

# CHARX SEC-3000 - AC charging controller



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	XWBRDA
GTIN	4063151086510
Weight per piece (including packing)	244 g
Weight per piece (excluding packing)	182 g
Customs tariff number	85371091
Country of origin	PL

## Technical data

### Product properties

Product type	AC charging controller
Product family	CHARX control modular
Design	with Embedded Linux system
Charging mode	Mode 3, Case B + C
Operating mode	Stand-Alone
	Client
	Server
Modem for communication present	no
Connectable peripheral devices	Energy meter
	RFID
	DC residual current detection

### System properties

Processor	Arm® Cortex®-A7, 528 MHz i.MX6 UL
RAM	512 Mbyte (RAM)
Data storage system	8 GByte (eMMC)
Operating system	Linux
Management	Web-based management

### Electrical properties

#### Supply

Supply voltage	12 V DC $\pm$ 5 %
Supply voltage range	11.4 V DC ... 12.6 V DC
Current consumption	max. 2 A (Stand-alone operation)
	< 200 mA (No load, without external loads)

#### Insulation characteristics

Pollution degree	2 (in acc. with IEC 60664-1)
Overvoltage category	III

### 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

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

## Connection data

### 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
Cable cross-section range	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (with ferrules)
Stripping length of the individual wire	8 mm
	10 mm (for contactor control)

## Interfaces

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

### Interface for 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
Operating mode	WAN/LAN
	LAN/LAN
Protocols supported	OCPP 1.6J
	Modbus/TCP
	MQTT
	HTTP
	HTTPS

### Interface for configuration and diagnostics

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

### Interface for energy meter

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)

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## Interface for RFID reader

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)

## Interface for CHARX control modular system bus

Interface	CHARX control modular system bus
Connection method	DIN rail bus connector
Number of interfaces	1

## Interface for vehicle

Interface	Vehicle interface
Communication protocol	IEC 61851-1
	GB/T 18487
Proximity	IEC 61851-1
	GB/T 18487
Control voltage	± 12 V (Locking actuator)
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Rated current	2 A

## Interface for residual current detection

Interface	Residual current detection
Sensor supply voltage	12 V DC
Signal level	12 V (Different terminal points)
	0 V (Different terminal points)
	12 V

## Interface for temperature monitoring

Interface	Temperature monitoring
Sensor type	Pt 1000
	PTC chain
Tripping characteristic	configurable

## Interface for contactor control

Interface	Contactor control
Interface description	Floating switch contact
Switching voltage	max. 250 V AC
	max. 30 V DC
Rated current	2 A
Interrupting rating	max. 1500 VA

## Dimensions

Charging controller

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Width	37.6 mm
Height	121 mm
Depth	85 mm

## 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)

## Standards and regulations

### Standards

Standards/regulations	IEC 61851-1
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## Mounting

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

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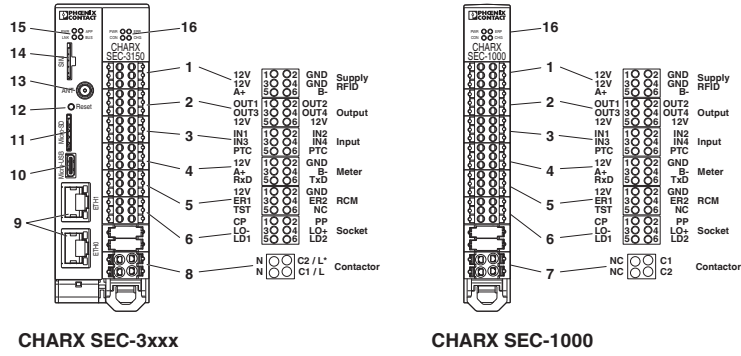


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## Drawings

### Schematic diagram



Connections and status indicators

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## Classifications

### ECLASS

ECLASS-13.0	27144703
ECLASS-15.0	27144703

### ETIM

ETIM 10.0	EC002889
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### 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-50
	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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