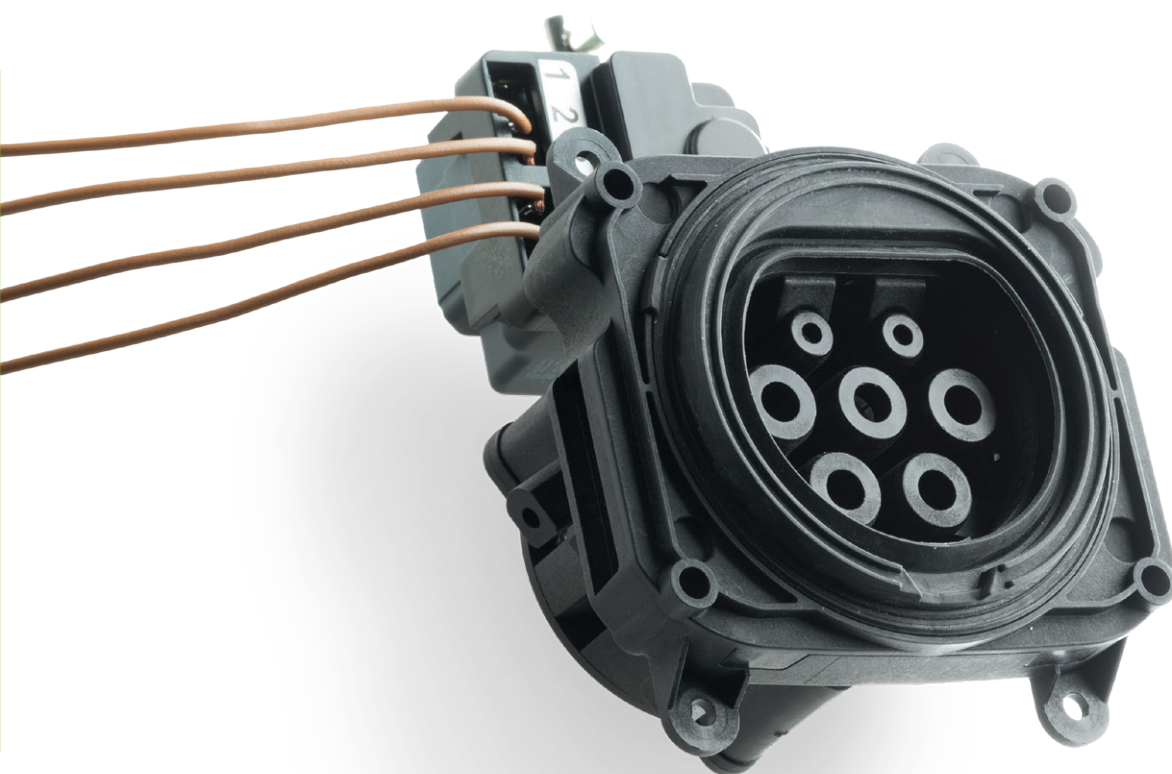


E-MOBILITY

EVSE  
COMPONENTS





EVSE  
COMPONENTS

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[www.scame.com](http://www.scame.com)

“ In over fifty years we have built an industrial reality that has always maintained the spirit of its origins ”



Stefano Scainelli CEO



**THE CONCEPT OF QUALITY IS AN INTEGRAL PART OF OUR CULTURE IN ALL ASPECTS AND EVERY ACTIVITY OF OUR WORK.**

**SCAME PARRE S.p.A.**, parent company of the SCAME Group, manufactures components and systems for electrical installations in the civil, tertiary and industrial sectors. It was founded among the mountains of the high Seriana Valley in the Bergamo province and expanded over the years. Since 1963, the year of its founding, SCAME has never betrayed the spirit of its origins, which included respect for the environment and for the individual person, as well as constant search for innovation that is never an end to itself, but instead translates into total quality and tangible advantages for the user.

On this basis, SCAME's commitment in the sector of charging infrastructures and components for electric vehicles dates back to the end of the 1990s when, in collaboration with the Italian Commission for battery-powered, hybrid and fuel cells Electric Road Vehicles (CEI - CIVES or Commissione Italiana Veicoli Elettrici Stradali a batteria, ibridi e a celle combustibili) it designed and produced the world's first connector specifically intended for the charging of light vehicles and electric motor vehicles, completely new from both a production and regulatory standpoint.

In recent years, due to the growing interest in electric automobiles, the Company renewed its commitment to this area and set up a specific company division, SCAME E-MOBILITY, in order to offer the market a complete range of charging stations and connectors, called LIBERA SERIES, which allows connection for charging purposes and communication between automobile and charging infrastructure.

SCAME's R&D E-MOBILITY division is constantly committed to searching for efficient and effective solutions aimed at improving the functionality and safety of its products. In addition to simple connectors and charging stations, the current offer for electric mobility has been enriched to include integrated solutions with personalised management systems that can be customised to meet various needs, perfectly compatible with the latest management and payment technologies, such as Apps and recognition systems, hence natively in line with the dictates of INDUSTRY 4.0.





**SCAME**  
electrical solutions  
Italy, Parre (Bergamo)



**SCAME ARGENTINA**  
Argentina

**SCAME BULGARIA**  
Bulgaria

**SCAME BRASIL**  
Brazil

**SCAME CHILE**  
Chile

**SCAME-TOP**  
China

**SCAME-CZ**  
Czech Republic

**SOBEM SCAME**  
France

**SCAME INDIA**  
India

**SCAME POLSKA**  
Poland

**SCAME PORTUGAL**  
Portugal

**SCAME-RO**  
Romania

**SCAME-SK**  
Slovakia

**SCAME IBERICA**  
Spain

**SCAME MIDDLE EAST**  
U.A.E.

**SCAME-UK**  
United Kingdom

**SCAME-UY**  
Uruguay

**SCAME-UA**  
Ukraine

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CORD SETS	PAGE 19
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CONNECTORS	PAGE 25
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# Reference standards

## 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 a standard socket-outlet of an AC supply network, no supplementary pilot or auxiliary contacts. Up to 16A single-phase or three-phase, protective earthing conductor is required.



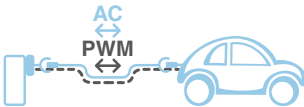
### MODE 2

Connection of the EV to a standard socket-outlet of an AC supply network using an EV supply equipment providing CP (control pilot) function and protection against electric shock (ICCB In-Cable Control Box). Up to 32A single-phase or three-phase, protective earthing conductor is required.



### MODE 3

Connection of the EV to an AC supply network using an EV supply equipment with specific connectors and providing CP (control pilot) function, protective earthing conductor is required.



### MODE 4

Connection of the EV to an AC supply network using an EV supply equipment providing DC charging (off-board battery charger); protective earthing conductor is required.



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

### CASE A

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



### CASE B

EV connection to the supply network using a detachable cable equipped with plug and connector (cord set/cable assembly).



### CASE C

EV connection to the supply network using a cable and connector 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:

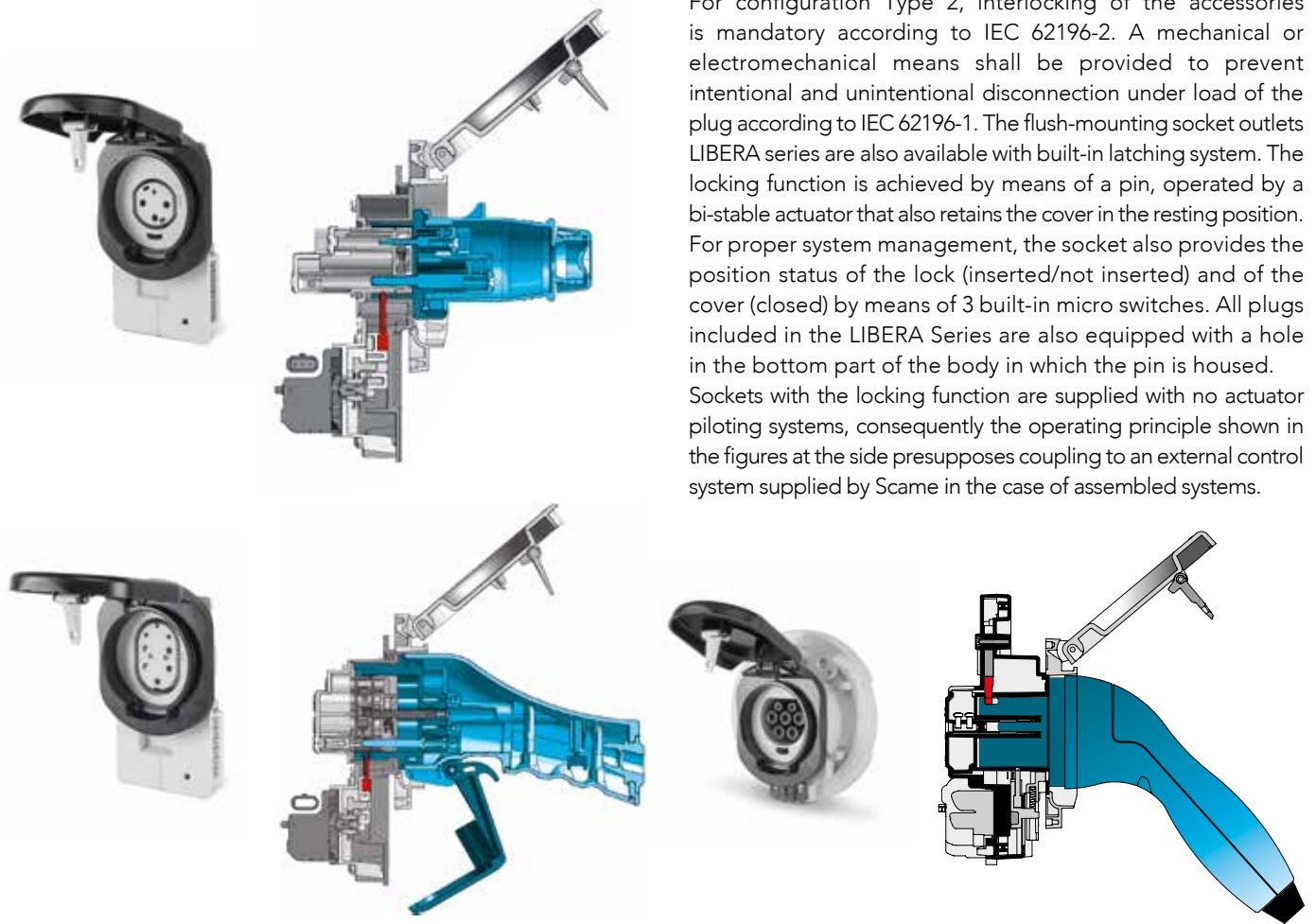
### C O N N E C T I O N S

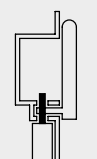
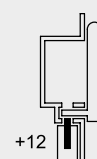
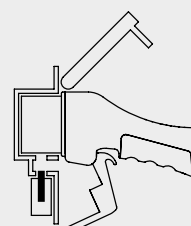
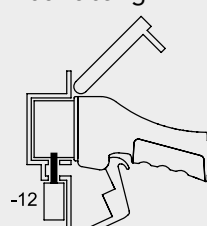
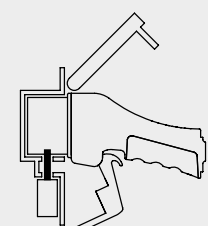
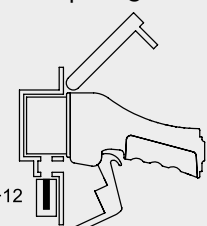
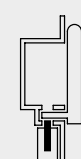
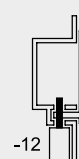
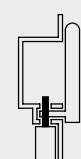
**CHARGING STATION**

VEHICLE	Type 1	Type 2	STATION	Type 2	Type 3A	Type 3C
Circuit	Single-phase	Single/three-phase	Circuit	Single/three-phase	Single-phase	Single/three-phase
Current	32A	70A (single-phase) 63A (three-phase)	Current	70A (single-phase) 63A (three-phase)	16A	63A
Max. voltage	250V	480V	Max. voltage	480V	250V	480V
No. of contacts	5	7	No. of contacts	7	4	7
Connector			Connector			

# Latching system is mandatory

For configuration Type 2, interlocking of the accessories is mandatory according to IEC 62196-2. A mechanical or electromechanical means shall be provided to prevent intentional and unintentional disconnection under load of the plug according to IEC 62196-1. The flush-mounting socket outlets LIBERA series are also available with built-in latching system. The locking function is achieved by means of a pin, operated by a bi-stable actuator that also retains 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.



<p>1. Idle.</p> 	<p>2. User identification (RFID). Lock opening.</p> <p>+12</p> 	<p>3. Cover opening. Plug insertion.</p> 	<p>4. User identification (RFID). Lock closing.</p> <p>-12</p> 	<p>5. Charging.</p> 
<p>6. User identification (RFID). Lock opening.</p> <p>+12</p> 	<p>7. Plug removal. Cover closing.</p> 	<p>8. Lock closing.</p> <p>-12</p> 	<p>9. Idle.</p> 	



# SOCKET OUTLETS



ALL THE COMPONENTS FOR THE ELECTRIC VEHICLE CHARGING STATIONS ARE DESIGNED, MANUFACTURED AND TESTED IN THE ITALIAN HEADQUARTERS OF SCAME PARRE.

THE PRODUCTION ORGANISATION AND EXCELLENT ORGANISATIONAL CAPABILITY ACQUIRED OVER THE YEARS ALLOWS A HIGH DEGREE OF CUSTOMISATION AND ADDITIONAL SERVICES TO BE OFFERED TO THE MARKET.



Scame Parre has been the first company in the world to get its components certified according to EV-Ready 1.4D, EV37 requirement.



MADE in ITALY

# SOCKET OUTLETS

## TYPE 2S CONNECTORS WITH SHUTTERS

IP55



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 domestic connectors, the type 3A and 3C 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. Our products come with batch tracciability number.

### 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)
Live parts protection:	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 10mm <sup>2</sup>
Saline solution:	Resistant
UV rays:	Resistant

### CODE

200.23266S (STANDARD VERSION)

200.23267S (WITH DRAINAGE)

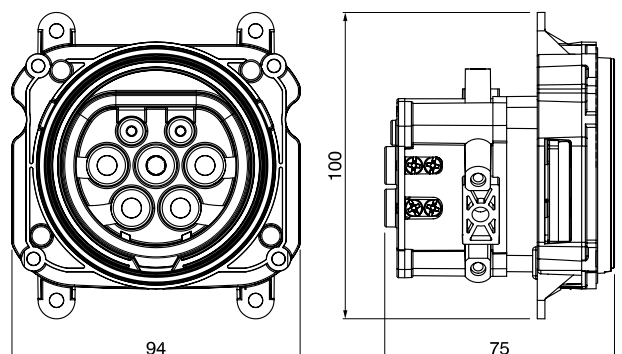


Flush mounting socket outlet with shutters.  
IPXXD  
IP55 (mated)  
IP55 (with lid)



With drainage system to direct possible moisture through water pipehouse (not included).

### DIMENSIONS



# Child safety shutters

Section 8.1 of new standard IEC 61851-1 regulates the degree of protection against access to hazardous-live-parts for the EV socket-outlets intended for Mode 3 use, not mated.

The presence of shutters (corresponding to the IPXXD protection level) meets the safety requirement without any supplementary insulation device.

There are many countries in Europe with electrical safety regulations which require the use of sockets with shutters (child protection). This is the case in France, Italy, Spain, Portugal, UK, etc.

Installing sockets without safety shutters either in homes or public places could result in non-conformity. Therefore, the national regulations of every European country should be consulted to decide if sockets with shutters are compulsory.

Type 2 sockets with shutter, i.e. fitted with terminals and pins protected by a shutter, the same ones which, for years, have been seen on household connectors.

EUROPEAN  
PATENT  
N° 2685568



SCAME Type 2 socket with shutters complies with new IEC 61851-1 without any specific additional accessory. This solution ensures for the end user a safety and ease of use normally

found at home by plugging a domestic standard socket. The feature such as mechanical shutters is also according to the european directive 2014/94/EU (the AFI directive).

## IPXXD PROTECTION

IPXXD level of protection means to fulfil the 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 very important for unskilled users to use this kind of connector.

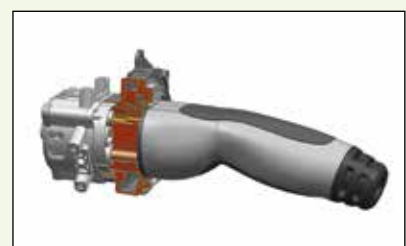
The LIBERA series connectors satisfy this requirement thanks to the adoption of pins and contact-tubes protected by shutters that can be opened only after the plug is inserted into the socket (as in case of home outlets).



Closing shutters.



Opening shutters.



Complete insertion.

# SOCKET OUTLETS

## TYPE 2 STANDARD

IP55



Type 2 connector is designed for electric vehicles with charging power greater than 3 kW, such as cars. It was adopted by main manufacturers and selected by the European Commission as a standard solution on the infrastructure-side.

It can be wired in both single-phase and three-phase, it has contacts for proximity plugs.

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.

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. Our products come with batch tracciability number.

### 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)
Live parts protection:	IPXXB
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 10mm <sup>2</sup>
Saline solution:	Resistant
UV rays:	Resistant

### CODE

200.23266 (STANDARD VERSION)

200.23267 (WITH DRAINAGE)

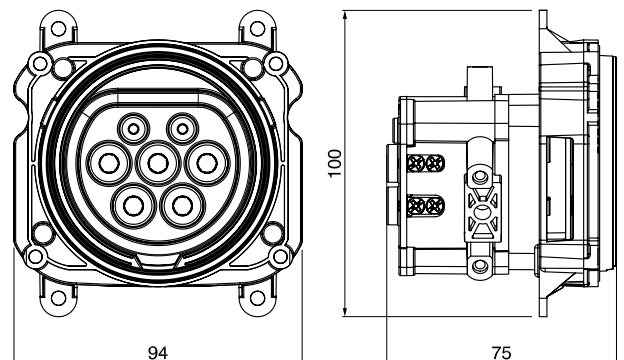


Flush mounting socket outlet without shutters.  
IPXXB  
IP55 (mated)  
IP55 (with lid)



With drainage system to direct possible moisture through water pipehouse (not included).

### DIMENSIONS



# TYPE 2 STANDARD COMPACT - MODE 3

**IP54**



Type 2 connector is designed for electric vehicles with charging power greater than 3 kW, such as cars. It was adopted by main manufacturers and selected by the European Commission as a standard solution on the infrastructure-side. The compact version, although maintaining the basic technical characteristics of the standard version, decreases the overall size, allowing optimisation of space, where necessary. 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. Our products come with batch traceability number.

## 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:	IP54 (mated)
Live parts protection:	IPXXB
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 10mm <sup>2</sup>
Saline solution:	Resistant
UV rays:	Resistant

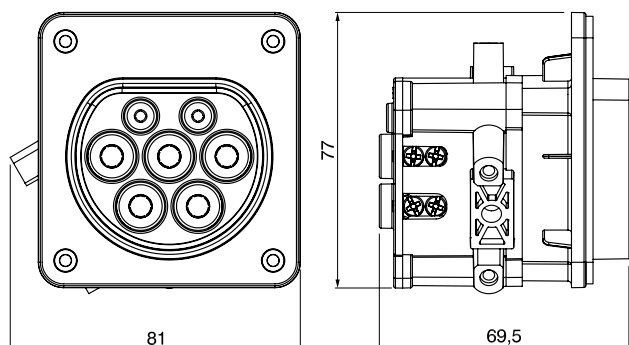
## CODE

200.23265



Flush mounting socket outlet without shutters (compact version).  
IPXXB  
IP54 (mated)  
IP55 (with lid)



## DIMENSIONS



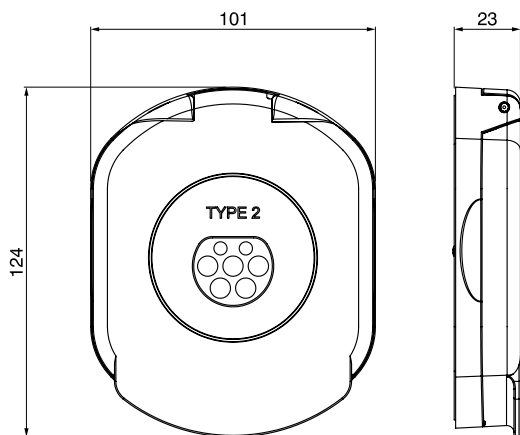
# SOCKET OUTLETS

## ACCESSORIES

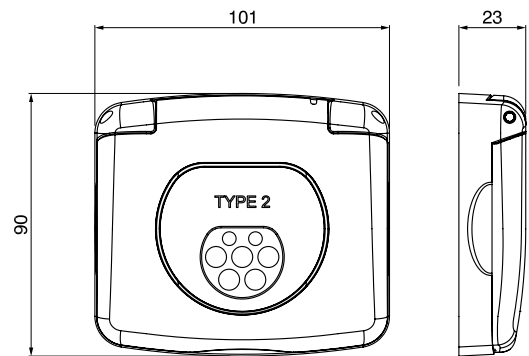
### LID

Code	Description
 200.23260CS	Standard lid IP55 for: 200.23266 - 200.23266S 200.23267 - 200.23267S
 200.23260CC	Compact lid IP55 for: 200.23265 200.23266 - 200.23266S 200.23267 - 200.23267S


200.23260CS



200.23260CC



### LATCHING SYSTEM

Code	Description
 200.23260BS	 Latching system with rotary actuator and 2 external microswitches to query the lock state (ON/OFF position). Suitable with: 200.23265 200.23266 - 200.23266S 200.23267 - 200.23267S
200.23260BL	 Latching system with rotary actuator without microswitches (no detection of the lock state). Suitable with: 200.23265 200.23266 - 200.23266S 200.23267 - 200.23267S
200.23260BP	 Latching system with rotary actuator and integrated micro to query the lock state (ON position). Suitable with: 200.23265 200.23266 - 200.23266S 200.23267 - 200.23267S

# TYPE 2 STANDARD WITH EMBEDDED COVER

**IP54**



The Type 2 socket with cover and built-in interlock is also suitable for public use because, in addition to the connector lock (included in the standard), there is a cover lock which prevents the socket from being accessed by unauthorised personnel.

The locking system of the standard Type 2 socket is implemented through technology that uses a single motor which blocks the cover and the connector when engaged.

## 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:	IP54 (mated)
Live parts protection:	IPXXB
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 10mm <sup>2</sup>
Saline solution:	Resistant
UV rays:	Resistant

## CODE

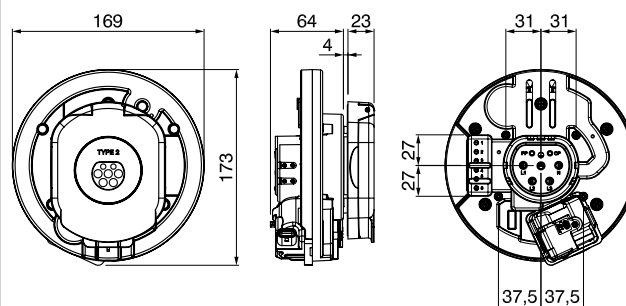
200.23264B



Flush mounting socket outlet with interlock system (plug and lid) IP54 standard version.  
IPXXB  
IP54 (mated)  
IP54 (with lid)

## DIMENSIONS

200.23264B



# SOCKET OUTLETS

## TYPE 2 CONNECTORS WITH SHUTTERS AND VANDAL-PROOF PROTECTION - MODE 3

IP55



### Advantages of the SCAME Type 2 socket outlets with built-in shutters and vandal-proof flange (200.23267SB).

Type 2 socket outlet with built-in shutters and vandal-proof flange offers the advantage of being able to close the socket when not engaged thanks to the same device used to block the plug inserted in the socket during the charging phase (mandatory for type 2 sockets in order to avoid disconnections while charging).

Moreover, the special shape of the sliding recessed lid reduces the possibility of vandals damaging the lid itself. For the manufacturers of charging stations, this makes the control system even "simpler" (the socket is also equipped with suitable micro-switches for detecting the status of the block and closing of the lid), (for cost reduction) and greater sturdiness.

For the users the built-in over opens automatically upon inserting the plug (obviously only after its opening has been authorised). Our products come with batch traceability number.

### 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.*

### EQUIPMENTS

1 bistable actuator: 12Vdc for 1 second  
3 switches: lock on/off, cover close

### TECHNICAL CHARACTERISTICS

Rated current:	32 A
Rated voltage:	380-480 V AC
Frequency:	50-60 Hz
Insulation voltage:	500 V
Protection degree:	IP55 (mated)
Live parts protection:	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 10mm <sup>2</sup>
Saline solution:	Resistant
UV rays:	Resistant

### CODE

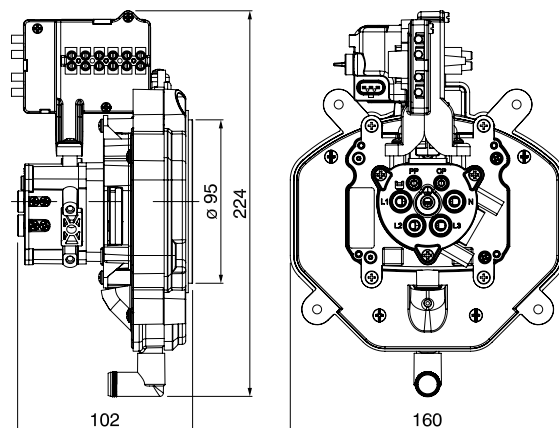
200.23267SB (WITH SHUTTERS) IPXXD

200.23267B (STANDARD VERSION) IPXXB



Vandal-proof flange with interlock system (plug and lid).  
IP55 (mated)  
IP54 (with lid)

### DIMENSIONS

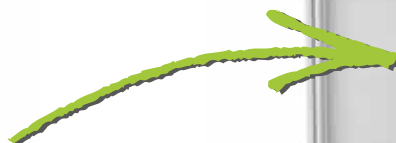




# One hand charge Scame T2 connector with shutters

With the special ONE HAND SYSTEM, accessing the charge becomes even simpler because you only need one hand to insert the connector in the socket, leaving your other hand

free for other operations, such as accessing the charging station with a card or smartphone or for anything else you need to do.



# SOCKET OUTLETS

## T2 BESPOKE PRE-WIRED SOLUTIONS



All Scame Type 2 sockets can also be supplied in the pre-wired version, based on each customer's unique customised specifications. This is possible thanks to the fully integrated production, organised into LEAN LINE PRODUCTION, managed and produced entirely by the Italian parent company. The pre-wiring of the socket, including any restraint system (locking system), allows for faster integration on production lines, thus optimising costs and production times. The pre-wiring is carried out by meticulously following the end customer's specifications.

### 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)
Live parts protection:	IPXXB – 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 10mm <sup>2</sup>
Saline solution:	Resistant
UV rays:	Resistant

### CUSTOMIZED SOLUTIONS



# TYPE 3A CONNECTORS - MODE 3

**IP54**



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.

## 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)
Live parts protection:	IPXXD
Operating temperature:	-30°C +50°C
Glow Wire test:	850°C 850°C-960°C (sockets with interlock)
Material:	Technopolymer
IK degree at 20°C:	IK07 – IK08 (sockets with interlock)
Colour:	Grey
Number of poles:	L-N-PE-CP
Size of conductors:	1 to 4 mm <sup>2</sup>
Saline solution:	Resistant
UV rays:	Resistant

## CODE

200.01663



Flush mounting socket outlet with flange 70x87mm.  
IPXXD  
IP44 (mated)  
IP44 (with lid)

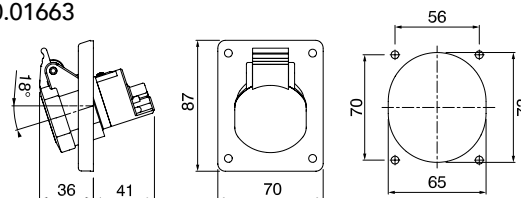
200.01663B



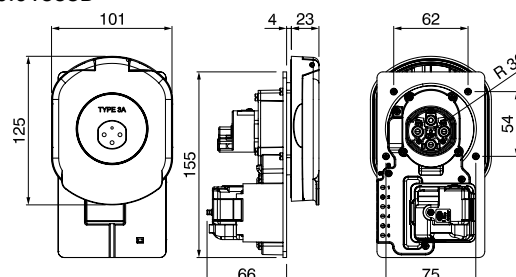
Flush mounting socket outlet with interlock IP54.  
IPXXD  
IP54 (mated)  
IP54 (with lid)

## DIMENSIONS

200.01663



200.01663B



# SOCKET OUTLETS

## DOMESTIC CONNECTORS - MODE 1



### REFERENCE STANDARDS

#### EN 60884-1

Plugs and socket-outlets for household and similar purposes.  
Part 1: General requirements.

### CODE

200.4007B



UNEL IP54 flush-mounting socket outlet with interlock.

570.4062-SW



UNEL IP54 flush-mounting socket outlet with flange 70x87mm (with switch). Available also in french standard.

570.2091G-SW



French standard IP54 flush-mounting socket outlet with flange 50x60mm (with switch). Available also in UNEL standard.

There are several electric vehicles on the market today that, due to their construction, do not fall within the charging modes covered by standard EN 61851-1 (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.

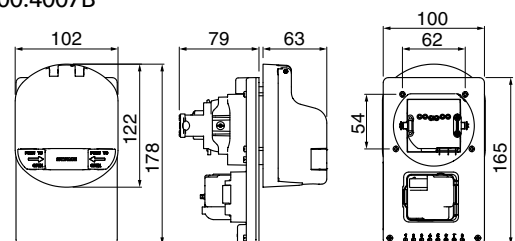
**N.B.:** Please note remember that in some country, domestic connectors are not suited for charging electric vehicles in mode 1 and mode 2 in environments open to third parties.

### TECHNICAL CHARACTERISTICS

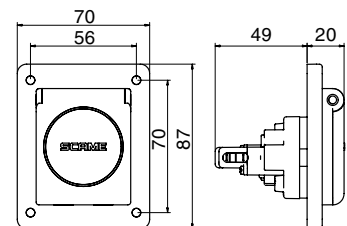
Rated current:	16 A
Rated voltage:	200 - 250 V AC
Frequency:	50-60 Hz
Insulation voltage:	250 V
Protection degree:	IP54 (IPXXD)
Operating temperature:	-25°C to +35°C -30°C to +50°C (sockets with interlock)
Material:	Technopolymer
Glow Wire test:	650°C-750°C 850-960°C (sockets with interlock)
IK grade at 20°C:	IK08
Colour:	Grey / Light blue
Number of poles:	L-N-PE
Size of conductors:	1 to 4 mm <sup>2</sup>
Saline solution:	Resistant
UV rays:	Resistant

### DIMENSIONS

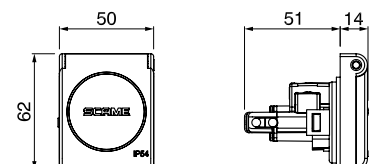
200.4007B



570.4062-SW



570.2091G-SW



# CORD SETS



ALL THE CORD SETS FOR THE ELECTRIC VEHICLE CHARGING STATIONS ARE DESIGNED, MANUFACTURED AND TESTED IN THE ITALIAN HEADQUARTERS OF SCAME PARRE.

SCAME'S EXPERIENCE, IN PARTICULAR IN PRODUCING INDUSTRIAL CONNECTORS HAS LED TO THE PRODUCTION OF CONNECTORS FOR ELECTRIC VEHICLES. THE NEW TYPE 2 CONNECTOR IS THE RESULT OF THIS EXTENSIVE EXPERIENCE AND QUEST FOR TOTAL QUALITY AND SAFETY.

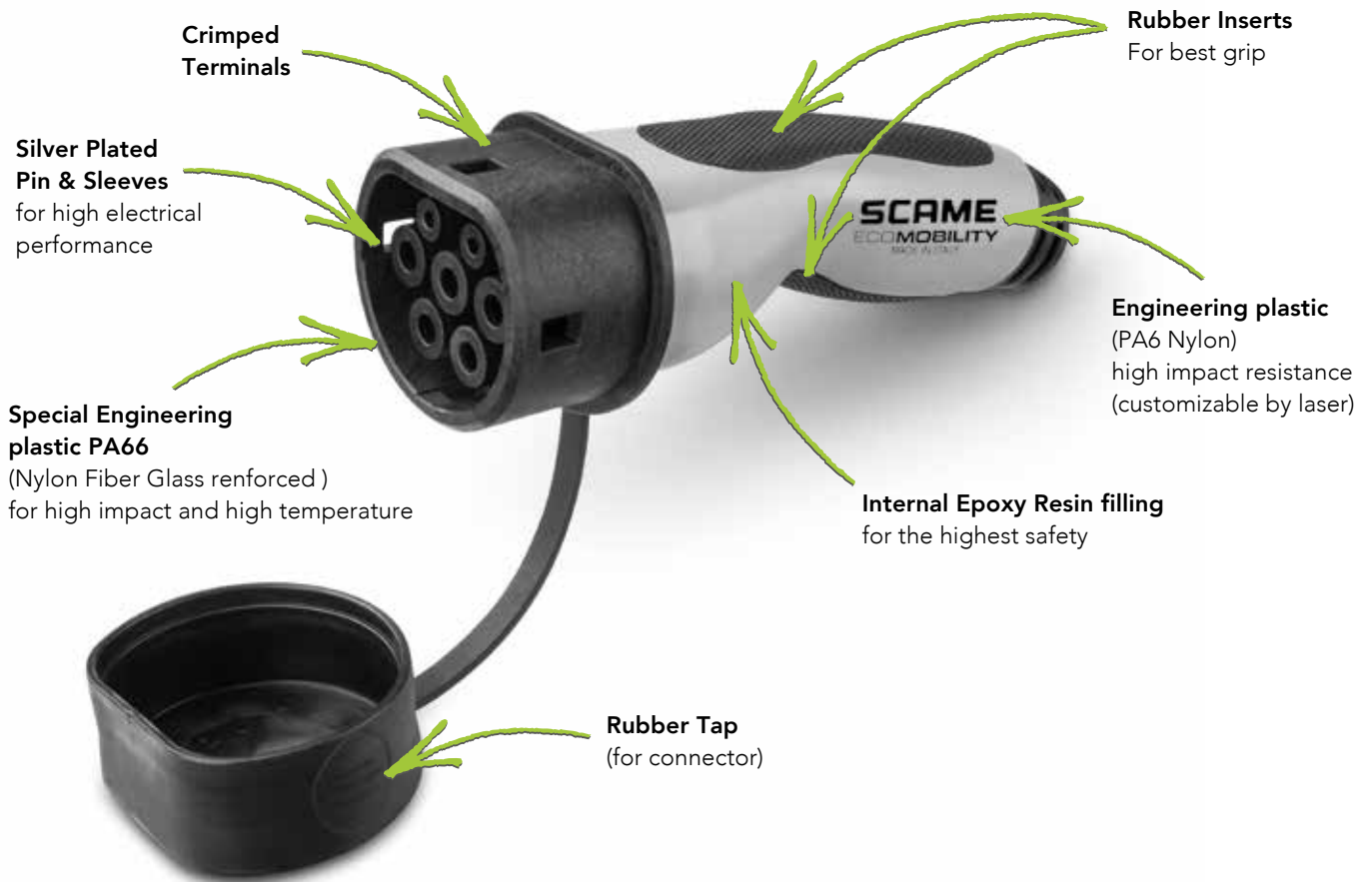
THE PRODUCTION OF CONNECTORS AND CABLING WITH THE RELEVANT CABLE TAKES PLACE IN SCAME'S HEADQUARTERS IN ITALY WHERE THE EXCELLENT PRODUCTION/ORGANISATIONAL CAPABILITY ALLOWS A HIGH DEGREE OF CUSTOMISATION. THE OPEN CABLE END CAN BE CUSTOMISED BOTH IN TERMS OF LENGTH AND OPEN END DEPENDING ON OUR CUSTOMER'S REQUIREMENTS.

BY GETTING IN TOUCH WITH OUR COMMERCIAL CONTACTS AND SPECIFYING THE TECHNICAL DETAILS OF THE TYPE OF CABLING REQUIRED, WE CAN SUPPLY A HIGHLY PROFESSIONAL SERVICE TAILORED TO YOUR NEEDS.



**MADE in ITALY**

# Scame cord set technical features



**ERGONOMIC DESIGN FOR A BETTER USER EXPERIENCE**

# Customization

The logo is produced using exclusive laser-based technology. This technology combined with the special material, that

includes high technological capability, allows us to customise the wording on the connector even on minimum lots.

**AVAILABLE IN:  
DIFFERENT COLORS  
DIFFERENT LOGO  
DIFFERENT CABLE  
LENGHT**



## THE SPECIAL ENGINEERING PLASTIC COULD BE CUSTOMIZED ALSO IN COLOURS



The special technopolymer with a high intrinsic technological capability means the connector colour can also be customised. The standard colours available, which can be produced in minimum lots, when agreed in advance, are as follows.



For other colours, an in-depth analysis must be carried out beforehand to guarantee that the result meets SCAME's high quality levels. For further information, please contact your SCAME sales and marketing representative.

The Italian production facility, in direct contact with the other company departments, also allows a rapid and high degree of customisation in terms of the length of the cord which can be agreed upon beforehand based on customer requirements.

**For further information, please contact your SCAME sales and marketing representative.**



The cord sets can be produced in the "open end" version based on the technical specifications defined by the customer. In addition to the standard cable length, the dimensions of the cable stripping and the stripped length, including the addition of elements such as cable lugs, can be customised. All the cord sets are produced with specific cable suitable for EV compliant to the reference EN 50620.

### 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.*

#### EN 50620 (2017)

Electric cables - Charging cables for electric vehicles.

### 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 V / 500 V
Protection degree:	IP44
Operating temperature:	-30°C to +50°C
Material:	Technopolymer
Saline solution:	Resistant
UV rays:	Resistant

### CABLE

Rated voltage:	450 / 750 V AC
Wire insulation/sheath:	ELASTOMER
Maximum temperature:	+90°C



# CORD SETS



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.

All the cord sets are produced with specific cable suitable for EV compliant to the reference EN 50620.

## 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.

### EN 50620 (2017)

Electric cables - Charging cables for electric vehicles.



















## 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 V / 500 V
Protection degree:	IP44
Operating temperature:	-30°C to +50°C
Material:	Technopolymer
Saline solution:	Resistant
UV rays:	Resistant

## CABLE

Rated voltage:	450 / 750 V AC
Wire insulation/sheath:	ELASTOMER
Maximum temperature:	+90°C

## CORD SET

Length	Code	Charging station	Cable characteristics	Electric vehicle (inlet)
5 m 8 m	201.CS2111-5 201.CS2111-8	 Type 2 3,5 kW 1P+N+PE 20A	3 x 2,5 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 1 3,5 kW 1P+N+PE 20A
5 m 8 m	201.CS2121-5 201.CS2121-8	 Type 2 3,5 kW 1P+N+PE 20A	3 x 2,5 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 2 3,5 kW 1P+N+PE 20A
5 m 8 m	201.CSA111-5 201.CSA111-8	 Type 3A 3,5 kW 1P+N+PE 20A	3 x 2,5 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 1 3,5 kW 1P+N+PE 20A
5 m 8 m	201.CSA121-5 201.CSA121-8	 Type 3A 3,5 kW 1P+N+PE 20A	3 x 2,5 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 2 3,5 kW 1P+N+PE 20A
5 m 8 m	201.CSA1A1-5 201.CSA1A1-8	 Type 3A 3,5 kW 1P+N+PE 20A	3 x 2,5 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 3A 3,5 kW 1P+N+PE 20A
Length	Code	Charging station	Cable characteristics	Electric vehicle (inlet)
5 m 8 m	201.CS2313-5 201.CS2313-8	 Type 2 7 kW 1P+N+PE 32A	3 x 6 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 1 7 kW 1P+N+PE 32A
5 m 8 m	201.CS2323-5 201.CS2323-8	 Type 2 7 kW 1P+N+PE 32A	3 x 6 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 2 7 kW 1P+N+PE 32A
Length	Code	Charging station	Cable characteristics	Electric vehicle (inlet)
5 m 8 m	201.CS2424-5 201.CS2424-8	 Type 2 22 kW 3P+N+PE 32A	5 x 6 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 2 22 kW 3P+N+PE 32A
5 m 8 m	201.CSC424-5 201.CSC424-8	 Type 3C 22 kW 3P+N+PE 32A	5 x 6 mm <sup>2</sup> + 1 x 0,5 mm <sup>2</sup>	 Type 2 22 kW 3P+N+PE 32A

# CONNECTORS



ALL THE CONNECTORS FOR THE ELECTRIC VEHICLE CHARGING STATIONS ARE DESIGNED, MANUFACTURED AND TESTED IN THE ITALIAN HEADQUARTERS OF SCAME PARRE.












SCAME'S HISTORY IN THE ELECTRIC VEHICLE CONNECTOR SECTOR BEGAN IN 1999 WITH THE DESIGN OF THE 3A CONNECTOR, WHICH IS NOW OFFICIALLY INCLUDED IN THE IEC 62196-1/2 STANDARD AND INDICATED IN OTHER COUNTRIES AS THE IDEAL STANDARD FOR LIGHT VEHICLES.

SCAME WAS ALSO ONE OF THE FIRST MANUFACTURERS OF THE 3C CONNECTOR WHICH IS ALSO INCLUDED IN THE IEC 62196-1/2 STANDARD AND STILL USED IN SOME COUNTRIES.



MADE in ITALY

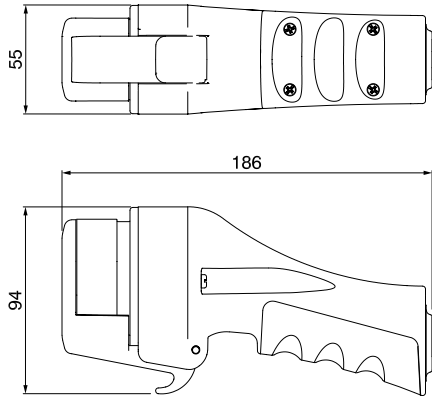
## 3C TYPE CONNECTORS - SINGLE/THREE-PHASE 16 A - 32 A 400 V~ 3P+N+PE+CP+PP - IP44

	Code	Description
	200.33233	Plug with screw terminals 1.5 to 6 mm <sup>2</sup>
	200.33233C2(*)	Plug with crimped terminals 2.5 mm <sup>2</sup>
	200.33233C4(*)	Plug with crimped terminals 4 mm <sup>2</sup>
	200.33233C6(*)	Plug with crimped terminals 6 mm <sup>2</sup>
	200.33234C2(*)	Plug with crimped terminals 2.5 mm <sup>2</sup>
	200.33234C4(*)	Plug with crimped terminals 4 mm <sup>2</sup>
	200.332KITC2	Crimped pin kit 2.5 mm <sup>2</sup>
	200.332KITC4	Crimped pin kit 4 mm <sup>2</sup>
	200.332KITC6	Crimped pin kit 6 mm <sup>2</sup>
	200.01633	Plug
	200.01634	Plug (black case)
	200.01633A	Angled plug
	200.01693	Fixed plug with flange 70x87mm
	200.01643	Straight outlet
	200.01644	Straight outlet (black case)
	200.01623	Italian plug adaptor P17
	200.01624	French-German plug adaptor
	200.33263	Flush mounting socket outlet with flange 70x87 mm IPXXD IP44 (mated) IP44 (with lid)
	200.33263B	Flush mounting socket outlet with interlock IP54 IPXXD IP54 (mated) IP54 (with lid)

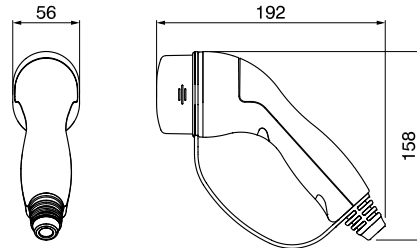
(\*) Cable to be defined at the time of the order.

**DIMENSIONS**

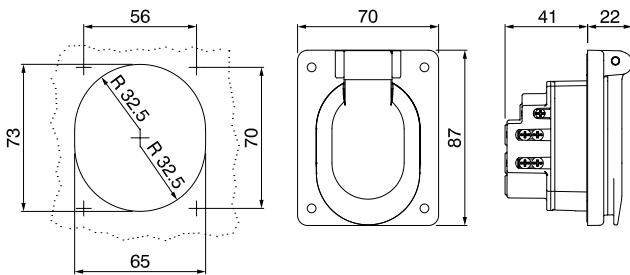
200.33233 - 200.33233C2  
200.33233C4 - 200.33233C6



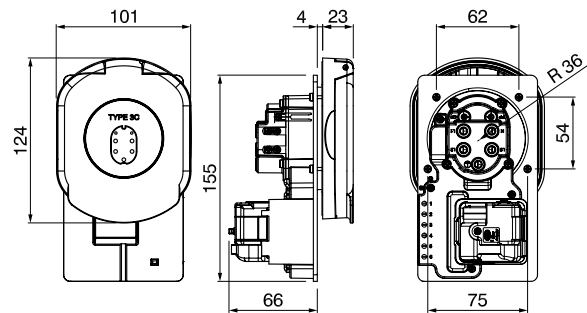
200.33234C2  
200.33234C4



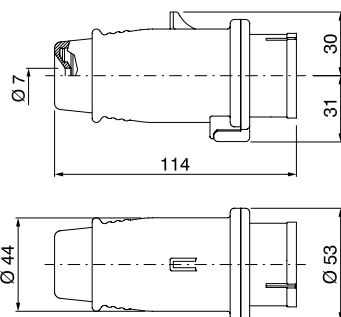
200.33263



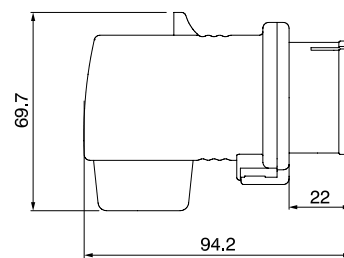
200.33263B



200.01633 - 200.01634

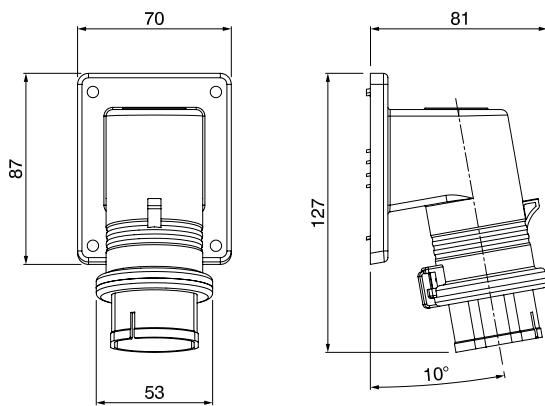


200.01633A

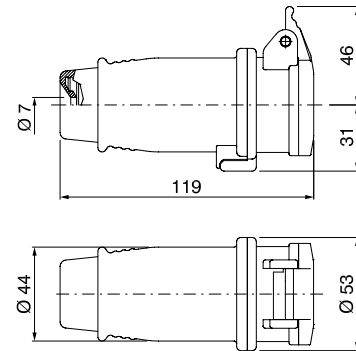


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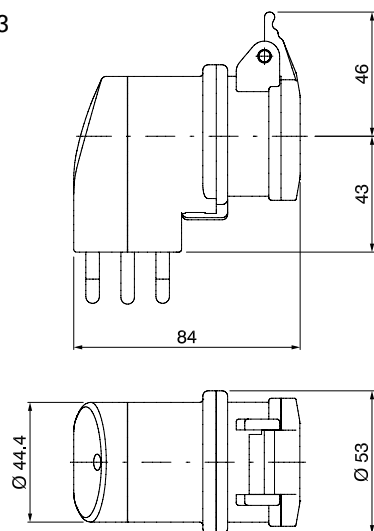
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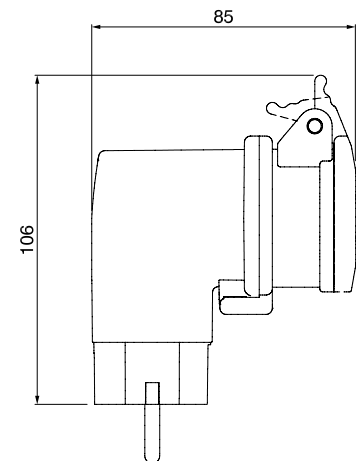
200.01643 - 200.01644



200.01623



200.01624





ZP01056-GB-1



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