ELECTROUSTIC
DISTRIBUTION OF CONNECTIVITY SOLUTIONS

ECOMOBILITY GENERAL CATALOGUE

ECOMOBILITY
SCAME
electrical solutions

2015-2016

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ECOMOBILITY

SCAME
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ECOMOBILITY GENERAL CATALOGUE 2015-2016

www.scame.com

Scame:
a growing group

IN LESS THAN FIFTY YEARS

WE HAVE BUILT AN

INDUSTRIAL BUSINESS THAT

HAS ALWAYS PRESERVED

THE SPIRIT OF ITS ORIGINS

Scame was founded amidst the enthusiasm of the Italian economic boom of the 60's and has always pursued its raison d'être in thriving by improving. Today it is an international industrial group of about 800 people employed in 18 subsidiary and associated companies operating under the parent company headquartered in Parre (Bergamo) in Alta Valle Seriana. Scame has a capillary presence throughout Italy with its own sales agencies and operates worldwide with branches and loyal distributors.

SCAME in the world

SCAME electrical solutions

taly
Parre Bergamo)

SCAME ARGENTINA
Argentina

SCAME CHILE
Chile

SCAME-CZ
Czech Republic

SCAME-SEE
Bosnia Herzegovina

SCAME-TOP
China

SOBEM SCAME
France

SCAME BRASIL
Brazil

SCAME-HR
Croatia

SCAME INDIA
India

SCAME POLSKA
Poland

SCAME PORTUGAL
Portugal

SCAME-RO
Romania

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Slovakia

SCAME IBERICA
Spain

SCAME MIDDLE EAST
U.A.E.

SCAME-UK
United Kingdom

SCAME-UY
Uruguay

SCAME-UA
Ukraine

Technical and sales service

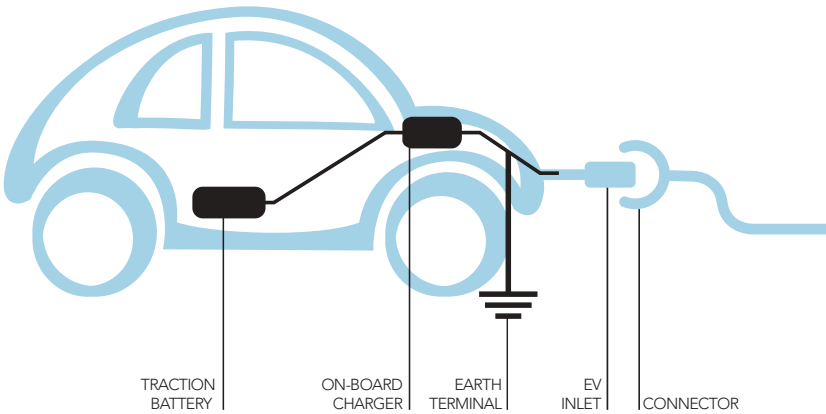
SEND AN E-MAIL TO THE ADDRESS infotech@scame.com AND YOU'LL RECEIVE THE ANSWERS TO ALL YOUR QUESTIONS ABOUT TECHNICAL ASPECTS, INSTALLATION AND CONFORMITY WITH THE STANDARDS.

The Scame technical information centre is able to promptly provide clear and complete answers to all your questions regarding the Scame products. The leading distributors of electrical material, with the support of our sales agencies and technical promoters, represent an additional capillary reference network. Information and updates can be found in the Info-point section of the internet site and in the newsletter sent periodically to the registered users.

infotech@scame.com

Connectors

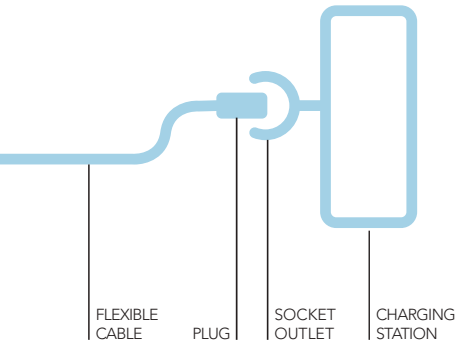
Wall box



Cord set

Domino

Charging stations



There is a great effort behind this project.

The world changes. It is inevitable. It is often a steady evolution, but at times sudden changes occur that lead to new scenarios in just a short time. The introduction of electric vehicles on the market entails the creation of new habits, new structures, and new needs. In such an evolving context, it is important to establish points of reference that guide the change; in this case, the more qualified, and thus credible, figure becomes the main player. SCAME did not hesitate for a second to offer a tangible and functional contribution in order to achieve sustainable choices from a technological, economic and environmental standpoint.

A considerable commitment, which SCAME has gladly been devoted to for many years, with the aim of providing tomorrow's drivers with practical and safe instruments.

We aim to build on good ideas.

In Europe, there are many technicians with experience and skills, but in order to make the most of this wealth it was necessary to find a way to coordinate the work being carried out, channel choices and share objectives. SCAME, in conjunction with other manufacturers strive to ensure compliance of connections used to supply electrical vehicles with IEC/CENELEC standards. All the efforts were geared towards setting up a European connecting standard capable of guaranteeing the highest levels of safety.

We set only one possible choice for ourselves:

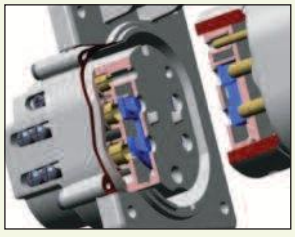
total safety!

European standards define possible cases for electric vehicle connection to the source of power. Within the standardization activities, SCAME has elected to develop its products by presenting original and ground-breaking solutions on the topic of safety that have been appreciated and considered as reference standards at the European level. SCAME thus received proper recognition for the valuable expertise gained while developing its range of products with innovative spirit and designing ability.

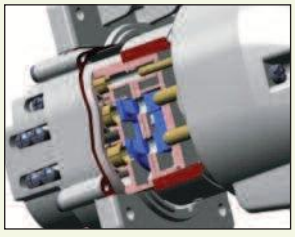
IPXXD PROTECTION

Paragraph 11.3.2 of standard IEC/EN 61851-1 requires IPXXD protection (entry test of wire with 1-mm diameter) against accidental contact for connected and unconnected plugs in case of two-way energy transfer.
This requirement is especially important as it prevents users not trained in the use of these connectors from coming in contact with potentially live parts; moreover, it is required by most European countries.

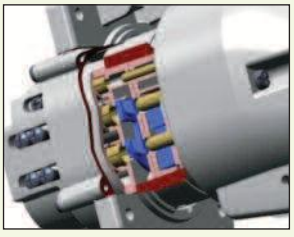
The LIBERA Series connectors satisfy this requirement thanks to the adoption of pins and contact-tubes protected by shutters that can be opened only after the plug is inserted into the socket, as it has been for years now for domestic connectors. As the shutters satisfy the IPXXD degree of protection, the LIBERA Series connectors do not require additional sectioning devices in order to achieve an equivalent degree of protection.



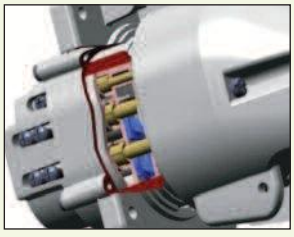
Closed shutters.



Plug shutter opening.



Socket shutter opening.



Complete insertion.

Our solution is simple. And efficient.

IEC/EN 61851-1: CHARGING METHODS

The reference standard for EV charging stations is the IEC/EN 61851-1, which describes four charging modes:

MODE 1

Connection of the EV to the a.c. mains using domestic connectors up to 16 A, type A 30 mA RCD (Residual Current Device) protection in upstream.

MODE 2

Connection of the EV to the a.c. mains using domestic or industrial connectors up to 32 A, type A 30 mA RCD protection, control device on the cable (ICCB In-Cable Control Box).

MODE 3

Connection of the EV to the a.c. mains with dedicated connectors, type A 30 mA RCD protection, control device in the charging station.

MODE 4

Connection of the EV to the a.c. mains with off-board battery charger.

Moreover, depending on the type of cable connection, there are three different possible cases:

CASE A

EV connection to the a.c. mains using a supply cable and plug permanently attached to the EV.

CASE B

EV connection to the a.c. mains using a detachable cable equipped with plug and socket.

CASE C

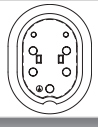
EV connection to the a.c. mains using cable and socket permanently attached to the charging station.

IEC/EN 62196-1 AND IEC/EN 62196-2: MODE 3 CONNECTORS

The reference standards for Mode 3 connectors are the IEC/EN 62196-1 and 2, and they describe three different types of connection:

CONNECTIONS

VEHICLE	Type 1	Type 2
Circuit	Single-phase	Single/three-phase
Current	32 A	70 A (single-phase) 63 A (three-phase)
Max. voltage	250 V	480 V
No. of contacts	5	7
Connector		

STATION	Type 2	Type 3A	Type 3C
Circuit	Single/three-phase	Single-phase	Single/three-phase
Current	70 A (single-phase) 63 A (three-phase)	16 A	63 A
Max. voltage	480 V	250 V	480 V
No. of contacts	7	4	7
Connector			

CONNECTORS FOR ELECTRIC VEHICLES

TYPE 3A CONNECTOR MODE 3

Type 3A connector was launched in Italy in 2000 as the unique connection system for Mode 3 charging electric vehicles in environments open to third parties. Featuring a design derived from the SCAME IEC 309 socket-outlets,
it adopted the quick snap-on device and it uses an additional CP contact for the control pilot circuit to verify the continuity of the protective conductor, in accordance with standard CEI 69-6. Given its small size, it is the preferred connector for small vehicles, such as scooters and motorcycles, with charging power lower than 3 kW. Thanks to the adaptors, it is also possible to use 3A plugs to charge in environments closed to third parties, such as private garages, in mode 1.

N.B.: The IPXXD degree of protection, and consequently the shutters, are not necessary for type 3A plugs as the vehicles for which they are designed don't require them.

REFERENCE STANDARDS

EN 62196-1 (2012)

Plugs, socket-outlets, vehicle couplers and vehicle inlets.

Conductive charging of electric vehicles.

Part 1: General requirements.

EN 62196-2 (2012)

Plugs, socket-outlets and vehicle couplers.

Conductive charging of electric vehicles.

Part 2: Dimensional interchangeability requirements for a.c. pin and contact-tube accessories.

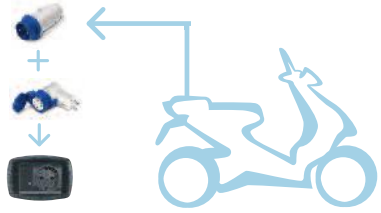
CEI 69-6 (2001)

Standardization sheet of plug and socket-outlet for the connection of electric road vehicles to the supply network.

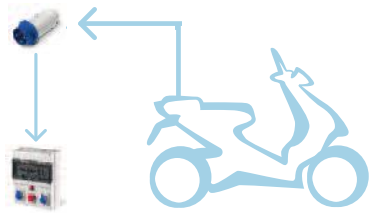
TECHNICAL CHARACTERISTICS

Rated current:	16 A
Rated voltage:	200-250 V AC
Frequency:	50-60 Hz
Insulation voltage:	250 V
Protection degree:	IP44 - IP54 (sockets with interlock) IPXXD (sockets)
Operating temperature:	-30°C to +50°C
Glow Wire test:	850°C 850°C-960°C (sockets with interlock)
Material:	Technopolymer
IK Grade at 20°C:	IK07 – IK08 (sockets with interlock)
Colour:	Grey
Number of poles:	L1-N-PE-CP
Size of conductors:	1 to 2.5 mm^2 (plugs and connectors) 1 to 4 mm^2 (flush-mounting sockets)
Saline solution:	Resistant
UV rays:	Resistant

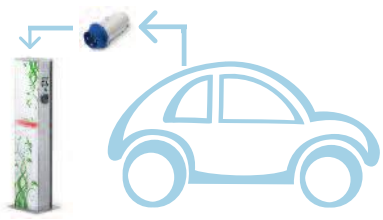
MODE 1 – CHARGING OF EV WITHOUT PWM IN ENVIRONMENTS CLOSED TO THIRD PARTIES
Vehicle connection to the AC mains using standardized connectors up to 16 A.



SIMPLIFIED MODE 3 – CHARGING OF EV WITHOUT PWM IN ENVIRONMENTS OPEN TO THIRD PARTIES
Vehicle connection to the AC mains using specific connectors, control pilot circuit .



MODE 3 CHARGING OF EV WITH PWM IN ENVIRONMENTS OPEN TO THIRD PARTIES
Vehicle connection to the AC mains using specific connectors, control pilot circuit .



TYPE 3C CONNECTOR

MODE 3

Type 3C connector is designed for electric vehicles with charging power greater than 3 kW, such as cars, promoted by the EV Plug Alliance, as a single European solution, infrastructure-side. Derived from type 3A connector, it keeps the same protection characteristics against indirect contact as well as the additional contact used to check continuity of the protective conductor.
The evolution consisting in the possibility to have both single-phase and three-phase wiring, higher rated current, introduction of the shutters on the plug side (a necessary requirement in the case of "Smart Grid") and the additional PP (Proximity Plug) contact for cable size identification. Due to the heavy-duty operating conditions, special attention was taken in the choice of materials in order to guarantee proper resistance to heat, chemical agents and mechanical stress, in compliance with the strict parameters set by the automotive industry.

REFERENCE STANDARDS

EN 62196-1 (2012)

Plugs, socket-outlets, vehicle couplers and vehicle inlets.

Conductive charging of electric vehicles.

Part 1: General requirements.

EN 62196-2 (2012)

Plugs, socket-outlets and vehicle couplers.

Conductive charging of electric vehicles.

Part 2: Dimensional interchangeability requirements for a.c. pin and contact-tube accessories.

TECHNICAL CHARACTERISTICS

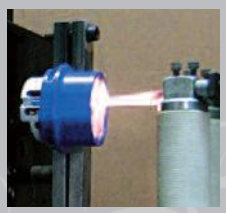
Rated current:	32 A
Rated voltage:	380-480 V AC
Frequency:	50-60 Hz
Insulation voltage:	500 V
Protection degree:	IP44 - IP54 (sockets with interlock) (IPXXD)
Operating temperature:	-30°C to +50°C
Material:	Technopolymer
Glow Wire test:	850°C 850°C-960°C (sockets with interlock)
IK degree at 20°C:	IK08
Colour:	Grey
Number of poles:	L1-L2-L3-N-PE-CP-PP
Size of conductors:	1.5 to 6 mm² (plugs with screw terminals) 2.5 to 6 mm² (plugs with crimped terminals) 1.5 to 10 mm² (flush-mounting sockets)
Saline solution:	Resistant
UV rays:	Resistant

LABORATORY TESTING

RESISTANCE TESTS








RESISTANCE TO CHEMICAL AGENTS

Saline solution	Acids		Base		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	Limited resistance	Resistant	Limited resistance	Resistant	Not resistant	Not resistant	Not resistant	Limited resistance	Resistant	Resistant

TYPE 2 CONNECTOR WITH SHUTTERS MODE 3

The current standard type 2 connector provides a IPXXB degree of protection for socket outlets installed on charging stations. Since this degree of protection is unsuitable for the concerned application, type 2 must be joined with a device upstream that ensures complete isolation.
The SCAME solution using the shutters, as already done for the type 3A, 3C and domestic connectors, can upgrade the degree of protection to IPXXD, ensuring protection against direct contact with potentially live parts.
The type 2 connector with shutters, apart from meeting the expectations of the European Commission, also fulfils the safety requirements for domestic environments required by the regulations and laws of most European Union member states.

REFERENCE STANDARDS

EN 62196-1 (2012)

Plugs, socket-outlets, vehicle couplers and vehicle inlets.

Conductive charging of electric vehicles.

Part 1: General requirements.

EN 62196-2 (2012)

Plugs, socket-outlets and vehicle couplers.

Conductive charging of electric vehicles.

Part 2: Dimensional interchangeability requirements for a.c. pin and contact-tube accessories.

TECHNICAL CHARACTERISTICS

Rated current:	32 A
Rated voltage:	380-480 V AC
Frequency:	50-60 Hz
Insulation voltage:	500 V
Protection degree:	IP55 (mated) (IPXXD)
Operating temperature:	-30°C to +50°C
Material:	Engineering plastic
Glow Wire test:	850°C-960°C
IK Grade at 20°C:	IK08
Colour:	Black
Number of poles:	L1-L2-L3-N-PE-CP-PP
Size of conductors:	2.5 to 10 mm²
Saline solution:	Resistant
UV rays:	Resistant

TYPE 2 WITHOUT SHUTTERS

Type 2 connector is designed for electric vehicles with charging power greater than 3 kW, such as cars. It was adopted by German manufacturers and selected by the European Commission as a standard solution on the infrastructure-side.
As the 3C-type connector can be wired in both single-phase and three-phase, it has the same contacts arrangement (CP and PP contacts).
Since the type 2 connector cannot be disconnected under load,the SCAME type 2 socket already provides an interlocking mechanism that blocks the plug during the charging and that closes the lid when the socket is not engaged.The latching device is operated by a single 2-position actuator.

CORD SET

MODE 3

The cord-set is used to connect the vehicle to the charging station. It consists of a plug for infrastructure-side connection, a connector (movable socket) for the vehicle side, a cable with adequate cross-section and polarity suited to mobile use, particularly resistant to operating conditions.
Compared to case A (cord-set fixed to the vehicle) and case C (cord-set fixed to the charging station), case B is the more versatile one thanks to the compatibility that can be achieved between the various standards in use today in the international scenario of connections.

TECHNICAL CHARACTERISTICS

Rated current:	16 A / 20 A / 32 A
Rated voltage:	200-250 V AC / 380-480 V AC
Frequency:	50-60 Hz
Insulation voltage:	250/500 V
Protection degree:	IP44
Operating temperature:	-30°C to +50°C
Material:	Technopolymer
Saline solution:	Resistant
UV rays:	Resistant

REFERENCE STANDARDS

EN 62196-1 (2012)

Plugs, socket-outlets, vehicle couplers and vehicle inlets.

Conductive charging of electric vehicles.

Part 1: General requirements.

EN 62196-2 (2012)

Plugs, socket-outlets and vehicle couplers.

Part 2: Dimensional interchangeability requirements for a.c. pin and contact-tube accessories.

CEI 69-6 (2001)

Standardization sheet of plug and socket-outlet for the connection of electric road vehicles to the supply network.

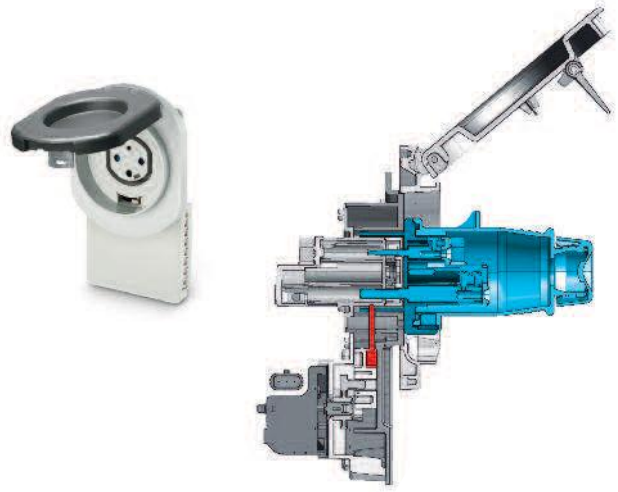
SAE J1772 (2012)

Electric vehicle and plug in hybrid electric vehicles conductive charge coupler.

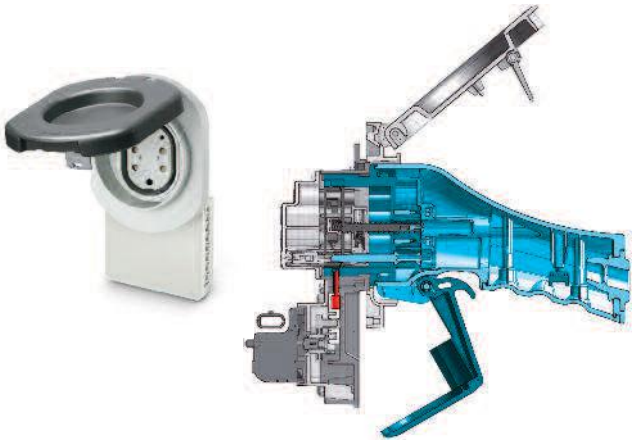
CABLE

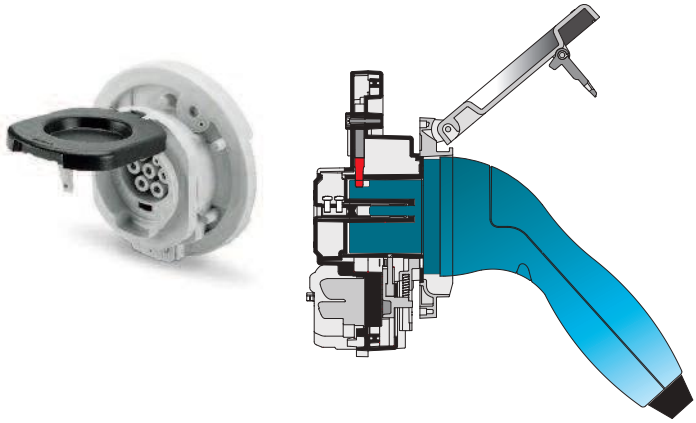
Rated voltage:	300/500 V
Wire insulation/sheath:	TPE / TPE
Maximum temperature:	+105°C

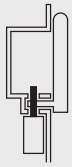
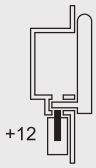
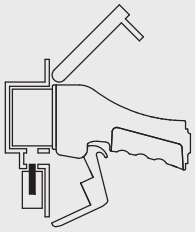
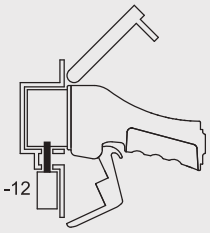
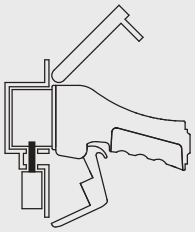
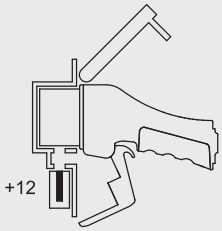
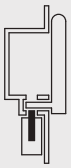
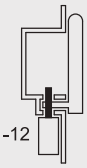
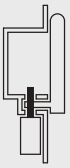
LATCHING SYSTEM



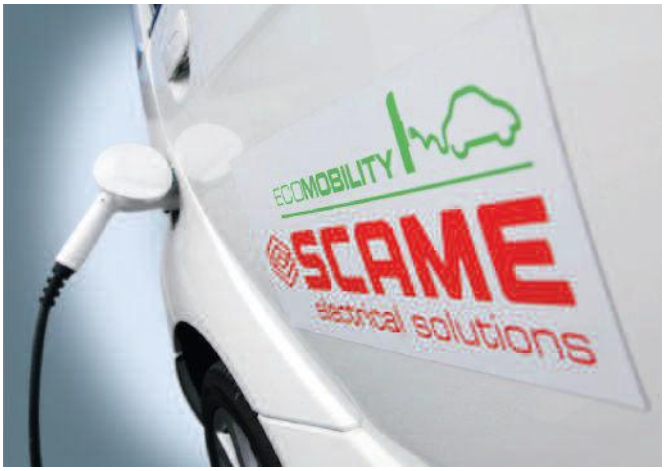
The flush-mounting socket-outlets of the LIBERA Series are also available in the optional version with built-in latching system in order to avoid accidental or intentional extraction of the plug in charging stations located in unsupervised places, such as squares and roads. The locking function is achieved by means of a pin, operated by a bi-stable actuator that also blocks the opening of the cover in the resting position.
For proper system management, the socket also provides the position status of the lock (inserted/not inserted) and of the cover (closed) by means of 3 built-in micro switches. All plugs included in the LIBERA Series are also equipped with a hole in the bottom part of the body in which the pin is housed.
Sockets with the locking function are supplied with no actuator piloting systems, consequently the operating principle shown in the figures at the side presupposes coupling to an external control system supplied by Scame in the case of assembled systems.





1. Idle. 	2. User identification (RFID). Lock opening. 	3. Cover opening. Plug insertion. 	4. User identification (RFID). Lock closing. 	5. Charging. 
6. User identification (RFID). Lock opening. 	7. Plug removal. Cover closing. 	8. Lock closing. 	9. Idle. 	

The legislative scenario is complex



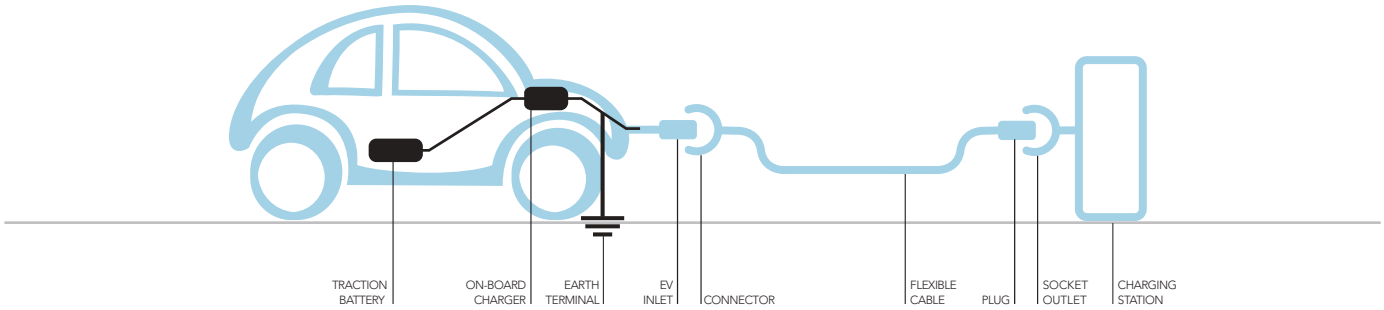
While contributing to defining the new standards, SCAME put technology at the service of common sense, with the aim of pursuing practical and intelligent design choices. Indeed, the choices made when defining connection methods and designing the relevant equipment have led to the offer of simple and safe products. This means that the utilization methods are perfectly suited to the user, that production costs are low and that safety is ensured.

The connection developed by Scame

CHARGING MODE 3

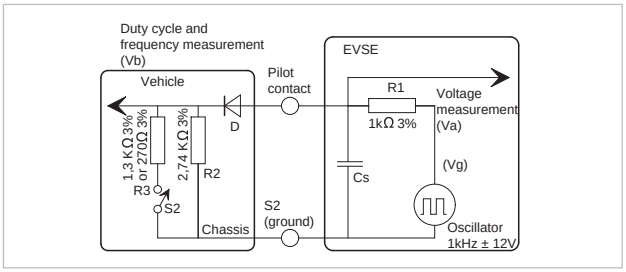
SCAME's charging stations use charging mode 3, in accordance with IEC / EN 61851-1.
Charging mode 3 consists in connecting the vehicle to the AC mains using specific connectors and with a control pilot circuit inside the charging station to verify continuity of the protective conductor between vehicle and grid during the charging.

This check is necessary to ensure proper operation of protections against indirect contacts, hence to prevent any dangerous voltage from being discharged through accidental contact with unaware persons; it is usually mandatory for vehicles with power above 3 kW, and, in Italy, for public or private environments open to third parties. The control circuit also arranges for communication between charging station and vehicle (PWM Circuit) and for cable size identification (Resistor Coding).



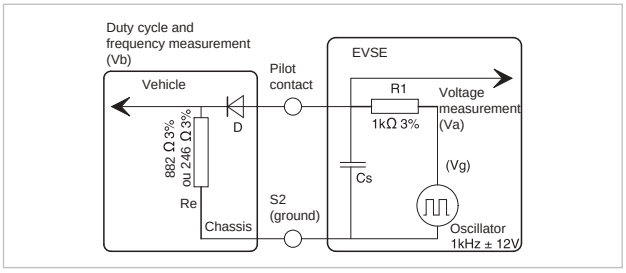
MODE 3 PWM CIRCUIT (PULSE WIDTH MODULATION)

PWM circuit operation is described in Annex A of standard IEC/EN 61851-1. This circuit arranges for communication between charging station and electric vehicle: the station communicates the supply network availability to the vehicle through a frequency-modulated signal, the vehicle adjusts the load returning its status through a voltage value.



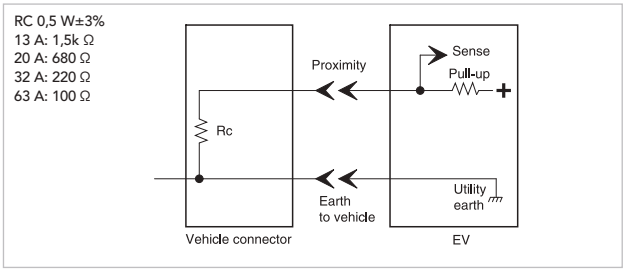
"SIMPLIFIED" MODE 3

In the case of vehicles without PWM, the circuit operates in "simplified mode", measuring the earth resistance value only and limiting the charging current to 16 A (10 A in the future).



RESISTOR CODING

Resistor Coding operation is described in Annex B.5 of standard IEC / EN 61851-1 and it is mandatory in the case of 3C type connectors, type 1 and type 2, when it is possible to wire the plug using cables with different cross-sections and current carrying capability. Depending on the max charging current, a resistance is positioned between the PP contact and the earth, with a value that identifies cable size. The PWM circuit then checks that the charging current does not exceed the maximum drawable current.



CHARGING STATIONS

WALL BOX

MODE 3

The Wall Box is a wall-mounted charging station with the same features as the UB versions, yet featuring a dedicated design that makes it suitable for installation in domestic or similar environments.

TECHNICAL CHARACTERISTICS

Rated current:	16 A / 32 A
rated voltage:	230 V AC
Frequency:	50-60 Hz
Insulation voltage:	250 V
Protection degree:	IP54
Operating temperature:	-25°C to +40°C
Material:	Technopolymer
Glow Wire test:	650°C
IK grade at 20°C:	IK08
Colour:	Grey
Installation:	Wall-mounted
Saline solution:	Resistant
UV rays:	Resistant

REFERENCE STANDARDS

EN 61851-1 (2011)

Electric vehicle conductive charging system.

Part 1: General requirements.

EN 61439-1 (2011)

Low-voltage switchgear and control gear assemblies.

Part 1: General requirement.

FEATURES

- Mode 3 charging with PWM pilot circuit
- Identification of connected cable size
- Protection against overloads and indirect contacts
- Measurement of power output and current drawn
- Control of proper contactor opening
- Identification of users authorized to the charging
- Management of plug interlock system
- Operation in free stand-alone or personal mode
- Set up for serial communication

APPLICATION EXAMPLES

UB DOMINO UNITS

MODE 3

UB switchboards are wall-mounted charging stations using the modular composition possibilities offered by the SCAME Domino Series switchboards.

TECHNICAL CHARACTERISTICS

Rated current:	16 A / 32 A
Rated voltage:	230 V AC / 400 V AC
Frequency:	50-60 Hz
Insulation voltage:	250 V / 500 V
Protection degree:	IP44 - IP54
Operating temperature:	-25°C to +40°C
Material:	Technopolymer
Glow Wire test:	650°C
IK grade at 20°C:	IK07
Colour:	Grey
Installation:	Wall-mounted
Saline solution:	Resistant
UV rays:	Resistant

REFERENCE STANDARDS

EN 61851-1 (2011)

Electric vehicle conductive charging system.

Part 1: General requirements.

EN 61439-1 (2011)

Low-voltage switchgear and control gear assemblies.

Part 1: General requirement.

FEATURES

- Mode 3 charging with PWM pilot circuit
- Identification of the connected cable size
- Protection against overloads and indirect contacts
- Measurement of power output and current drawn
- Control of proper contactor opening
- Identification of users authorized to the charging
- Management of cover locking and plug interlock system
- Management of charging in case of power failure (optional)
- Operation in free stand-alone or personal mode
- Set up for serial communication

APPLICATION EXAMPLES

CA CHARGING STATION MODE 3

The CA charging column is a free-standing, two-sided charging station made of painted steel sheet that can be equipped with type 2, 3A, 3C and domestic socket-outlets having a built-in antiextraction locking system and with movable outlets with permanently connected cable (case C connection). Suited for private or public open areas, these columns feature removable front panels in Plexiglas that allow quick and easy customization.

TECHNICAL CHARACTERISTICS

Rated current:	16 A - 32 A - 50 A - 63 A
Rated voltage :	230 V AC / 400 V AC
Frequency:	50-60 Hz
Insulating voltage:	250 V / 500 V
Protection degree:	IP54
Operating temperature:	-25°C to +40°C
Material:	Steel sheet
Glow Wire test:	-
IK grade at 20°C:	IK10
Colour:	Grey
Installation:	Free-standing
Saline solution:	Resistant
UV rays:	Resistant

REFERENCE STANDARDS

EN 61851-1 (2011)

Electric vehicle conductive charging system.

Part 1: General requirements.

EN 61439-1 (2011)

Low-voltage switchgear and control gear assemblies.

Part 1: General requirement.

FEATURES

- Mode 3 charging with PWM pilot circuit
- Identification of the connected cable
- Protection against overloads and indirect contacts
- Measurement of power output and current drawn
- Control of proper contactor opening
- Identification of user authorized to the charging
- Management of cover locking and plug interlock system
- Management of charging in case of power failure
- Operation in free stand-alone or personal mode
- Set up for serial communication

APPLICATION EXAMPLES

Head with LED indications

LED display with RFID reader

Customizable front panel

Compartment protected by door with lock

Separating plate for cable entry

Free-standing base with separating chamber

CB CHARGING STATION MODE 3

The CB charging column is a free-standing, two-sided charging station with the same features as the CA column but made of stainless steel sheet instead and with a smart design.
Suited for private and public open areas and for environments requiring greater corrosion resistance.

TECHNICAL CHARACTERISTICS

Rated current:	16 A – 32 A
Rated voltage:	400 V AC
Frequency:	50-60 Hz
Insulation voltage:	500 V
Protection degree:	IP54
Operating temperature:	-25°C to +40°C
Material:	AISI 304 steel
Glow Wire test:	-
IK grade at 20°C:	IK10
Colour:	Satin-finished
Installation:	Free standing
Saline solution:	Resistant
UV rays:	Resistant

REFERENCE STANDARDS

EN 61851-1 (2011)

Electric vehicle conductive charging system.

Part 1: General requirement..

EN 61439-1 (2011)

Low-voltage switchgear and control gear assemblies.

Part 1: General requirement.

FEATURES

- Mode 3 charging with PWM pilot circuit
- Identification of the connected cable size
- Protection against overloads and indirect contacts
- Measurement of power output and current drawn
- Control of proper contactor opening
- Identification of user authorized to the charging
- Management of cover locking and plug interlock system
- Management of charging in case of power failure
- Operation in free stand-alone or personal mode
- Set up for serial communication

APPLICATION EXAMPLES

Head with LED indications

LED display with RFID reader

Flush-mounting outlet with door

Compartment protected by door with lock

Separating plate

Free-standing with separating chamber

CR-CL RES (OURCE) CHARGING STATION MODE 3

RES(ource) is more than just an equipment device used to charge electric vehicles. RES(ource) is also a source of energy, communication and services. A successful blend of design and functionality, it expresses through its shape and colours the vocation to fit in historical, architectural and valuable landscapes, typical of the Italian scenery.

TECHNICAL CHARACTERISTICS

Rated current:	32 A
rated voltage:	400 V AC
Frequency:	50-60 Hz
Insulation voltage:	500 V
Protection degree:	IP54
Operating temperature:	-25°C to +40°C
Material:	Corten steel - Steel sheet
Glow Wire test:	-
IK grade at 20°C:	IK10
Colour:	Oxidized (rust-like) - Grey
Installation:	Free-standing
Saline solution:	Resistant
UV rays:	Resistant

FEATURES

- Mode 3 charging with PWM pilot circuit
- Identification of the connected cable size
- Protection against overloads and indirect contacts
- Measurement of power output and current drawn
- Control of proper contactor opening
- Management of service based on the available credit
- Management of cover locking and plug interlock system
- Management of charging in case of power failure
- Operation in free stand-alone or personal mode
- Set up for serial communication

REFERENCE STANDARDS

EN 61851-1 (2011)

Electric vehicle conductive charging system.

Part 1: General requirements.

EN 61439-1 (2011)

Low-voltage switchgear and control gear assemblies.

Part 1: General requirement.

APPLICATION EXAMPLES

ZE READY CERTIFICATION MODE 3

ZE READY LABEL is a quality brand owned by Renault that guarantees full compatibility of the charging infrastructure with ZE Renault vehicles.
When affixed, it ensures that the charging stations and their installation, are carried out in compliance with specific requirements established by the members of the ZE Ready workshop, which anticipate upcoming rules and regulations concerning the charging of electric vehicles in order to ensure their safety and performance.

ZE READY is a trademark granted by Renault to accredited partners. The right to use the trademark is only given to companies that have control over the product and its installation. SCAME stations have been tested and accredited in conformity with ZE READY 1.2 requirements, so any installer that wishes to successfully comply with ZE READY expectations can become SCAME's partner. For more information about SCAME products, the certification process and how to become a partner, please contact SCAME at **info@scame.com.**

ZE READY CERTIFICATION PROCEDURE
FOR POTENTIAL PARTNER

- Acceptance of the collaboration contract
- Participation in the technical course at SCAME covering the following topics:
  - Reference standards
  - Installation, configuration and use of SCAME charging stations
  - Additional ZE READY requirements
- Installation of products according to:
  - Current standards
  - Technical manual
  - ZE READY requirements
- Filling in the installation report
- Affixing the label.

For the software we

A truly complete project cannot be limited to defining the technical characteristics of the equipment. In such a complex scenario such as the one that is evolving in this sector, it is crucial to provide for advanced utilization modes of the power supply system, taking advantage of plant management technologies that allow an optimization of equipment use.

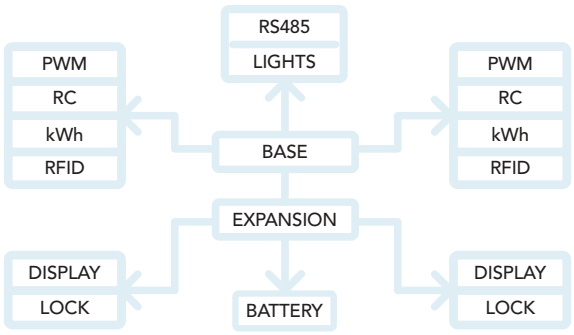
SCAME has provided for the interaction with sophisticated control and management tools, also developing an advanced software system that makes the SCAME world compatible with the most depending market requirements.

component have worked hard

CONTROL CARD

Scame's charging stations are equipped with a control card that was developed in cooperation with our partner, GENERALE SISTEMI, which supplies basic functions such as PWM circuit, resistor coding, energy measurement, RFID user identification, indicator lights and RS485 serial communication.

Depending on the versions, additional functions such as emergency power supply, display management, anti-extraction locking and lights command are provided by a special expansion module.

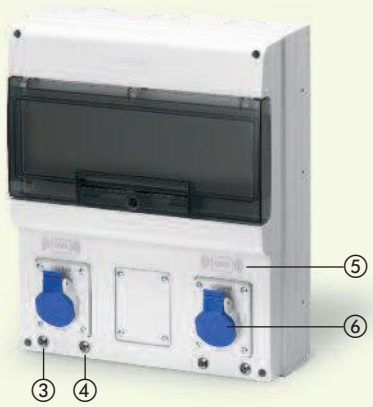


USER INTERFACE

204.CAXXX

204.CBXXX

204.UBXX



① GENERAL LIGHTS: if blue, charging in progress; if green, ready to charge; if red, there is a failure; is OFF there is no AC mains.

② LCD DISPLAY: provides the user with instructions on how to charge and displays information regarding the charging process and about any anomaly.

③ WHITE OPERATING LED: if ON it indicates normal operation; if flashing, control or programming is in progress.

④ BLUE OPERATING LED: if ON indicates charging is in progress; if flashing charging is suspended.

⑤ RFID READER: to enable/stop the charging or open the socket-outlet cover, the User Card must be placed over this area.

⑥ STOP CHARGE BUTTON (free mode)

⑦ SOCKET-OUTLET: depending on the version, can be type 1, type 2, type 3A, 3C or domestic, with or without interlocking device, complies with IEC 62196-1 and 2.

Three configurations for charging

STAND-ALONE

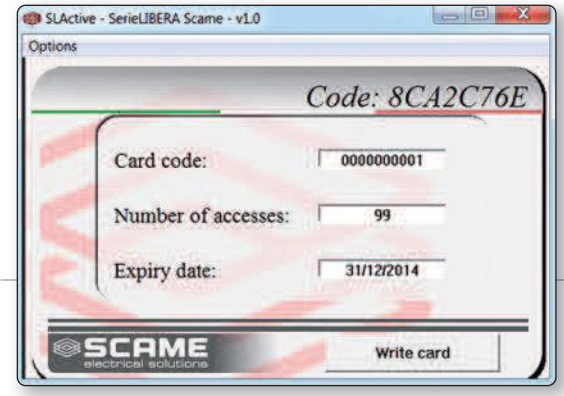
The charging stations are not connected together and operate independently. The station administrator can leave them in free charging mode (FREE) or limit the charge to authorized users (PERSONAL). Through the card programmer, the administrator can nevertheless control the charging depending on a specific time interval and/or the number of accesses.

Programmer and User Card in HF technology

ACTIVE CARD

Each User Card can be programmed by assigning an expiry date and/or a limited number of accesses through the 208.PROG programmer, to be connect to one's PC, and the supplied SLActive software.

SLActive software

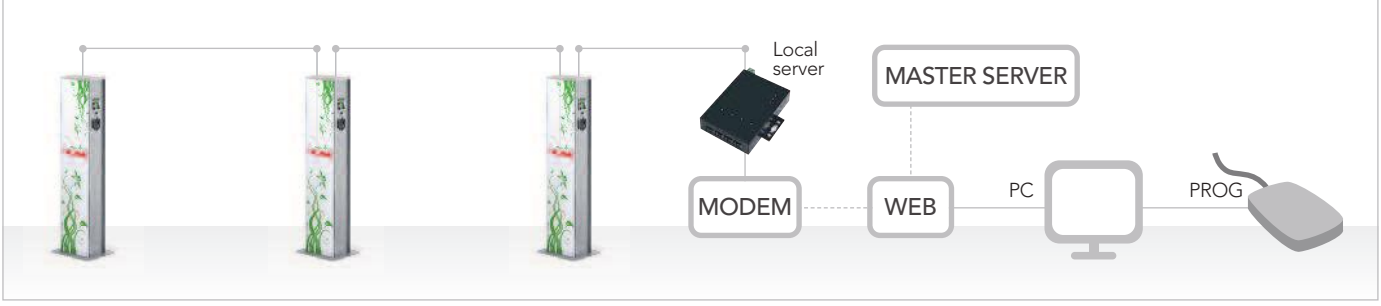


WEB

The stations are connected together to local server and by a GPRS/ADSL modem the data are transferred to the web server (master server).
The station administrator accesses the web server to manage users, monitor and configure the stations, calculate consumption, etc. Users also can access the web server only as far as their own account is concerned. The development of systems that take advantage of station connection to a web server is entrusted to our partner, GENERALE SISTEMI, which operates the service.

WEB SERVICES

The services via the Internet developed by SCAME in cooperation with GS SISTEMI offer the following solutions:
- real-time display of system status (column free, busy, charging, etc.);
- recording of consumption;
- calculation of statistics on column use and availability.
- monitor of failures/malfunctions



stations

NET

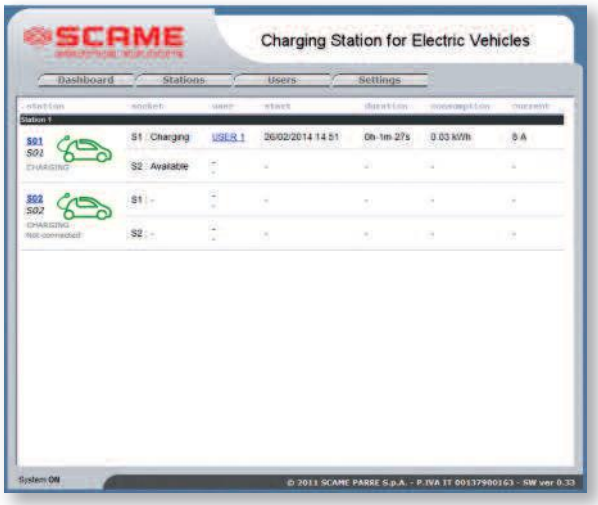
The charging stations are connected together and to a local server, which can only be accessed by the station administrator. In addition to being a data concentrator, the server contains the standard software developed in cooperation with our technological partner, GENERALE SISTEMI, through which it is possible to manage users, monitor and configure the charging stations, record consumptions, etc. Through the card programmer, the administrator can nevertheless control the charging depending on a specific time interval and/or the number of accesses.

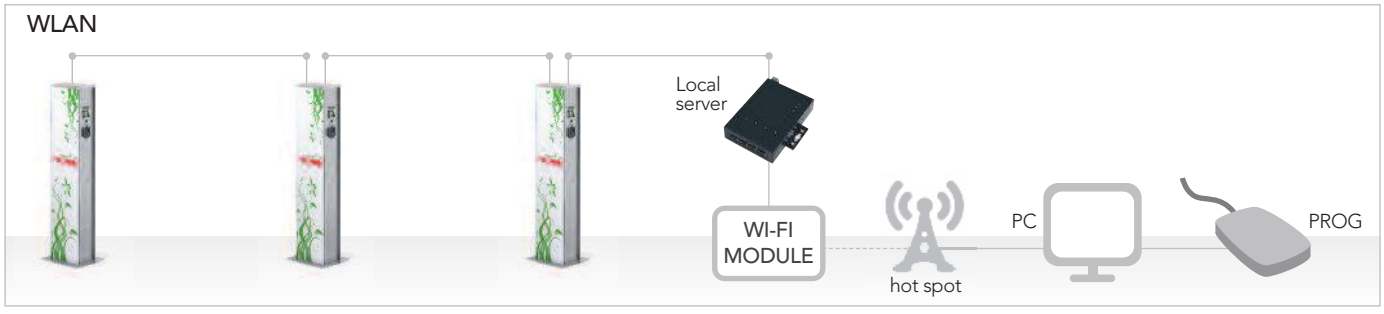
The services are managed through a local server located nearby the columns.

Local server with standard management software

The system used to manage SCAME's charging stations does not require the installation of software in order to work, as the program is already installed on the server.

The operating status of the outlets of the connected stations is reported in real time on the web page shown here below.





ALTERNATIVE SOLUTIONS

To complete its product range, SCAME offers the Fast Charge quick charging stations in Mode 4.

REFERENCE STANDARDS

EN 61851-1 (2011)

Electric vehicle conductive charging system.

Part 1: General requirements.

IEC 61439-1 (2011)

Low-voltage switchgear and control gear assemblies.

Part 1: General requirement.

N.B:

- The term "fast charge" means the ability of a battery to charge up to 80% of capacity in 10/15 minutes.
- Mode 4 consist in a DC supply of the vehicle using a dedicated connector that allows even a digital communication between vehicle and station. The most used standards today are:

• CHAdeMO is the name of the Japanese association that promotes this charging mode, which requires the use of dedicated connectors, pre-setting the vehicle for this charging mode, and digital communication between vehicle and charging station defined by a proprietary protocol (CAN bus).

• The Combined Charging System (CCS) Type 2, also called "COMBO 2", supports both conventional a.c. charging and fast d.c. charging. Both connectors fit into the vehicle inlet and the communication is provided by power line.
COMBO 2 is a standard promoted by the German carmakers. The European Commission specified the use of the COMBO 2 according to IEC 62196 as a common standard throughout Europe.

CHAdeMO CHARGING STATION (CH) MODE 4

CHAdeMO connector

FEATURES

- Mode 4 charging according to CHAdeMO standard
- Electronic protection system:
  - Revers polarity
  - Short circuit
  - Anti-arcing
  - Over temperature
- Protection against overloads and indirect contacts
- Charging history (200 charge cycles)
- Management of charging in case of power failure
- Operation in stand-alone free mode
- Set up for serial communication

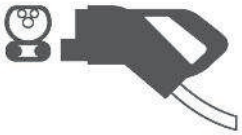
TECHNICAL CHARACTERISTICS

Input voltage:	400 V AC
Input current:	32 A - 80 A
Frequency:	50-60 Hz
Output voltage:	50-600 V DC
Output current:	125 A Max.
Efficiency:	> 92%
Power factor:	0.95
Protection degree:	IP54
Operating temperature:	-25°C to +40°C
Material:	Steel sheet
Glow Wire test:	-
IK grade at 20°C:	IK10
Colour:	Grey
Installation:	Free-standing
Saline solution:	Resistant
UV rays:	Resistant

MOBILE CHARGING STATION MODE 4

CHAdeMO connector

Combo 2 connector



FEATURES

- Mode 4 charging according to CHAdeMO standard
- Mode 4 charging according to DIN 70121 protocol
- Mode 3 charging with PWM circuit
- Protection against short-circuit, overcurrent, overvoltage and residual current
- Monitoring of earth resistance and insulation
- Operation in stand-alone free mode
- Set up for serial communication

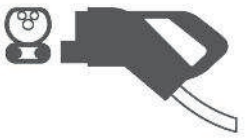
TECHNICAL CHARACTERISTICS

Input voltage:	400 V AC
Input current:	28 A - 32 A
Frequency:	50-60 Hz
Output voltage:	170-500 V DC
Output current:	50 - 60 A max.
Efficiency:	> 93 %
Power factor:	0.99
Protection degree:	IP54
Operating temperature:	25°C to +40°C
Material:	Galvanized steel
IK Grade at 20°C:	IK10
Colour:	White
Saline solution:	Resistant
UV rays:	Resistant

COMBINED CHARGING STATION

CHAdeMO connector

Combo 2 connector



Type 2 socket-outlet

APPLICATION EXAMPLES

DOMESTIC CONNECTORS MODE 1

There are several electric vehicles on the market today that, due to their construction, do not fall within the charging modes covered by standard EN61851 - 1 (e.g., scooters/ bike with off-board battery charger) .
For these vehicles, SCAME has developed special versions of its domestic connectors that have the same technical features of mode 3 connectors to be 'exploited' (such as inserted plug detection and anti-extraction lock system), so that they can be used in SCAME's charging infrastructure.

N.B.: Please note remember that in Italy, domestic connectors are not suited for charging electric vehicles in mode 1 in environments open to third parties.

REFERENCE STANDARDS

EN 60884-I

Plugs and socket-outlets for household and similar purposes.

Part 1: General requirements.

TECHNICAL CHARACTERISTICS

Rated current:	16 A
Rated voltage:	200 - 250 V AC
Frequency:	50-60 Hz
Insulation voltage:	250 V
Protection degree:	IP54 (IPXXD)
Operating temperature:	-25°C to +35°C -30°C to +50°C (sockets with interlock)
Material:	Technopolymer
Glow Wire test:	650°C-750°C 850-960 / (sockets with interlock)
IK grade at 20°C:	IK08
Colour:	Grey / Light blue
Number of poles:	L1-N-PE-CP
Size of conductors:	1 to 4 mm²
Saline solution:	Resistant
UV rays:	Resistant

UNEL SOCKET-OUTLET WITH INTERLOCK

The flush-mounting socket-outlets of the LIBERA Series are also available in the UNEL version with built-in plug locking device for a charging system in mode 1 having the same features as the socket-outlets with lock in mode 3.
In this case, however, the anti-extraction function is obtained by locking the lid opening even when the plug is inserted.
The use of this socket-outlet is allowed only in areas where mode 3 is not mandatory. The socket-outlet is supplied without the external actuator. Operation is guaranteed only with the UNEL plug.

EVOBIKE CHARGING STATION

DC

FEATURES

- Charging in DC standard EvoBike mode
- Protection against overloads and indirect contacts
- Identification of users authorized to the charging
- Management of cover locking and plug interlock system
- Operation in free stand-alone or personal mode

TECHNICAL CHARACTERISTICS

Rated current:	32 A
Rated voltage:	230 V AC
Frequency:	50-60 Hz
Insulation voltage:	250 V
Protection degree:	IP44
Operating temperature:	-25°C to +40°C
Material:	Steel sheet
Glow Wire test:	-
IK grade at 20°C:	IK10
Colour:	Anthracite
Installation:	Wall-mounted / free-standing
Saline solution:	Resistant
UV rays:	Resistant

To increase its product range, SCAME also offers charging stations in DC for vehicles that are equipped with an external battery charger and are therefore not covered by current standards.
This is a bar structure that can be easily integrated in a cantilever roof sheltering; it contains the control and identification electronic parts and can house the battery charger best suited for the vehicle to be charged (not included).
The system also includes a connecting system which the vehicle must equip itself, based on a proprietary connector standard.

REFERENCE STANDARDS

EN 61851-1 (2011)

Electric vehicle conductive charging system.

Part 1: General requirements.

EN 61439-1 (2011)

Low-voltage switchgear and control gear assemblies.

Part 1: General requirement.

APPLICATION EXAMPLES

ECOMOBILITY

SCAME
electrical solutions

ECOMOBILITY GENERAL CATALOGUE 2015-2016 PRODUCTS

3A TYPE CONNECTORS - SINGLE-PHASE 16 A 230 V~ 1P+N+PE+CP - IP44

	DESCRIPTION	PACK.	CODE
	Plug	10/100	**200.01633**
	Angled plug	10/100	**200.01633A**
	Fixed plug with flange 70x87mm	10/40	**200.01693**
	Straight outlet	10/100	**200.01643**

	DESCRIPTION	PACK.	CODE
	Flush-mounting socket-outlet with flange 70x87 mm	10/60	**200.01663**
	Flush-mounting socket-outlet with interlock IP54	1/20	**200.01663B**
	Italian plug adaptor P17	10/100	**200.01623**
	French-German plug adaptor	10/100	**200.01624**

DOMESTIC CONNECTORS - SINGLE-PHASE 16 A 230 V~ 1P+N+PE - MODE 1

	DESCRIPTION	PACK.	CODE
	UNEL IP54 flush-mounting socket-outlet with flange 70x87 mm (with switch)	10/100	**570.4062-SW**

	DESCRIPTION	PACK.	CODE
	UNEL IP54 flush-mounting socket-outlet with interlock	1/10	**200.4007B**

DOMOPLUS Series

For domestic use
IP66 with inserted plug

For additional information, please refer to our general catalogue

OMNIAPLUS Series

For domestic use
IP56 with inserted plug
with lock device

For additional information, please refer to our general catalogue

3C TYPE CONNECTORS - SINGLE/THREE-PHASE 16 A - 32 A 400 V~ 3P+N+PE+CP+PP - IP44

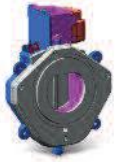
	DESCRIPTION	PACK.	CODE
	Plug with screw terminals 1.5 to 6 mm²	10/40	**200.33233**
	Plug with crimped terminals 2.5 mm²	10/40	**200.33233C2(*)**
	Plug with crimped terminals 4 mm²	10/40	**200.33233C4(*)**
	Plug with crimped terminals 6 mm²	10/40	**200.33233C6(*)**
	Plug with crimped terminals 2.5 mm²	1	**200.33234C2(*)**
	Plug with crimped terminals 4 mm²	1	**200.33234C4(*)**

	DESCRIPTION	PACK.	CODE
	Crimped pin kit 2.5 mm²	10/100	**200.332KITC2**
	Crimped pin kit 4 mm²	10/100	**200.332KITC4**
	Crimped pin kit 6 mm²	10/100	**200.332KITC6**
	Flush-mounting socket-outlet with flange 70x87 mm	10/60	**200.33263**
	Flush-mounting socket-outlet with interlock IP54	1/20	**200.33263B**

(*) Cable to be defined at the time of the order.

TYPE 2 CONNECTORS - SINGLE/THREE-PHASE 16A - 32 A 400 V~ 3P+N+PE+CP+PP

	DESCRIPTION	PACK.	CODE
	Recessed socket-outlet with interlock system (plug and lid) IP54 without shutters IPXXB	1/10	**200.23264B**
NEW 	Recessed socket-outlet with shutters IPXXD IP55 (mated) IP55 (with lid)	1/12	**200.23266S**
NEW 	Recessed socket-outlet without shutters IPXXB IP55 (mated) IP55 (with lid)	1/12	**200.23266**
NEW 	Recessed socket-outlet without shutters IPXXB (compact version) IP54 (mated) IP55 (with lid)	1/12	**200.23265**

	DESCRIPTION	PACK.	CODE
	Standard lid IP55 for: 200.23266S 200.23266	12/120	**200.23260CS**
NEW 	Compact lid IP55 for: 200.23266S 200.23266 200.23265	12/120	**200.23260CC**
NEW 	Top plug locking with rotary activator and 2 switches for locking detection for: 200.23266S 200.23266 200.23265	12/120	**200.23260BS**
NEW 	Anti vandalic flange with interlock system (plug and lid) IP55	1/1	**200.23260FA**

CORD SET (*)

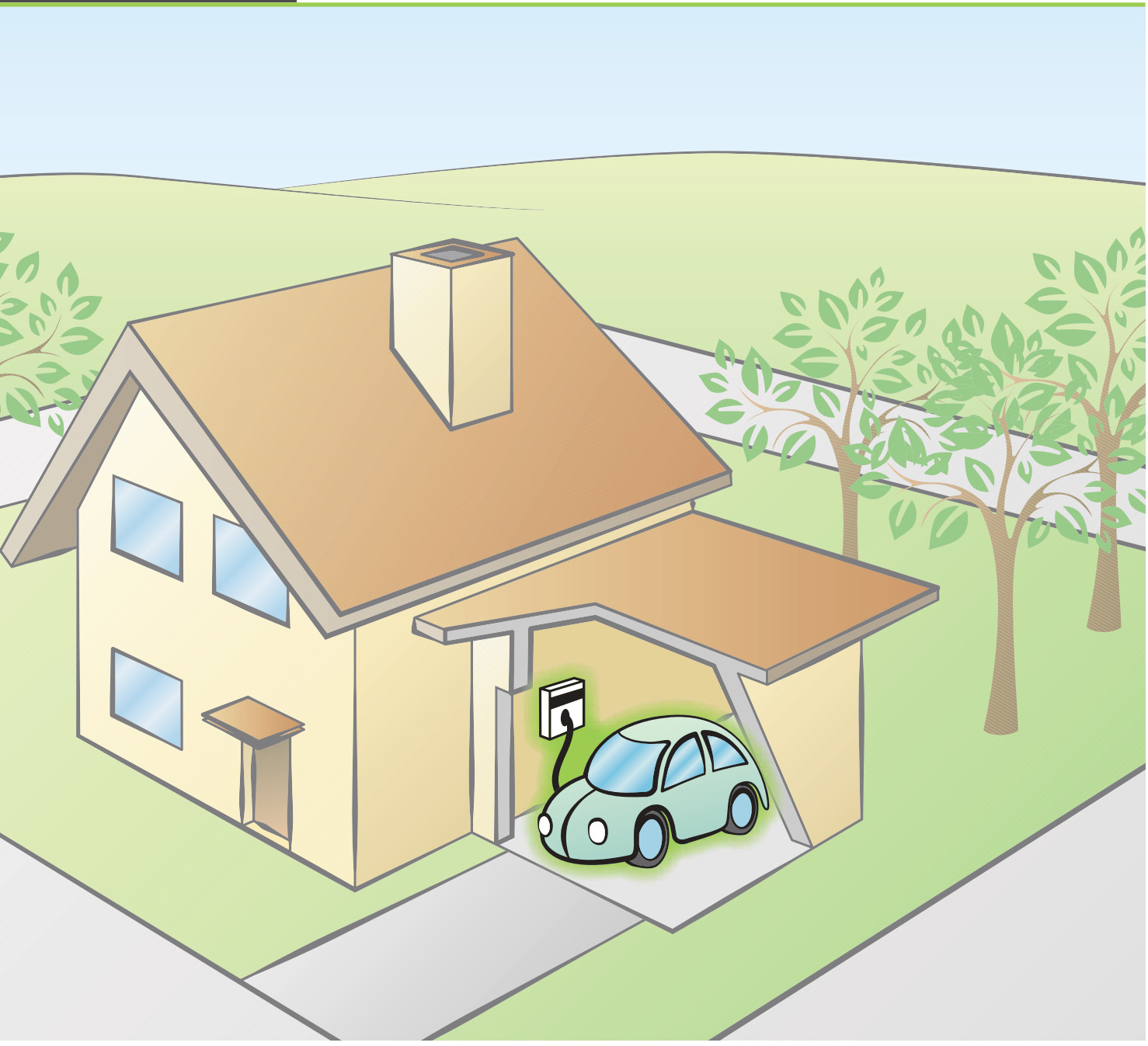
	PLUG	CABLE	CONNECTOR	PACK.	CODE
	Type 3A 16 A 1P	3x2.5+1x0.5 mm² - 5 m	Type 1 20 A 1P	1/5	200.CS3A1T11
	Type 3A 16 A 1P	3x2.5+1x0.5 mm² - 5 m	Type 3A 16 A 1P	1/5	200.CS3A13A1
	Type 3A 16 A 1P	3x2.5+1x0.5 mm² - 5 m	Type 2 20 A 1P	1/5	200.CS3A1T21
	Type 3C 32 A 3P	3x2.5+1x0.5 mm² - 5 m	Type 1 20 A 1P	1/5	200.CS3C1T11
	Type 3C 32 A 3P	3x6+1x0.5 mm² - 5 m	Type 1 32 A 1P	1/5	200.CS3C1T12
	Type 3C 32 A 3P	5x2.5+1x0.5 mm² - 5 m	Type 2 20 A 3P	1/5	200.CS3C1T22
	Type 3C 32 A 3P	5x6+1x0.5 mm² - 5 m	Type 2 32 A 3P	1/5	200.CS3C1T24
	Type 2 20 A 1P	3x2.5+1x0.5 mm² - 5 m	Type 1 20 A 1P	1/5	200.CST21T11
	Type 2 32 A 1P	3x6+1x0.5 mm² - 5 m	Type 1 32 A 1P	1/5	200.CST23T12
	Type 2 20 A 1P	3x2.5+1x0.5 mm² - 5 m	Type 2 20 A 1P	1/5	200.CST21T21
	Type 2 32 A 1P	3x6+1x0.5 mm² - 5 m	Type 2 32 A 1P	1/5	200.CST23T23
	Type 2 32 A 3P	5x6+1+0.5 mm² - 5 m	Type 2 32 A 3P	1/5	200.CST24T24

(*) Special version available on request

Scame Solutions for charging systems: 1. single-family home

POWER SUPPLY AND ENERGY MANAGEMENT:
- connection to the distribution board in the flat;
- connection to an electrical board inside the garage;
- connection to a meter dedicated to power the charging station.

IN A PRIVATE GARAGE



UB-L CONSUMER UNIT WITHOUT RFID AND PROTECTIONS (*)

	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet Type 3C – 3.5 kW	1/1	204.UB11L-3C
	No. 1 socket-outlet Type 3A – 3.5 kW	1/1	204.UB11L-3A

WB-E WALL BOX WITHOUT RFID, PROTECTION AND ENERGY METERING (*)

NEW	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet Type 3C – 3.5 kW	1/1	204.WB11E-3C
	No. 1 socket-outlet Type 2 – 3.5 kW (▲)	1/1	204.WB11E-T2
	No. 1 socket-outlet Type 3A – 3.5 kW	1/1	204.WB11E-3A
	No. 1 cable+connector Type 1 – 3.5 kW	1/1	204.WB11E-T11
	No. 1 cable+connector Type 2 – 3.5 kW	1/1	204.WB11E-T21

WB-L WALL BOX WITHOUT RFID AND PROTECTIONS (*)

NEW	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet Type 3C – 3.5 kW	1/1	204.WB11L-3C
	No. 1 socket-outlet Type 3C – 7 kW	1/1	204.WB11L-3C32
	No. 1 socket-outlet Type 2 – 3.5 kW (▲)	1/1	204.WB11L-T2
	No. 1 socket-outlet Type 2 – 7 kW	1/1	204.WB11L-T232
	No. 1 socket-outlet Type 3A – 3.5 kW	1/1	204.WB11L-3A
	No. 1 cable+connector Type 1 – 3.5 kW	1/1	204.WB11L-T11
	No. 1 cable+connector Type 1 – 7 kW	1/1	204.WB11L-T12
	No. 1 cable+connector Type 2 – 3.5 kW	1/1	204.WB11L-T21
	No. 1 cable+connector Type 2 – 7 kW	1/1	204.WB11L-T23

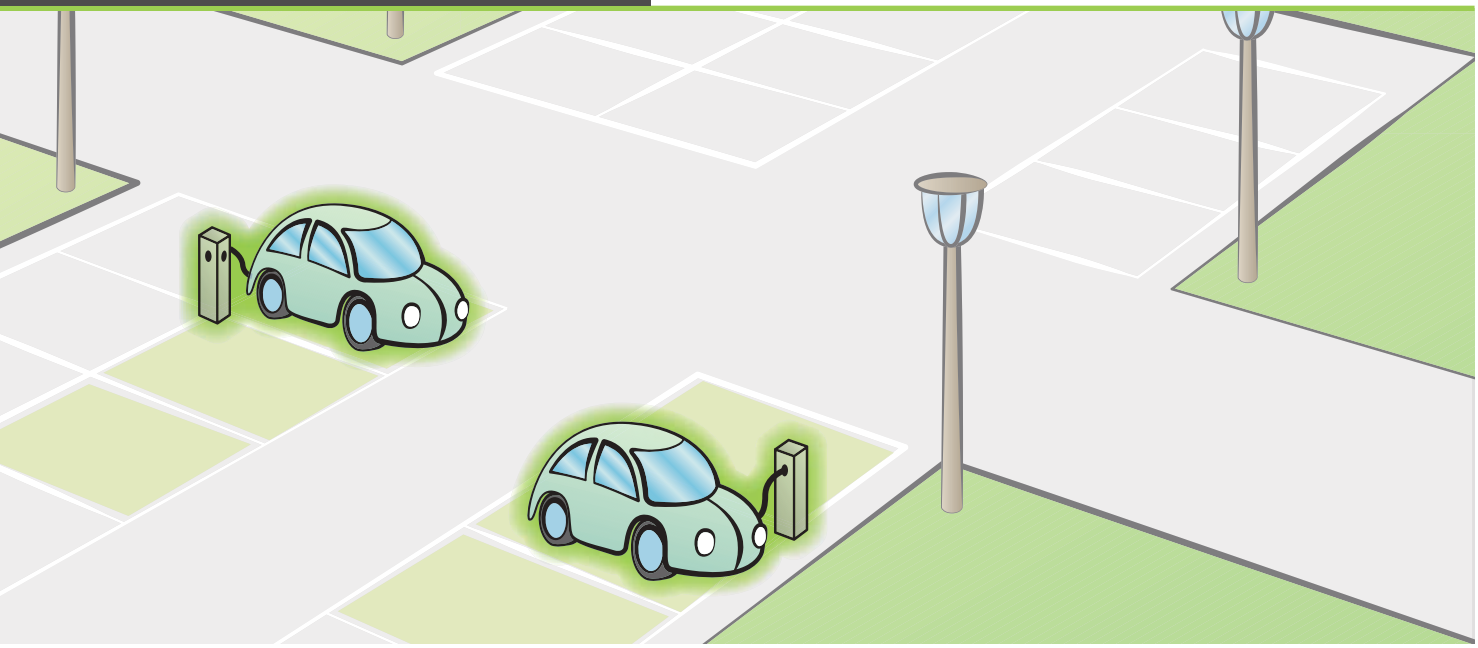
(*) Special versions available on request.
(▲) With latching system.

2. Apartment buildings and parking lots

POWER SUPPLY AND ENERGY MANAGEMENT:
- connection to the existing electrical system for communal areas;
- connection to an individual electrical system;
- connection to an energy meter dedicated to EV charging;
- option to use an RFID badge;
- option to lock the socket-outlet cover.

IN THE PRIVATE GARAGE OF A CONDOMINIUM

IN A CONDOMINIUM PARKING LOT



UB-R CONSUMER UNIT WITH RFID, PROTECTIONS AND ENERGY METER (*)

NEW	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet type 3C with RFID – 3.5 kW	1/1	204.UB11R-3C
	No. 1 socket-outlet type 3A with RFID – 3.5 kW	1/1	204.UB11R-3A
	No. 1 socket-outlet UNEL with RFID – 3.5 kW	1/1	204.UB11R-UN
	No. 2 socket-outlets type 3C with RFID – 3.5 kW	1/1	204.UB21R-3C3C
	No. 1 socket-outlet Type 3A with RFID - 3.5 kW No. 1 socket-outlet Type 3C with RFID - 3.5 kW	1/1	204.UB21R-3C3A
	No. 1 socket-outlet Type 3C with RFID - 3.5 kW No. 1 socket-outlet UNEL with RFID - 3.5 kW	1/1	204.UB21R-3CUN
	No. 2 socket-outlets Type 3A with RFID – 3.5 kW	1/1	204.UB21R-3A3A
	No. 1 socket-outlet Type 3A with RFID - 3.5 kW No. 1 socket-outlet UNEL 3A with RFID - 3.5 kW	1/1	204.UB21R-3AUN
	No. 2 socket-outlets UNEL with RFID- 3.5 kW	1/1	204.UB21R-UNUN

WB-P WALL BOX WITHOUT RFID, WITH PROTECTION, WITHOUT ENERGY METER

NEW	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet Type 3C – 3.5 kW	1/1	204.WB11P-3C
	No. 1 socket-outlet Type 2 – 3.5 kW (▲)	1/1	204.WB11P-T2
	No. 1 socket-outlet Type 3A – 3.5 kW	1/1	204.WB11P-3A
	No. 1 cable+connector Type 1 – 3.5 kW	1/1	204.WB11P-T11
	No. 1 cable+connector Type 2 – 3.5 kW	1/1	204.WB11P-T21

WB-R WALL BOX WITH RFID, PROTECTIONS AND ENERGY METER (*)

NEW	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet Type 3C with RFID – 3.5 kW	1/1	204.WB11R-3C
	No. 1 socket-outlet Type 3C with RFID – 7 kW	1/1	204.WB11R-3C32
	No. 1 socket-outlet Type 2 with RFID – 3.5 kW (▲)	1/1	204.WB11R-T2
	No. 1 socket-outlet Type 2 with RFID – 7 kW (▲)	1/1	204.WB11R-T232
	No. 1 socket-outlet Type 3A with RFID – 3.5 kW	1/1	204.WB11R-3A
	No. 1 cable+connector Type 1 – 3.5 kW	1/1	204.WB11R-T11
	No. 1 cable+connector Type 1 – 7 kW	1/1	204.WB11R-T12
	No. 1 cable+connector Type 2 – 3.5 kW	1/1	204.WB11R-T21
	No. 1 cable+connector Type 2 – 7 kW	1/1	204.WB11R-T23

(*) Special versions available on request.
(▲) With latching system.

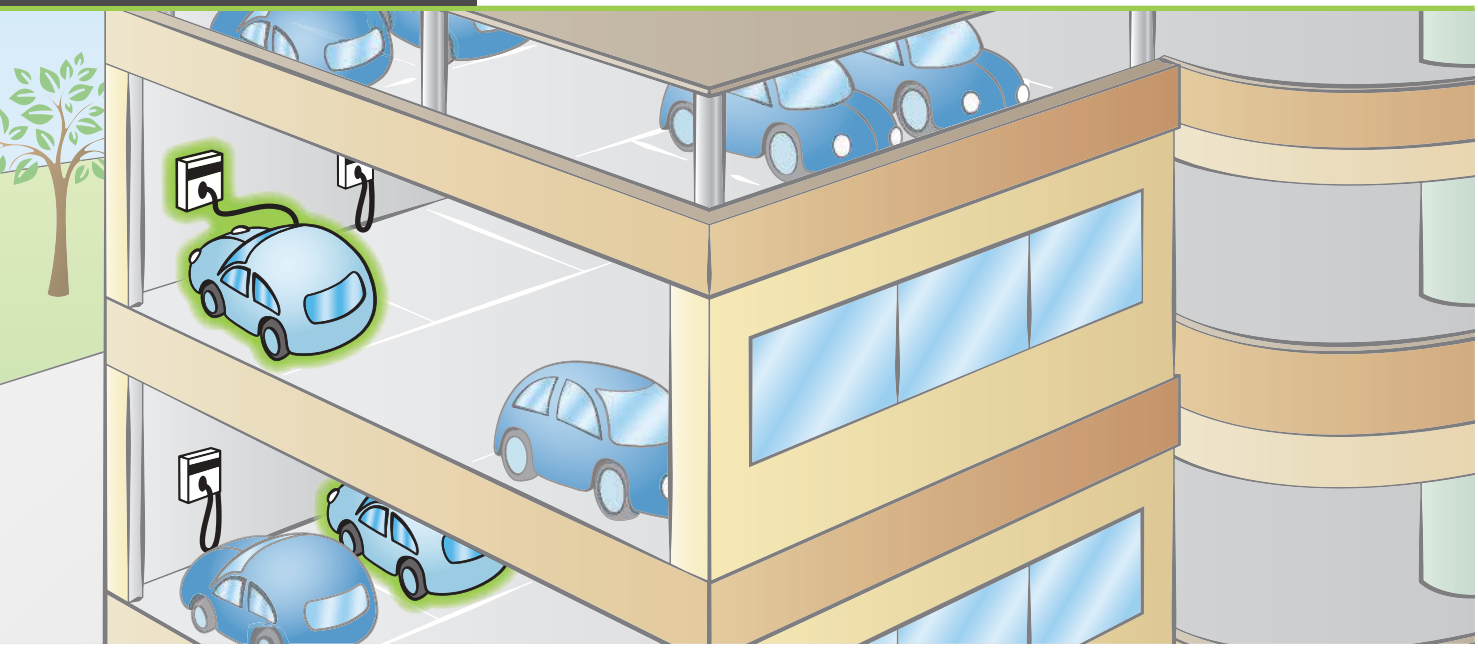
3. Parking lots for collective use

Shopping centres, hotels, companies and public parking lots

POWER SUPPLY AND ENERGY MANAGEMENT:
- connection to the power distribution board at the facility;
- connection to an energy meter dedicated to EV charging;
- option to use an RFID badge;
- option to lock the socket-outlet cover;
- option to install a charging station management system via LAN network or WEB Server.

IN A COMPANY PARKING LOT

IN A PUBLIC PARKING GARAGE



UB-B CONSUMER UNIT WITH RFID, PROTECTIONS, ENERGY METER AND INTERLOCK (*)

	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet Type 3C - 3.5 kW	1/1	204.UB11B-3C
	No. 1 socket-outlet Type 3C - 7 kW type	1/1	204.UB11B-3C32
	No. 1 socket-outlet Type 3C - 22 kW	1/1	204.UB13B-3C
	No. 1 socket-outlet Type 2 - 3.5 kW	1/1	204.UB11B-T2
	No. 1 socket-outlet Type 2 - 7 kW	1/1	204.UB11B-T232
	No. 1 socket-outlet Type 2 - 22 kW	1/1	204.UB13B-T2
	No. 1 socket-outlet Type 3A - 3.5 kW	1/1	204.UB11B-3A
	No. 1 socket-outlet UNEL – 3.5 kW	1/1	204.UB11B-UN
	No. 2 socket-outlets Type 3C – 3.5 kW	1/1	204.UB21B-3C3C
	No. 1 socket-outlet Type 3C – 3.5 kW No. 1 socket-outlet Type 3A – 3.5 kW	1/1	204.UB21B-3C3A
	No. 2 socket-outlets Type 3A - 3.5 kW	1/1	204.UB21B-3A3A
	No. 1 socket-outlet Type 3C - 3.5 kW No. 1 socket-outlet UNEL - 3.5 kW	1/1	204.UB21B-3CUN
	No. 1 socket-outlet Type 3A - 3.5 kW No. 1 socket-outlet UNEL - 3.5 kW	1/1	204.UB21B-3AUN
	No. 2 socket-outlets UNEL – 3.5 kW	1/1	204.UB21B-UNUN

CB-B PILLAR IN STEEL WITH RFID, PROTECTIONS, ENERGY METER AND INTERLOCK (*)

	DESCRIPTION	PACK.	CODE
	No. 2 socket-outlets Type 3C - 7 kW	1/1	204.CB21B-3C3C
	No. 1 socket-outlet Type 3C - 7 kW No. 1 socket-outlet Type 2 - 7 kW type	1/1	204.CB21B-3CT2
	No. 2 socket-outlets Type 2 - 7 kW	1/1	204.CB21B-T2T2
	No. 1 socket-outlet Type 3C - 7 kW No. 1 socket-outlet Type 3A - 3.5 kW	1/1	204.CB21B-3C3A
	No. 1 socket-outlet Type 2 - 7 kW No. 1 socket-outlet Type 3A - 3.5 kW	1/1	204.CB21B-T23A
	No. 2 socket-outlets Type 3A - 3.5 kW	1/1	204.CB21B-3A3A

(*) Special versions available on request.

CA-B PILLAR IN PAINTED STEEL WITH RFID, PROTECTIONS, ENERGY METER AND INTERLOCK

DESCRIPTION	PACK.	CODE
No. 1 socket-outlet Type 3C - 7 kW	1/1	204.CA11B-3C
No. 1 socket-outlet Type 3C - 22 kW	1/1	204.CA13B-3C
No. 1 socket-outlet Type 2 - 7 kW	1/1	204.CA11B-T2
No. 1 socket-outlet Type 2 - 22 kW	1/1	204.CA13B-T2
No. 1 cable+connector Type 2 - 44 kW	1/1	204.CA13R-T26
No. 1 socket-outlet Type 3A - 3.5 kW	1/1	204.CA11B-3A
No. 1 socket-outlet UNEL – 3.5 kW	1/1	204.CA11B-UN
No. 2 socket-outlets Type 3C - 7 kW	1/1	204.CA21B-3C3C
No. 1 socket-outlet Type 3C - 7 kW No. 1 socket-outlet Type 2 - 7 kW	1/1	204.CA21B-3CT2
No. 2 socket-outlets Type 2 - 7 kW	1/1	204.CA21B-T2T2
No. 1 socket-outlet Type 3C - 7 kW No. 1 socket-outlet Type 3A - 3.5 kW	1/1	204.CA21B-3C3A
No. 1 socket-outlet Type 3C - 7 kW No. 1 socket-outlet UNEL - 3.5 kW	1/1	204.CA21B-3CUN
No. 1 socket-outlet Type 2 - 7 kW No. 1 socket-outlet Type 3A - 3.5 kW	1/1	204.CA21B-T23A
No. 1 socket-outlet Type 2 - 7 kW No. 1 socket-outlet UNEL - 3.5 kW	1/1	204.CA21B-T2UN
No. 2 socket-outlets Type 3A - 3.5 kW	1/1	204.CA21B-3A3A
No. 1 socket-outlet Type 3A - 3.5 kW No. 1 socket-outlet UNEL - 3.5 kW	1/1	204.CA21B-3AUN
No. 2 socket-outlets UNEL – 3.5 kW	1/1	204.CA21B-UNUN
No. 2 cable+connector Type 1- 3.5 kW	1/1	204.CA21R-T11T11
No. 2 cable+connector Type 2- 3.5 kW	1/1	204.CA21R-T21T21
No. 1 socket-outlet Type 3C - 22 kW No. 1 socket-outlet Type 3A - 3.5 kW	1/1	204.CA22B-3C3A
No. 1 socket-outlet Type 3C - 22 kW No. 1 socket-outlet UNEL - 3.5 kW	1/1	204.CA22B-3CUN
No. 1 socket-outlet Type 2 - 22 kW No. 1 socket-outlet Type 3A - 3.5 kW k	1/1	204.CA22B-T23A
No. 1 socket-outlet Type 2 - 22 kW No. 1 socket-outlet UNEL - 3.5 kW	1/1	204.CA22B-T2UN
No. 2 socket-outlets Type 3C - 22 kW	1/1	204.CA23B-3C3C
No. 1 socket-outlet Type 3C - 22 kW No. 1 socket-outlet Type 2 - 22 kW	1/1	204.CA23B-3CT2
No. 2 socket-outlets Type 2 - 22 kW	1/1	204.CA23B-T2T2
No. 1 socket-outlet Type 3C - 7 kW No. 1 socket-outlet Type 2 - 7 kW No. 2 socket-outlets type 3A - 3.5 kW	1/1	204.CA41B-001

CR-B PILLAR IN CORTEN STEEL WITH COIN, TOUCH PANEL, PROTECTIONS, ENERGY METER AND INTERLOCK (*)

	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet Type 3C – 7 kW No. 1 socket-outlet Type 2 – 7 kW No. 2 socket-outlets Type 3A – 3.5 kW	1/1	204.CR41B-001

CL-B PILLAR WITH COIN, RFID, PROTECTIONS, ENERGY METER AND INTERLOCK (*)

	DESCRIPTION	PACK.	CODE
	No. 1 socket-outlet Type 2 – 7 kW No. 1 socket-outlet Type 3A – 3.5 kW	1/1	204.CL21B-T23A
	No. 1 socket-outlet Type 2 – 22 kW No. 1 socket-outlet Type 3A – 3.5 kW	1/1	204.CL22B-T23A

SYSTEM COMPONENTS

	DESCRIPTION	PACK.	CODE
	Local server with standard management software	1/1	208.SERV
	User card programmer with HF technology	1/1	208.PROG
	User card with HF technology	1/10	208.CARD

(*) Special versions available on request.

OTHER SOLUTIONS

CH - CHARGING COLUMN IN METAL SHEET CHADEMO

DESCRIPTION	PACK.	CODE
No. 1 cable+connector CHAdeMO - 20 kW	1/1	204.CH13L-20
No. 1 cable+connector CHAdeMO - 50 kW	1/1	204.CH13L-50

MC - MOBILE CHARGING STATION

DESCRIPTION	PACK.	CODE
No. 1 cable+connector CHAdeMO - 18.3 kW	1/1	204.MC13L-CH
No. 1 cable+connector COMBO2 - 20 kW	1/1	204.MC13L-C2

CC - COMBINED CHARGING STATION

DESCRIPTION	PACK.	CODE
No. 1 cable+connector CHAdeMO - 20 kW No. 1 socket-outlet Type 2 - 22 kW	1/1	204.CC23L-CHT2
No. 1 cable+connector COMBO 2 - 20 kW No. 1 socket-outlet Type 2 - 22 kW	1/1	204.CC23L-C2T2
No. 1 cable+connector CHAdeMO - 20 kW No. 1 cable+connector COMBO 2 - 20 kW No. 1 socket-outlet Type 2 - 22 kW	1/1	204.CC33L-CHC2T2
Surface mounting plate	1/1	204.CC-MP
Collision protection pipe (spare)	1/1	204.CC-CP

EVOBIKE

DESCRIPTION	PACK.	CODE
Bar to charge bicycles with 4 outlets	1/1	204.EB41B-001
Pair of brackets for fixing to wall	1/1	204.EB-ST
Side pillar for fixing to ground	1/1	204.EB-CL
Central pillar for fixing to ground	1/1	204.EB-CC
Cable and bike charging kit	1/1	204.EB-SP

ACCESSORIES (*)

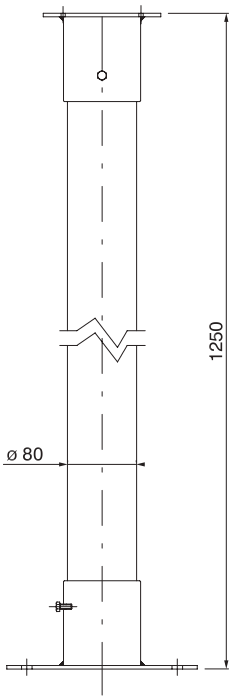
	DESCRIPTION		PACK.	CODE
	Tubular support in galvanized steel		1/1	654.0650
	Fixing plate in galvanized steel	UB21R	1/4	654.0651
		UB11L - UB11R	1/4	654.0657
		UB11B - UB13B - UB21B	1/4	654.0652
	Single-face hollow structure in painted steel sheet	UB11B - UB13B - UB21B	1/1	204.DA5010

(*) For Domino Series assemblies

APPLICATION EXAMPLES

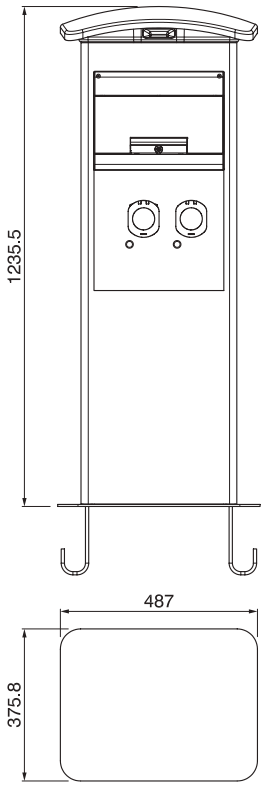
204.UB21R-3C3A + 654.0650 + 654.0651

654.0650



204.UB21B-3C3A + 204.DA5010

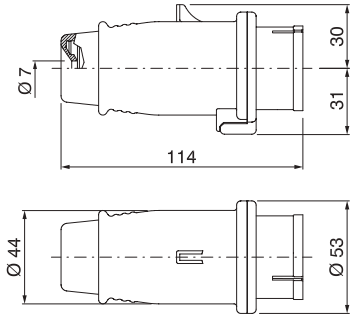
204.DA5010



- Head with twilight-sensor LED light.
- Pre-assembled versions available upon request.

DIMENSIONS

200.01633



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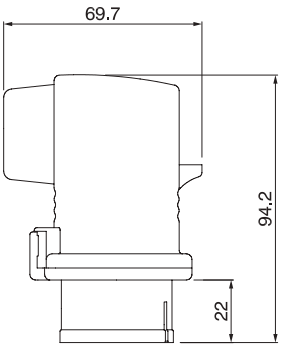

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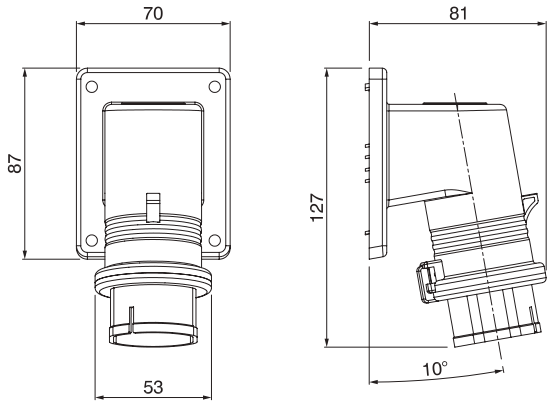

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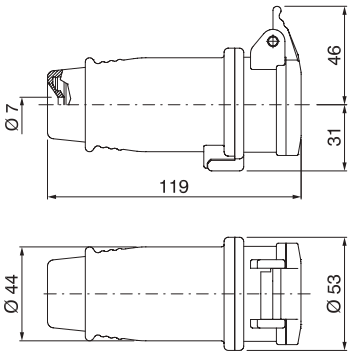

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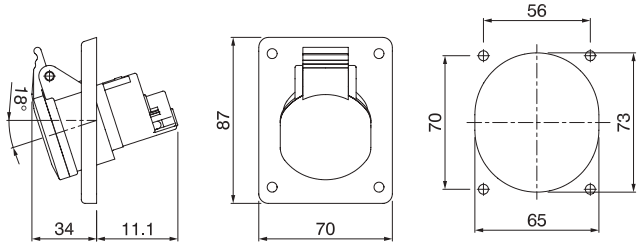

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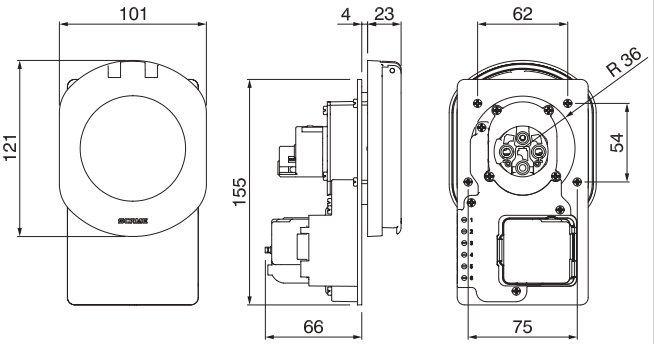

Dimensions in mm

DIMENSIONS

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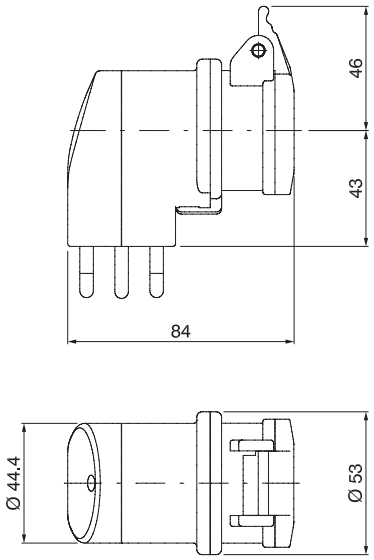

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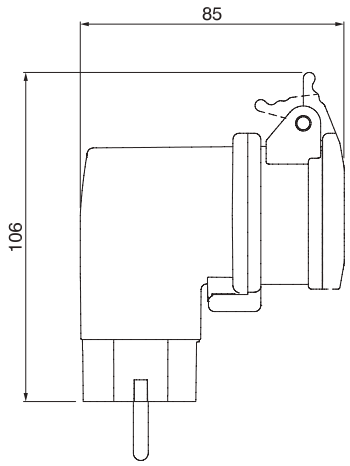

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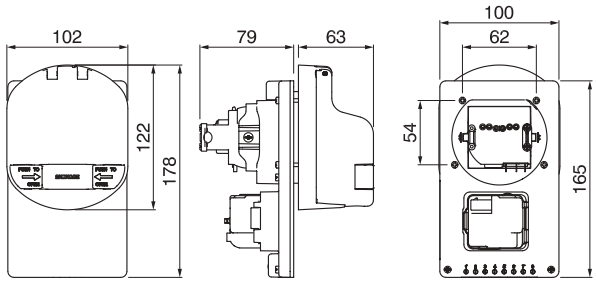

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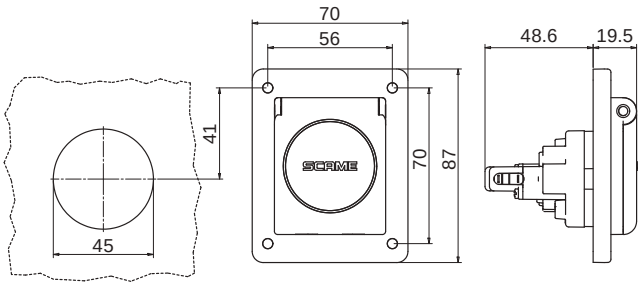

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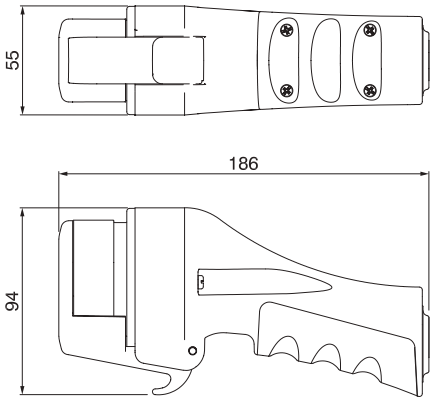
200.33233C2
200.33233C4
200.33233C6



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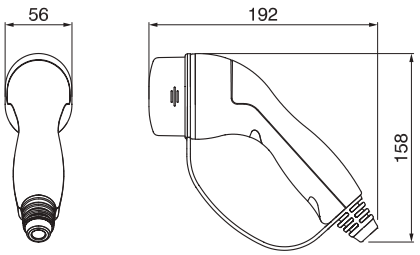

Dimensions in mm

DIMENSIONS

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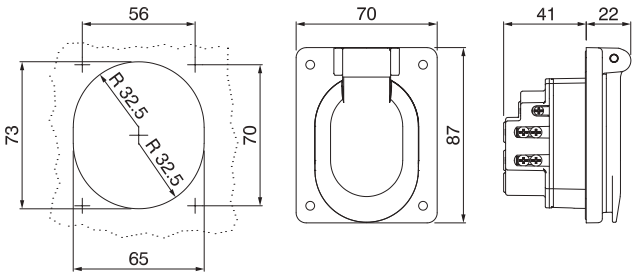

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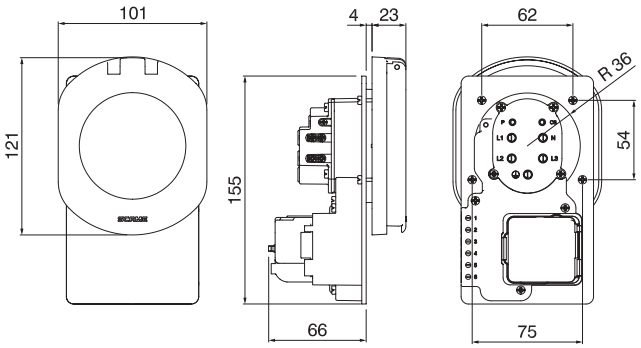

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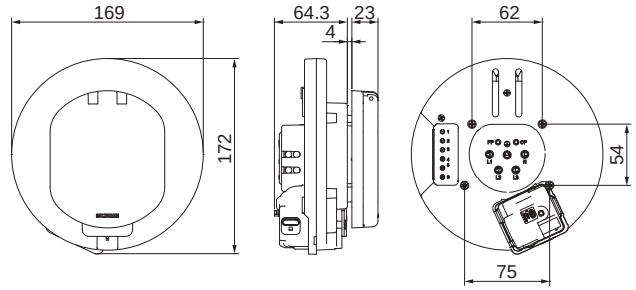
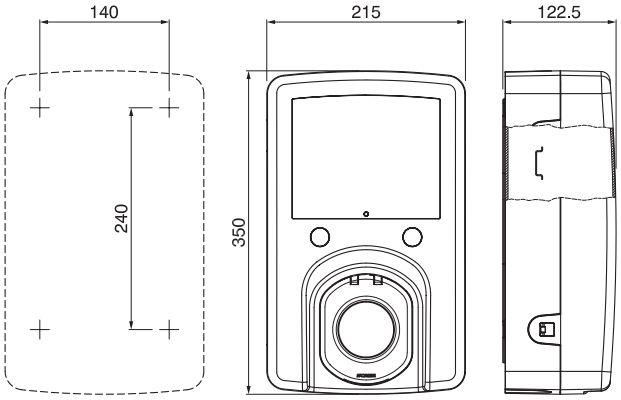


204.WB11L - 204.WB11E
204.WB11R - 204.WB11P



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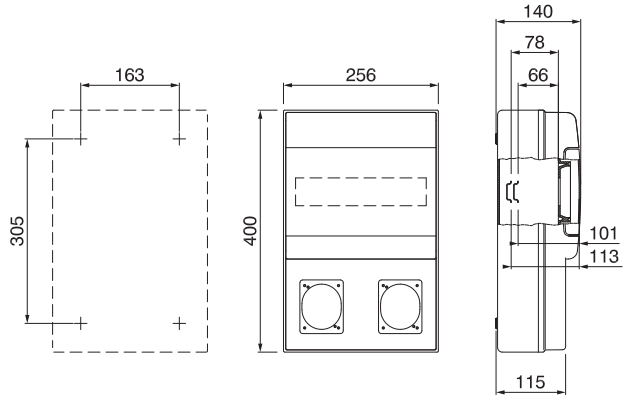
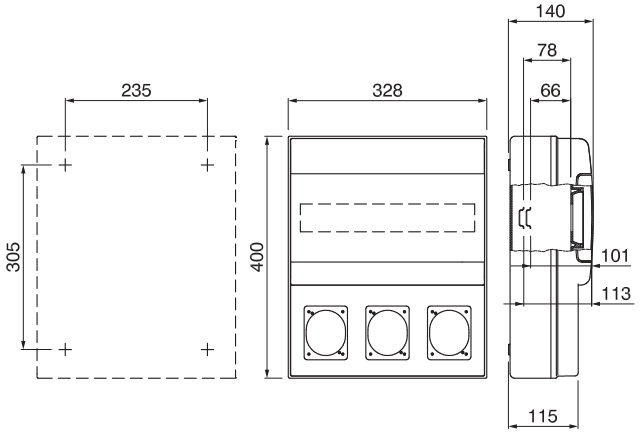
204.UB11R



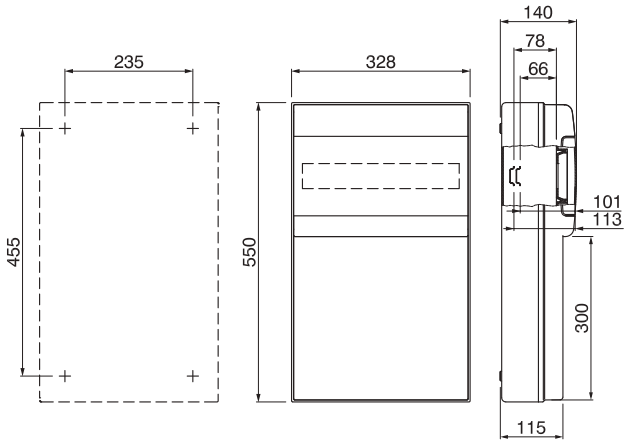
204.UB21R



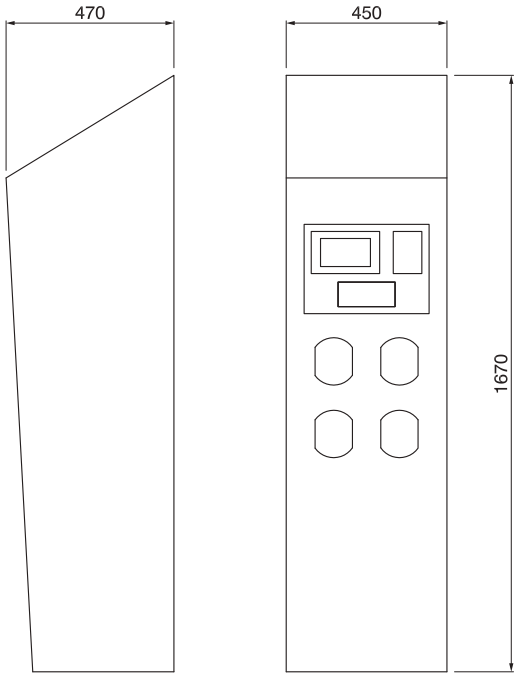
Dimensions in mm

DIMENSIONS

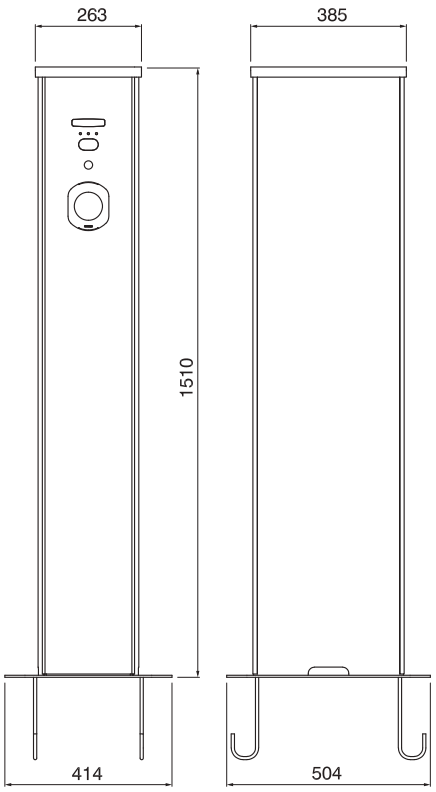
204.UB11B
204.UB13B
204.UB21B



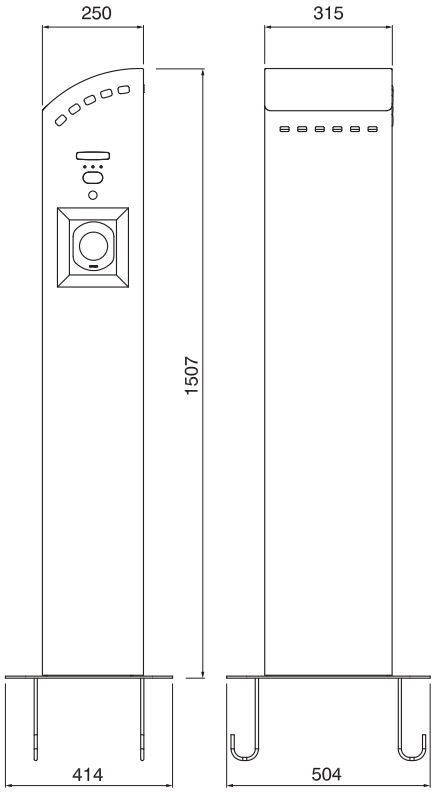
204.CR41B-001
204.CL21B-T23A
204.CL22B-T23A



204.CA



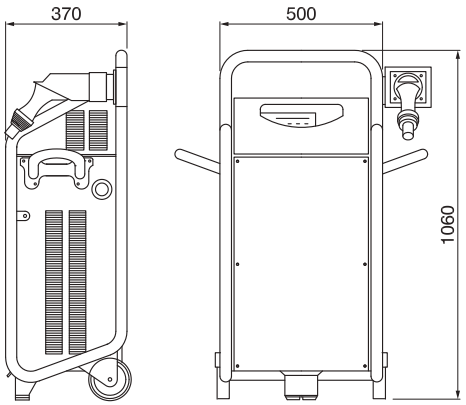
204.CB



Dimensions in mm

DIMENSIONS

204.MC13L-CH
204.MC13L-C2



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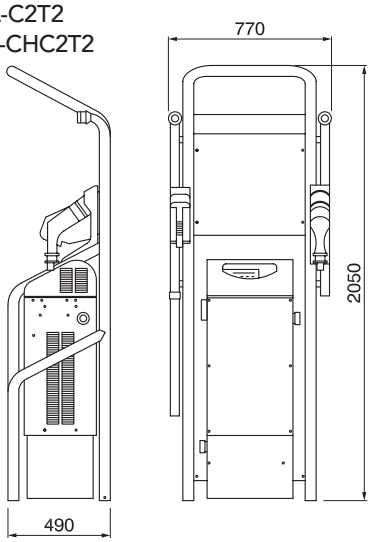
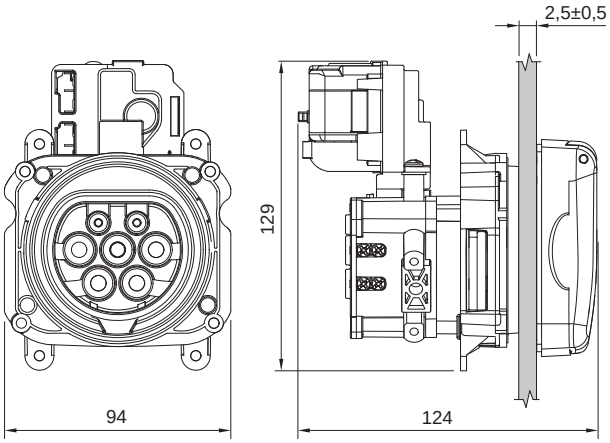
204.CC23L-C2T2
204.CC23L-CHC2T2



200.23266S - 200.23260BS
200.23266 - 200.23260BS



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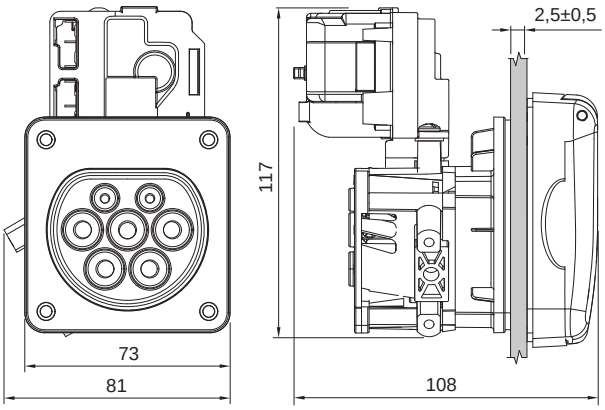

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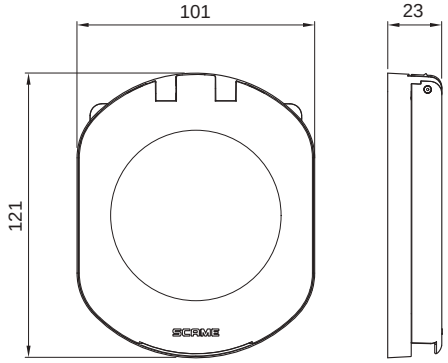

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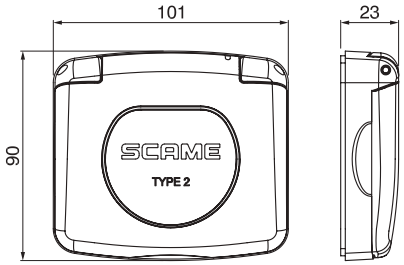
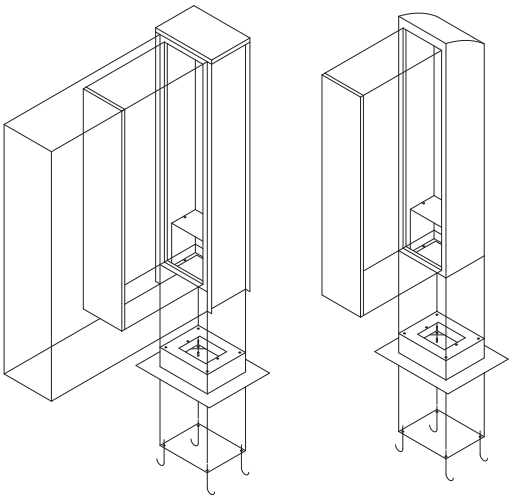
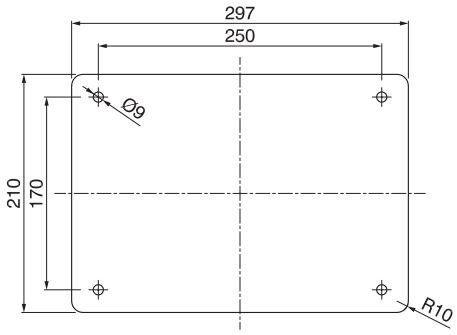


Dimensions in mm

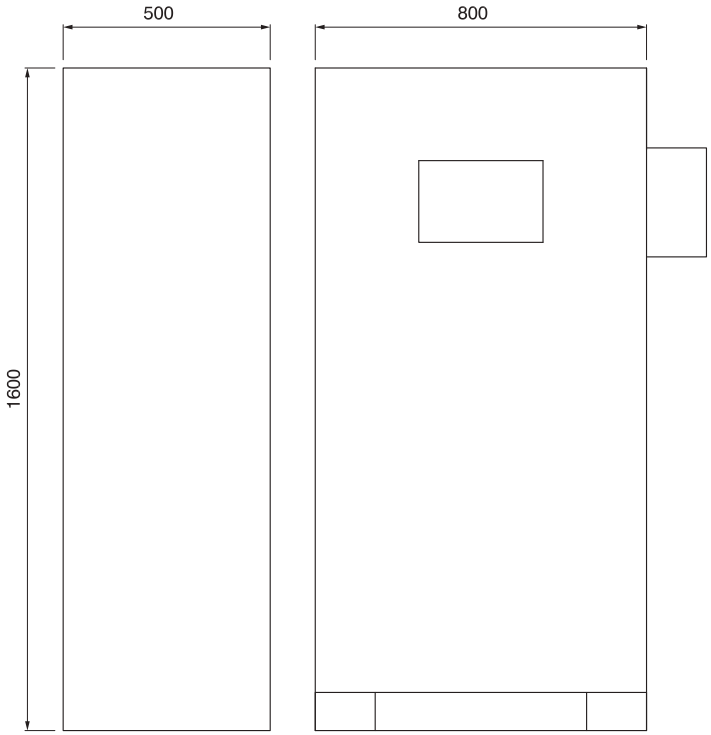
DIMENSIONS

CHARGING PILLARS CA/CB





204.CH



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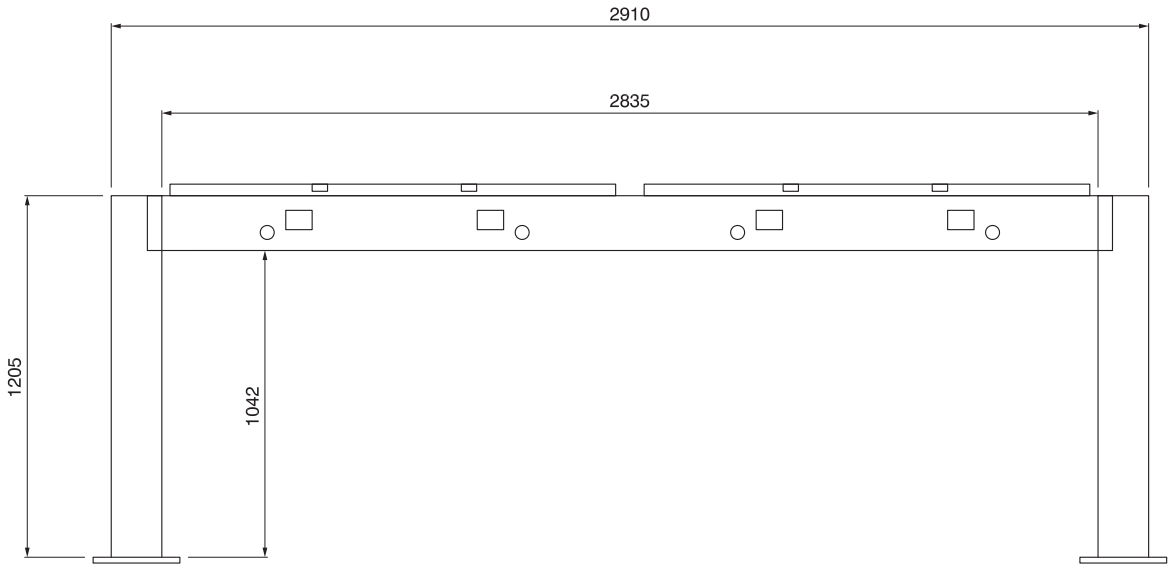

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