

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



1164423

<https://www.phoenixcontact.com/in/products/1164423>

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CHARX connect modular, Infrastructure charging socket, square, Premium, Set, with square protective cover, with temperature sensors, with LED (common cathode connection), for charging electric vehicles (EV) with alternating current (AC), Type 2, IEC 62196-2, 32 A / 480 V (AC), without single-core wires, locking actuator: 12 V, 4-pos., Rear panel mounting, M5 thread, housing: black, PHOENIX CONTACT logo

## Product Description

Infrastructure charging sockets with protective cover, for charging electric vehicles (EV) with alternating current (AC), compatible with Type 2 Infrastructure Plugs. For installation at charging stations for E-Mobility (EVSE)

## Your advantages

- Charging status intuitively visible at a glance with color LED indicator
- Protected against overheating with precise temperature measurement
- Flexible mounting and easy maintenance with plug-in cables
- Available with your logo on request – for consistent branding of your charging station
- Waterproof and dirtproof due to fully molded contacts
- Developed and produced in accordance with the IATF 16949 automotive standard and ISO 9001
- Uniform, space-saving installation space

## Commercial Data

Item number	1164423
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	XWB
Product Key	XWBADC
GTIN	4063151177089
Weight per Piece (including packing)	587.6 g
Weight per Piece (excluding packing)	378 g
Customs tariff number	85366990
Country of origin	DE

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## Set consists of

### EV-T2M3SO12-4P-P - Infrastructure charging socket

1164299

<https://www.phoenixcontact.com/in/products/1164299>



CHARX connect modular, Infrastructure charging socket, square, Premium, with temperature sensors, with LED (common cathode connection), for charging electric vehicles (EV) with alternating current (AC), Type 2, IEC 62196-2, 32 A / 480 V (AC), without single-core wires, locking actuator: 12 V, 4-pos., Rear panel mounting, M5 thread, housing: black, PHOENIX CONTACT logo

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### EV-T2SOC-P - Protective cover

1164297

<https://www.phoenixcontact.com/in/products/1164297>



CHARX connect modular, Protective cover, square, Accessories, Premium, with self-locking mechanism, with LED (common cathode connection), for attaching to infrastructure charging sockets, Type 2, IEC 62196-2, Front mounting, M5 thread, Embossed PHOENIX CONTACT logo

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## EV-T2M3SO-CAP - Protective cap

1202424

<https://www.phoenixcontact.com/in/products/1202424>



CHARX connect modular, Protective cap, circular, Accessories, for strain relief and touch protection, Type 2, IEC 62196-2

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## Technical Data

### Product properties

Design (Infrastructure charging socket)	square
Design (Protective cover)	square
Design (Protective cap)	circular
Product type	Infrastructure charging socket
Product family	CHARX connect modular
Application	for charging electric vehicles (EV) with alternating current (AC) compatible with infrastructure charging plugs
Type	Premium Set
Design	with square protective cover with temperature sensors with LED (common cathode connection)
Locking type	Locking in the inserted state with a locking mechanism
Affixed logo	PHOENIX CONTACT logo
Charging standard	Type 2
Charging mode	Mode 3, Case B

### Electrical properties

Type of signal transmission	Pulse width modulation
Note on the connection method	Connection via spade connector, separable and reconnectable
Type of charging current	AC 3-phase
Charging power rating	22 kW
Charging power	max. 26.6 kW
Charging current	max. 32 A

### Power contact

Number	5 (L1, L2, L3, N, PE)
Rated voltage	480 V AC
Rated current	32 A

### Signal contact

Number	2 (CP, PP)
Rated voltage	30 V AC
Rated current	2 A

### LED function

Application	to display the charging status
Position	in the frame of the protective cover
Connection type	common anode

### Temperature sensors (PTC chain)

Sensor type	PTC chain
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Standards/regulations	DIN EN 60738-1
Diagnostics	Short circuit, cable break
Attachment point	Sensor for the AC contacts
Messbereich_Widerstand	800 Ω ... 300 kΩ
Resistance	max. 10 Ω
Recommended measured current	≤ 1 mA (U <sub>max</sub> = 24 V DC)

## Locking actuator

Operating voltage	12 V
Note number of positions	4-pos.
Position of the locking actuator	top center

## Locking actuator

Operating voltage	12 V
Note number of positions	4-pos.
Position of the locking actuator	top center
Possible power supply range at the motor	9 V ... 16 V
Maximum voltage for locking detection	30 V
Typical motor current for locking	0.2 A
Reverse current of the motor	max. 1 A
Max. dwell time with reverse current	1000 ms
Recommended adaptation time	600 ms
Pause time after entry or exit path	3 s
Service life insertion cycles	> 10000 load cycles
Lock recognition	available
Mechanical emergency release	available
Ambient temperature (operation)	-30 °C ... 50 °C
Cable length	0.5 m
Cable structure	4 x 0.5 mm <sup>2</sup>

## Dimensions

### Infrastructure charging socket

Dimensional drawing	
Width	75 mm
Height	91.71 mm
Depth	87.95 mm

### Protective cover

Width	84.9 mm
Height	93.7 mm

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Depth	30.5 mm
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## Bore dimensions

Dimensional drawing	
Width	60 mm
Height	60 mm

## Protective cap

Width	64 mm
Height	57 mm
Depth	24 mm

## Material specifications

Color (Housing)	black (9005)
Color (Protective cover)	black (9005)
Material (Housing)	Plastic
Material (Protective cover)	Plastic
Material (Contact surface)	Silver

## Cable/line

Cable type	without single-core wires
Single wire, cross section	6.00 mm <sup>2</sup>

### Single-core wires for locking actuator

Cable length	0.5 m
Cable structure	4 x 0.5 mm <sup>2</sup>
Single wire, material	PVC
Single wire, color	BU/RD, BU/GN, BU/YE, BU/BN
External cable diameter	1.6 mm ±0.20 mm
Cable resistance	≤ 37.1 Ω/m

### Single-core wires for PTC temperature sensors

Cable length	0.5 m
Cable structure	5 x 0,5 mm <sup>2</sup>
Single wire, material	PVC
Single wire, color	BN/GY BN/YE/GN
External cable diameter	1.6 mm ±0.20 mm
Cable resistance	≤ 37.1 Ω/m

## Mechanical properties

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## Mechanical data

Insertion/withdrawal cycles	> 10000
Insertion force	< 100 N
Withdrawal force	< 100 N

## Environmental and real-life conditions

### Ambient conditions

Degree of protection (Infrastructure charging socket)	IP44 (plugged in)
Degree of protection (Protective cover)	IP54
Ambient temperature (operation)	-30 °C ... 50 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	5000 m (above sea level)

## Standards and regulations

### Standards

Standards/regulations	IEC 62196-2
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## Mounting

Mounting type Infrastructure charging socket	Rear panel mounting (0 to 90 degree frontal inclination possible)
Mounting type Protective cover	Rear panel mounting
Max. wall thickness	max. 50 mm (Rear panel mounting, normative maximum specification for infrastructure plug)
	max. 28 mm (Rear mounting, normative maximum specification for infrastructure plug when using protective cover 1405217)
Mounting hole diameter	7.00 mm (ø)
Fixing screws	M5 thread
Screws included in the scope of delivery	none

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket

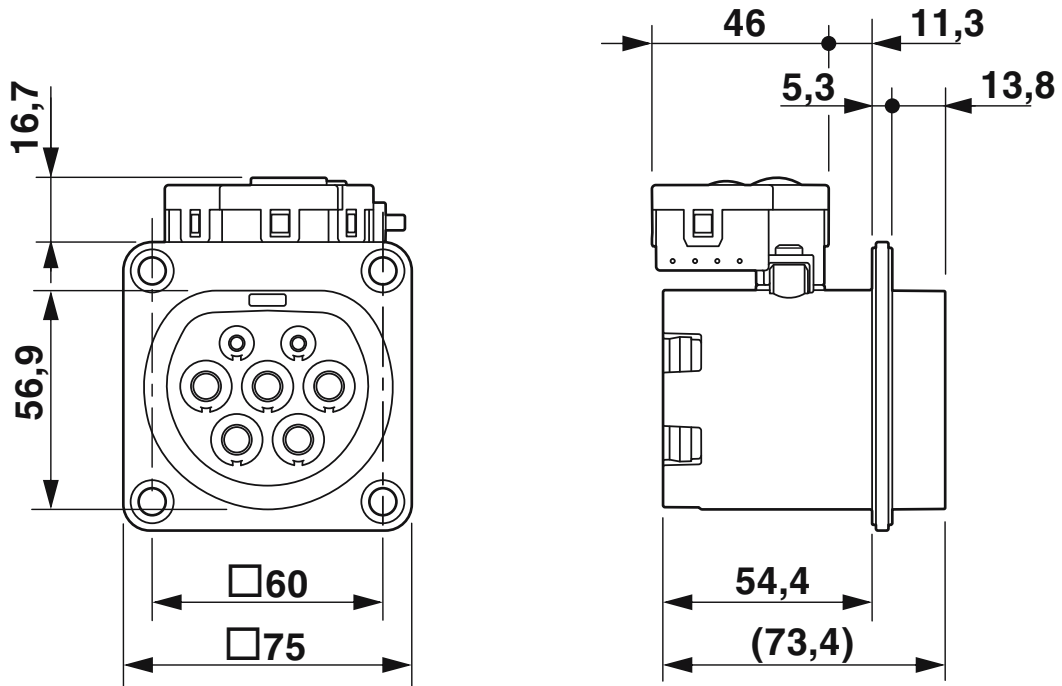


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## Drawings

Dimensional drawing



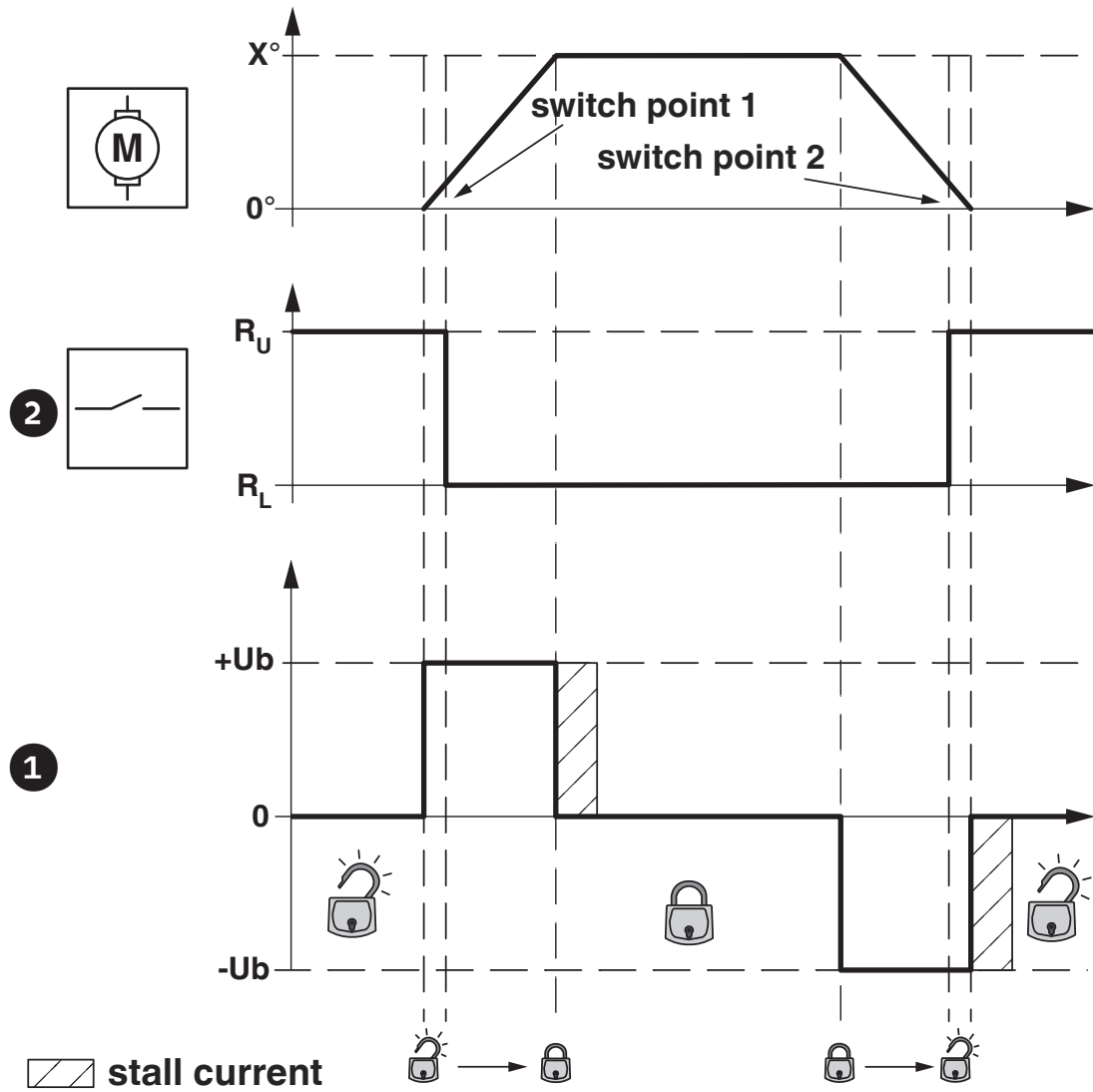


# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket

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Schematic diagram



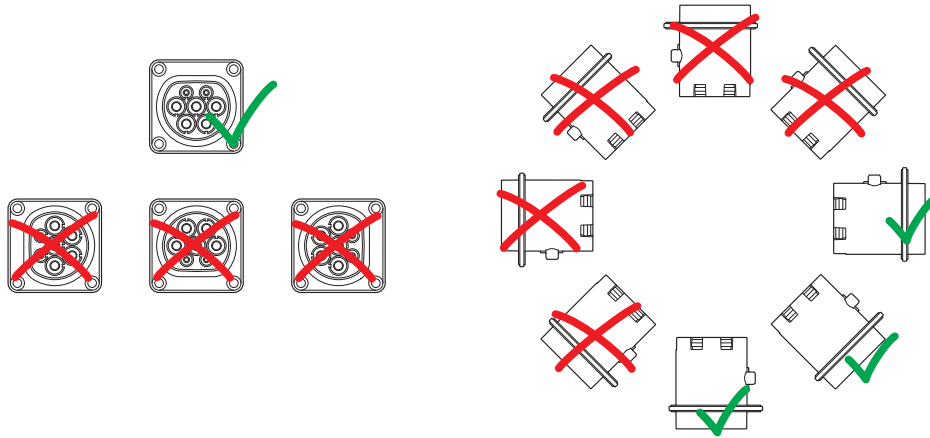
Locking states of the locking actuator

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket

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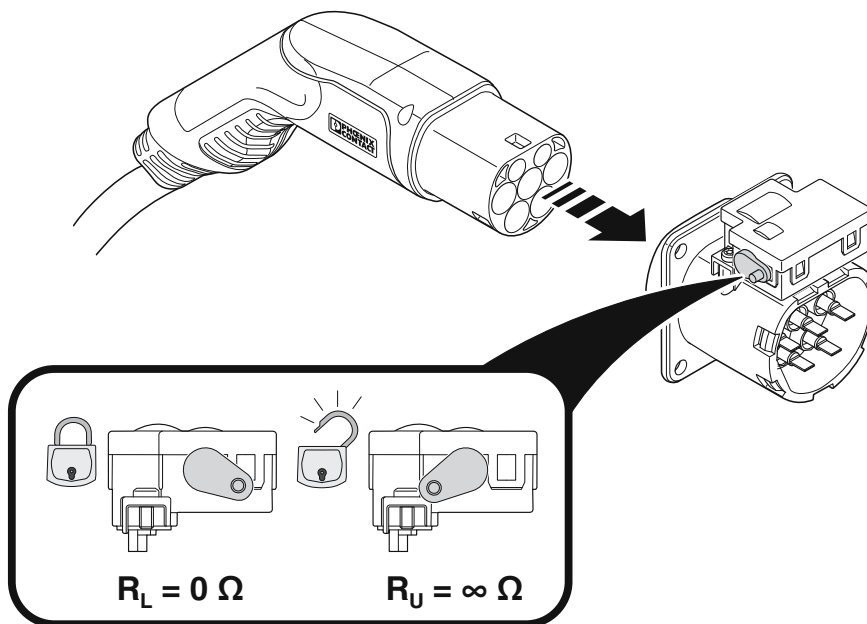
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## Schematic diagram



## Installation positions

## Schematic diagram



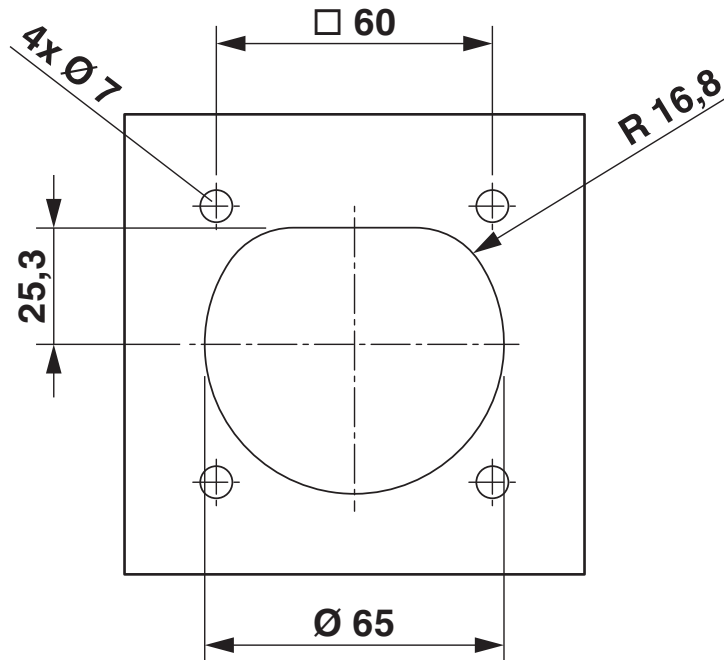
Position of the emergency unlocking lever on the locking actuator

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket

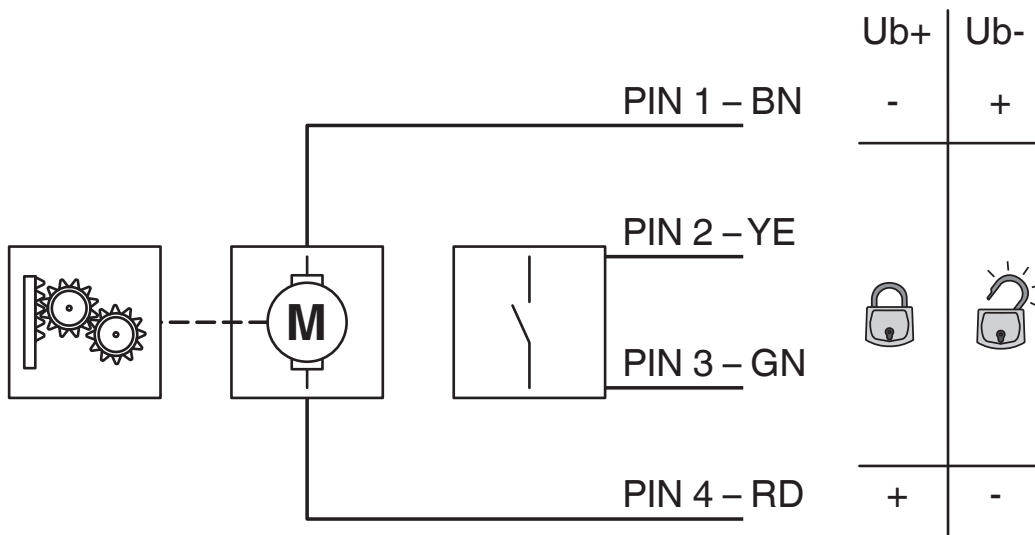
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Dimensional drawing



Block diagram



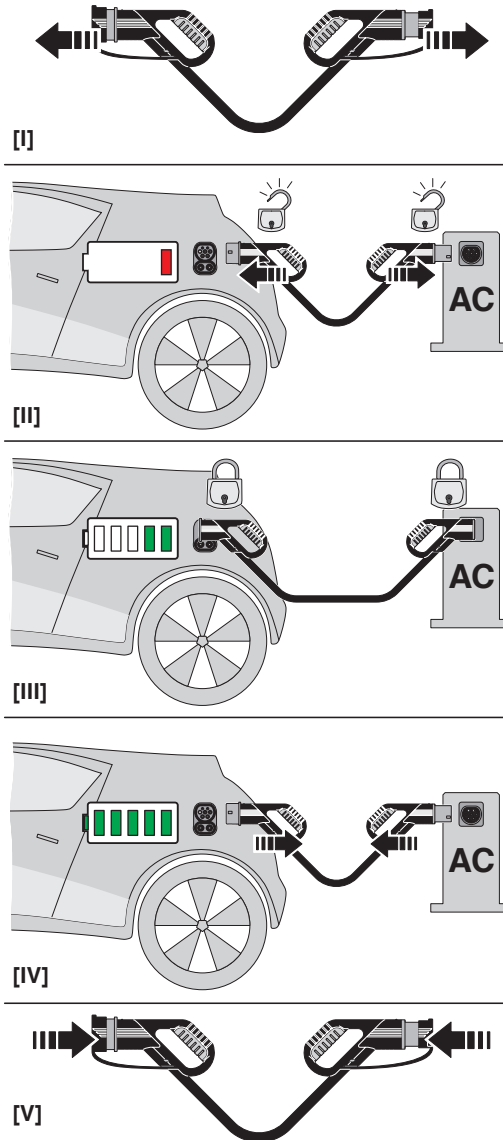
Block diagram of the locking actuator

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket

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Schematic diagram



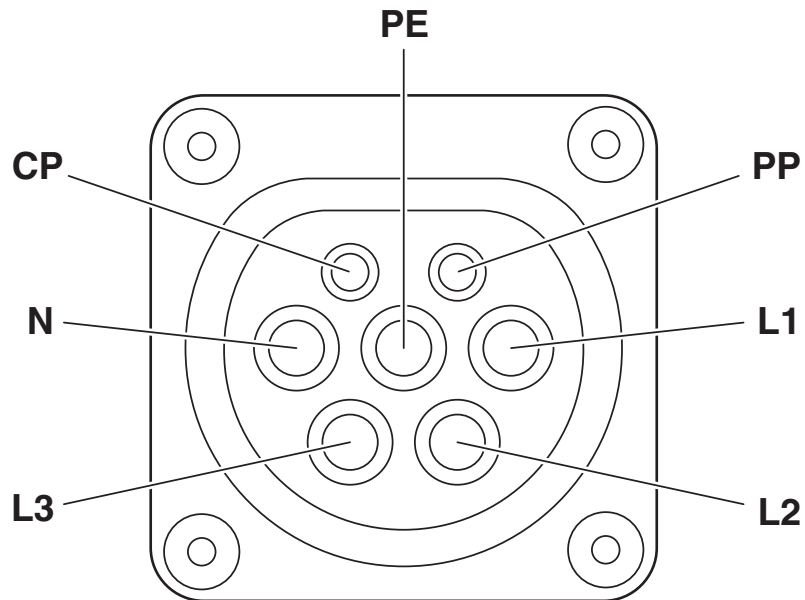
Operating instructions

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket

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Connection diagram



Pin assignment of infrastructure charging socket

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## Classifications

### ECLASS

ECLASS-11.0	27144706
ECLASS-12.0	27144706
ECLASS-13.0	27144706

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 10;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## Accessories

### EV-LABEL-C-SO - Label

1315521

<https://www.phoenixcontact.com/in/products/1315521>

CHARX connect, Label, Accessories, for AC type 2 infrastructure charging socket and for AC type 2 infrastructure charging plug, DIN EN 17186



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### EV-T2SOC-P - Protective cover

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CHARX connect modular, Protective cover, square, Accessories, Premium, with self-locking mechanism, with LED (common cathode connection), for attaching to infrastructure charging sockets, Type 2, IEC 62196-2, Front mounting, M5 thread, Embossed PHOENIX CONTACT logo





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## EV-T2M3SOW-1AC32A-0,3M6,0E - Cable set for infrastructure charging socket

1164343

<https://www.phoenixcontact.com/in/products/1164343>



CHARX connect modular, Cable set for infrastructure charging socket, Accessories, with slip-on sleeve at one end, Only for connection to generation 2 infrastructure charging sockets from Phoenix Contact, Type 2, IEC 62196-2, 32 A / 250 V (AC), Single wires, length: 0.3 m, Plug-in mounting

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## EV-T2M3SOW-3AC20A-0,3M2,5E - Cable set for infrastructure charging socket

1164355

<https://www.phoenixcontact.com/in/products/1164355>



CHARX connect modular, Cable set for infrastructure charging socket, Accessories, with slip-on sleeve at one end, Only for connection to generation 2 infrastructure charging sockets from Phoenix Contact, Type 2, IEC 62196-2, 20 A / 480 V (AC), Single wires, length: 0.3 m, Plug-in mounting

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



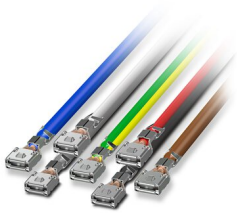
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<https://www.phoenixcontact.com/in/products/1164423>

## EV-T2M3SOW-3AC32A-0,3M6,0E - Cable set for infrastructure charging socket

1164362

<https://www.phoenixcontact.com/in/products/1164362>



CHARX connect modular, Cable set for infrastructure charging socket, Accessories, with slip-on sleeve at one end, Only for connection to generation 2 infrastructure charging sockets from Phoenix Contact, Type 2, IEC 62196-2, 32 A / 480 V (AC), Single wires, length: 0.3 m, Plug-in mounting

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## EV-T2M3SOW-1AC32A-0,7M6,0E - Cable set for infrastructure charging socket

1164344

<https://www.phoenixcontact.com/in/products/1164344>



CHARX connect modular, Cable set for infrastructure charging socket, Accessories, with slip-on sleeve at one end, Only for connection to generation 2 infrastructure charging sockets from Phoenix Contact, Type 2, IEC 62196-2, 32 A / 250 V (AC), Single wires, length: 0.7 m, Plug-in mounting

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



1164423

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## EV-T2M3SOW-3AC20A-0,7M2,5E - Cable set for infrastructure charging socket

1164361

<https://www.phoenixcontact.com/in/products/1164361>



CHARX connect modular, Cable set for infrastructure charging socket, Accessories, with slip-on sleeve at one end, Only for connection to generation 2 infrastructure charging sockets from Phoenix Contact, Type 2, IEC 62196-2, 20 A / 480 V (AC), Single wires, length: 0.7 m, Plug-in mounting

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## EV-T2M3SOW-3AC32A-0,7M6,0E - Cable set for infrastructure charging socket

1164365

<https://www.phoenixcontact.com/in/products/1164365>



CHARX connect modular, Cable set for infrastructure charging socket, Accessories, with slip-on sleeve at one end, Only for connection to generation 2 infrastructure charging sockets from Phoenix Contact, Type 2, IEC 62196-2, 32 A / 480 V (AC), Single wires, length: 0.7 m, Plug-in mounting

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## EV-T2M3SO-CAP - Protective cap

1202424

<https://www.phoenixcontact.com/in/products/1202424>



CHARX connect modular, Protective cap, circular, Accessories, for strain relief and touch protection, Type 2, IEC 62196-2

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## EV-T2M3SO-CAP-REMOVER - Removal tool

1286836

<https://www.phoenixcontact.com/in/products/1286836>



CHARX connect modular, Removal tool, Accessories, for removing the protective cap for strain relief and touch protection, which is mounted on the back of the infrastructure charging sockets, Type 2

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## CHARX SEC-1000 - AC charging controller

1139034

<https://www.phoenixcontact.com/in/products/1139034>



CHARX control modular, AC charging controller, IEC 61851-1, operating mode: Stand-Alone, Client, interface: CHARX control modular system bus, Connectable peripheral devices: Energy meter, RFID, DC residual current detection, DIN rail mounting

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## CHARX SEC-3000 - AC charging controller

1139022

<https://www.phoenixcontact.com/in/products/1139022>



CHARX control modular, AC charging controller, with Embedded Linux system, IEC 61851-1, operating mode: Stand-Alone, Client, Server, interface: Ethernet (2 x), CHARX control modular system bus, MICRO-USB type C, communication protocol: OCPP 1.6J, Modbus/TCP, MQTT, Connectable peripheral devices: Energy meter, RFID, DC residual current detection, DIN rail mounting

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket

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## CHARX SEC-3050 - AC charging controller

1139018

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CHARX control modular, AC charging controller, with Embedded Linux system, IEC 61851-1, ISO 15118, operating mode: Stand-Alone, Client, Server, interface: Ethernet (2x), CHARX control modular system bus, MICRO-USB type C, communication protocol: OCPP 1.6J, Modbus/TCP, MQTT, Connectable peripheral devices: Energy meter, RFID, DC residual current detection, DIN rail mounting

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## CHARX SEC-3100 - AC charging controller

1139012

<https://www.phoenixcontact.com/in/products/1139012>



CHARX control modular, AC charging controller, with Embedded Linux system, IEC 61851-1, operating mode: Stand-Alone, Client, Server, interface: Ethernet (2 x), Cellular communication (4G/2G), CHARX control modular system bus, MICRO-USB type C, communication protocol: OCPP 1.6J, Modbus/TCP, MQTT, Connectable peripheral devices: Energy meter, RFID, DC residual current detection, DIN rail mounting

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## CHARX SEC-3150 - AC charging controller

1138965

<https://www.phoenixcontact.com/in/products/1138965>



CHARX control modular, AC charging controller, with Embedded Linux system, IEC 61851-1, ISO 15118, operating mode: Stand-Alone, Client, Server, interface: Ethernet (2x), Cellular communication (4G/2G), CHARX control modular system bus, MICRO-USB type C, communication protocol: OCPP 1.6J, Modbus/TCP, MQTT, Connectable peripheral devices: Energy meter, RFID, DC residual current detection, DIN rail mounting

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## EM-CP-PP-ETH - AC charging controller

2902802

<https://www.phoenixcontact.com/in/products/2902802>



EV charge control is used to charge electrical vehicles on the 3-phase AC mains power supply according to IEC 61851-1 Mode 3. All necessary control functions are integrated. Additional functions are available for various charging applications.

# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket

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## VAL-EV-T1/T2 264/12.5/3+1 - Lightning/surge arrester type 1/2

1180149

<https://www.phoenixcontact.com/in/products/1180149>



CHARX protect advanced: Plug-in lightning surge/surge protective device, in accordance with Type 1/2 / Class I/II, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE). Specifically designed for use in e-mobility.

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## VAL-EV-T1/T2 264/12.5/3+1-R - Lightning/surge arrester type 1/2

1180150

<https://www.phoenixcontact.com/in/products/1180150>



CHARX protect advanced: Plug-in lightning surge/surge protective device, in accordance with Type 1/2 / Class I/II, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), with remote indication contact. Specifically designed for use in e-mobility.



# EV-T2M3SO12-4P-P-SET - Infrastructure charging socket



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## VAL-EV-T2 280/3+1 - Type 2 surge arrester

1180144

<https://www.phoenixcontact.com/in/products/1180144>



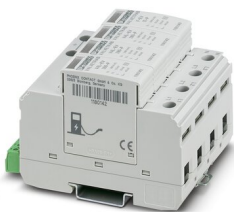
CHARX protect basic: Plug-in surge protective device, in accordance with Type 2/Class II, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE). Specifically designed for use in e-mobility.

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## VAL-EV-T2 280/3+1-R - Type 2 surge arrester

1180145

<https://www.phoenixcontact.com/in/products/1180145>



CHARX protect basic: Plug-in surge protective device, in accordance with Type 2/Class II, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), with remote indication contact. Specifically designed for use in e-mobility.

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