered, complying with international standards regarding the height of connectors/display that facilitates its operation

- eVolve series includes the necessary **electrical protections** (optional) not only to minimize the human safety risk of electrical shock but also to ensure the maximum uptime due to independent protections per connector

WallBox eVolve Smart *Series*

General Specifications

Network connection	10/100BaseTX (TCP-IP)
Interface protocol	OCPP1.2, 1.5
Enclosure rating	IP54 / IK10
Enclosure material	Aluminium & ABS
Enclosure door lock	Key lock
Enclosure access	Frontal door
Operating temperature	-5 ℃ to +45 ℃
Ambient temperature storage	-20 ℃ to +60 ℃
Operating humidity	5 % to 95 % Non-condensing
Light beacon	RGB colour indicator
Display	LCD Multi-language
Power limit control	Mode 3 PWM control according ISO/IEC 61851-1
Dimensions (D x W x H)	450 mm x 290 mm x 600 mm * x 850 mm **
Weight	20 Kg * / 25 Kg **

RFID Reader	ISO / IEC14443A / B MIFARE Classic/DESFire EV1 ISO 18092 / ECMA-340 NFC 13.56MHz
Meter	MID Class 1 - EN50470-3
Power output management	Embedded Power Balance

Optional devices	
Low temperature kit	-30 ℃ to +45 ℃
Electrical protection Type A***	Overcurrent: MCB (curve C) Safety: RCD Type A (30mA)
Electrical protection Type B***	Overcurrent: MCB (curve C) Safety: RCD Type B (30mA)
Surge protection	Four pole transient surge protector IEC 61643-1 (class II)
Wireless Communication	3G / GPRS / GSM

*   Model S & T without electrical protection
**   Model S & T with electrical protection and Model TM4
*** Electrical protection independent per plug. Not available in model TM4

Models Specifications

Model	S	T	TM4	
AC power supply	1P + N + PE	3P + N + PE	3P + N + PE	
AC input voltage	230 VAC +/-10%	400 VAC +/-10%	400 VAC +/-10%	
Maximum input current	64 A	64 A	64 A	
Maximum input power	14,8 kW	44 kW	44 kW	
Number of plugs	2	2	4	
Outlet A — Maximum output current	32 A	32 A	32 A	16 A
Outlet A — Maximum output power	7,4 kW	22 kW	22 kW	3,7 kW
Outlet A — AC output voltage	230 VAC (1P + N + PE)	400 VAC (3P + N + PE)	400 VAC (3P + N + PE)	230 VAC (1P + N + PE)
Outlet B — Maximum output current	32 A	32 A	32 A	16 A
Outlet B — Maximum output power	7,4 kW	22 kW	22 kW	3,7 kW
Outlet B — AC output voltage	230 VAC (1P + N + PE)	400 VAC (3P + N + PE)	400 VAC (3P + N + PE)	230 VAC (1P + N + PE)
Socket type	2x Type 2 Socket (lock system)	2x Type 2 Socket (lock system)	2x Type 2 Socket (lock system)	2x CEE/7
	A B	A B	A B	