

# CHARX SEC-3000 - AC charging controller



1139022

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

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CHARX control modular, AC charging controller, with Embedded Linux system, IEC 61851-1, 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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1139022       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | EM01          |
| Product key                          | XWBBFC        |
| GTIN                                 | 4063151086510 |
| Weight per piece (including packing) | 244 g         |
| Weight per piece (excluding packing) | 182 g         |
| Customs tariff number                | 85371091      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

|                   |                            |
|-------------------|----------------------------|
| Product type      | AC charging controller     |
| Product family    | CHARX control modular      |
| Design            | with Embedded Linux system |
| Operating mode    | Stand-Alone                |
|                   | Client                     |
|                   | Server                     |
| Charging standard | IEC 61851-1                |
| Charging mode     | Mode 3, Case B + C         |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 11 |
|------------------|----|

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
|----------------------|-----|

### System properties

#### IEC 61131 runtime system

|                     |                |
|---------------------|----------------|
| Data storage system | 8 GByte (eMMC) |
|---------------------|----------------|

### Electrical properties

#### Supply

|                          |                             |
|--------------------------|-----------------------------|
| Supply voltage           | 12 V DC $\pm 5\%$           |
| Supply voltage range     | 11.4 V DC ... 12.6 V DC     |
| Max. current consumption | 2 A (Stand-alone operation) |

### Input data

#### Digital

|                             |                   |
|-----------------------------|-------------------|
| Number of digital inputs    | 4                 |
| Description of the input    | Digital input     |
| Nominal input voltage $U_N$ | 12 V              |
| Input voltage range U1      | 0 V ... 3 V (Off) |
| Input voltage range U2      | 9 V ... 15 V (On) |

### Output data

#### Digital

|                        |                                  |
|------------------------|----------------------------------|
| Output name            | Digital output                   |
| Number outputs         | 4                                |
| Maximum output voltage | $\leq 12$ V (Low-side operation) |
| Maximum output current | max. 600 mA                      |

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## Connection data

### Conductor connection

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Connection method                | pluggable                                    |
|                                  | Push-in technology                           |
| Conductor cross section rigid    | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross section AWG      | 24 ... 16                                    |

## Interfaces

|           |                                  |
|-----------|----------------------------------|
| Interface | Ethernet (2x)                    |
|           | CHARX control modular system bus |
|           | USB-C                            |

### Ethernet

|                             |             |
|-----------------------------|-------------|
| Interface                   | Ethernet    |
| Connection method           | RJ45 jack   |
| Number of interfaces        | 2           |
| Number of supported devices | 2           |
| Serial transmission speed   | 10/100 Mbps |
| Transmission length         | 100 m       |
| Protocols supported         | OCPP 1.6J   |
|                             | Modbus/TCP  |
|                             | MQTT        |
|                             | HTTP        |
|                             | HTTPS       |

### Others

|                      |                               |
|----------------------|-------------------------------|
| Interface            | Configuration and diagnostics |
| Connection method    | USB type C                    |
| Number of interfaces | 1                             |
| Protocols supported  | RNDIS                         |

### Others

|                          |                                                                                          |
|--------------------------|------------------------------------------------------------------------------------------|
| Interface                | Energy meter                                                                             |
| Bus system               | RS-485                                                                                   |
| Transmission speed range | 9.6 kbps ... 115.2 kbps (Automatic setting in accordance with the selected energy meter) |

### Others

|                          |                                                                                         |
|--------------------------|-----------------------------------------------------------------------------------------|
| Interface                | RFID readers                                                                            |
| Bus system               | RS-485                                                                                  |
| Transmission speed range | 9.6 kbps ... 115.2 kbps (Automatic setting in accordance with the selected RFID reader) |

### Others

|           |                                  |
|-----------|----------------------------------|
| Interface | CHARX control modular system bus |
|-----------|----------------------------------|

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|                      |                         |
|----------------------|-------------------------|
| Connection method    | DIN rail bus connectors |
| Number of interfaces | 1                       |

## Environmental and real-life conditions

### Ambient conditions

|                                          |                                                        |
|------------------------------------------|--------------------------------------------------------|
| Degree of protection                     | IP20                                                   |
| Ambient temperature (operation)          | -25 °C ... 65 °C                                       |
| Ambient temperature (storage/transport)  | -40 °C ... 80 °C                                       |
| Permissible humidity (operation)         | 5 % ... 95 % (non-condensing)                          |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing)                          |
| Air pressure (operation)                 | 70 kPa ... 106 kPa (up to 3000 m above mean sea level) |
| Air pressure (storage/transport)         | 58 kPa ... 106 kPa (up to 4500 m above mean sea level) |

## Approvals

### Conformity/Approvals

|             |              |
|-------------|--------------|
| Conformance | CE-compliant |
|-------------|--------------|

## Standards and regulations

### Standards

|                       |             |
|-----------------------|-------------|
| Standards/regulations | IEC 61851-1 |
|-----------------------|-------------|

## Mounting

|                   |                   |
|-------------------|-------------------|
| Mounting type     | DIN rail mounting |
| Assembly note     | DIN rail mounting |
| Mounting position | any               |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27144703 |
| ECLASS-12.0 | 27144703 |
| ECLASS-13.0 | 27144703 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002889 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121800 |
|-------------|----------|

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## Environmental product compliance

|                                         |                                                                                                                                                                                                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EU RoHS                                 |                                                                                                                                                                                                                                   |
| Fulfills EU RoHS substance requirements | Yes                                                                                                                                                                                                                               |
| Exemption                               | 7(a), 7(c)-I                                                                                                                                                                                                                      |
| China RoHS                              |                                                                                                                                                                                                                                   |
| Environment friendly use period (EFUP)  | EFUP-10                                                                                                                                                                                                                           |
|                                         | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC                           |                                                                                                                                                                                                                                   |
| REACH candidate substance (CAS No.)     | Lead(CAS: 7439-92-1)                                                                                                                                                                                                              |
| SCIP                                    | 2ba36988-27cf-4fff-b7a9-1df9fd9e7f32                                                                                                                                                                                              |

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## Accessories

### EV-RCM-6DC-WAT - Differential current monitoring

1309697

<https://www.phoenixcontact.com/us/products/1309697>



CHARX control modular, the residual current monitoring module is used for AC and DC residual current detection in AC charging points. The higher-level safety equipment (e.g., residual current device) is protected against potential DC residual currents.

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### EV-RCM-6DC-WAT-X10 - Differential current monitoring

1309695

<https://www.phoenixcontact.com/us/products/1309695>



CHARX control modular, the residual current monitoring module is used for AC and DC residual current detection in AC charging points. The higher-level safety equipment (e.g., residual current device) is protected against potential DC residual currents.

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## EV-RFID-ELT-PCB - RFID device

1309772

<https://www.phoenixcontact.com/us/products/1309772>



CHARX control modular, RFID device, for connection to CHARX control modular AC charging controllers

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## EV-RFID-ELT-PCB-X10 - RFID device

1309752

<https://www.phoenixcontact.com/us/products/1309752>



CHARX control modular, RFID device, for connection to CHARX control modular AC charging controllers

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## EV-RFID-ELT-IP65 - RFID device

1309687

<https://www.phoenixcontact.com/us/products/1309687>

CHARX control modular, RFID device, for connection to CHARX control modular AC charging controllers, in housing



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## CHARX SEC JST-RCM-CBL - Cable set

1360462

<https://www.phoenixcontact.com/us/products/1360462>

CHARX control modular, Cable set, 4-pos., with plug-in contact at one end, For connecting the EV-RCM-6DC-WAT residual current monitor, item no.: 1309697 and CHARX RFID/NFC-PCB, item no.: 1391227 to the modules of the CHARX control modular charging controller family, length: 0.4 m



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## ISKRA WM3M4C ENERGYSMETER - Measuring device

1429603

<https://www.phoenixcontact.com/us/products/1429603>



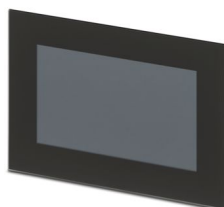
CHARX control modular, 3-phase energy meter for active power measurement with direct measurement in grids of up to 400 V/40 A, with RS-485 interface, certified in accordance with the MID directive

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## CHARX 4,3 LCD DISPLAY - Display

1426836

<https://www.phoenixcontact.com/us/products/1426836>



CHARX control modular, LCD color display, 4.3", including preinstalled charging software for electric vehicles, micro USB port, adhesive mounting (mounting material not supplied as standard), up to 12 charging points, can only be used in calibration law mode

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## EV-T2M3SO12-3P-P-SET - Infrastructure charging socket

1164422

<https://www.phoenixcontact.com/us/products/1164422>



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, 3-pos., Rear panel mounting, M5 thread, housing: black, PHOENIX CONTACT logo

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

1164423

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



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

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## EV-T2M3SO12-3P-BL-SET - Infrastructure charging socket

1268358

<https://www.phoenixcontact.com/us/products/1268358>



CHARX connect modular, Infrastructure charging socket, square, Basic, Set, with square protective cover, 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, 3-pos., Rear panel mounting, M5 thread, housing: black, PHOENIX CONTACT logo

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

1268355

<https://www.phoenixcontact.com/us/products/1268355>



CHARX connect modular, Infrastructure charging socket, square, Basic, Set, with square protective cover, 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-T2M3SO12-3P-B-SET - Infrastructure charging socket

1164420

<https://www.phoenixcontact.com/us/products/1164420>



CHARX connect modular, Infrastructure charging socket, square, Basic, Set, with square protective cover, 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, 3-pos., Rear panel mounting, M5 thread, housing: black, PHOENIX CONTACT logo

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

1164417

<https://www.phoenixcontact.com/us/products/1164417>



CHARX connect modular, Infrastructure charging socket, square, Basic, Set, with square protective cover, 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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## CHARX RFID/NFC-PCB - RFID/NFC device

1391227

<https://www.phoenixcontact.com/us/products/1391227>

CHARX control modular, RFID/NFC device, for connection to CHARX control modular AC charging controllers, with integrated LED indicator, with buzzer



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## CHARX RFID/NFC-PCB-X10 - RFID/NFC device

1399372

<https://www.phoenixcontact.com/us/products/1399372>

CHARX control modular, RFID/NFC device, for connection to CHARX control modular AC charging controllers, with integrated LED indicator, with buzzer



# CHARX SEC-3000 - AC charging controller



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## CHARX SEC JST-RCM-CBL 100 - Cable set

1486193

<https://www.phoenixcontact.com/us/products/1486193>



CHARX control modular, Cable set, 4-pos., with plug-in contact at one end, For connecting the EV-RCM-6DC-WAT residual current monitor, item no.: 1309697 and CHARX RFID/NFC-PCB, item no.: 1391227 to the modules of the CHARX control modular charging controller family, length: 1 m

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