

# AC charging controller - CHARX SEC-3050 - 1139018


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CHARX control modular, AC charging controller according to IEC 61851-1, ISO/IEC 15118. Embedded Linux system. operating mode Stand-alone, server, or client. 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



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 063151 082833
GTIN	4063151082833

## Technical data

### Product definition

Type	Embedded Linux system
Standards/regulations	IEC 61851-1
	ISO 15118
Charging standard	IEC 61851-1
	ISO/IEC 15118
Charging mode	Mode 3, Case B + C
Conformance	CE-compliant

### Dimensions

Height	121 mm
Width	37.6 mm
Depth	85.00 mm

### Ambient conditions

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)

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## Technical data

### Ambient conditions

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)
Degree of protection	IP20
Degree of pollution	2 in acc. with IEC 60664-1
Overvoltage category	III
Shock (operation)	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test specification	15g, 11 ms period, half-sine shock pulse
Vibration (operation)	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test specification	5g, 10...150 Hz, 2.5 h, in XYZ direction

### Device supply

Supply voltage	12 V DC
Supply voltage range	11.4 V DC ... 12.6 V DC
Max. current consumption	2 A (Stand-alone operation)
No-load current	< 200 mA (without external loads)

### System data

Operating system	Linux
Processor	Arm® Cortex®-A7 Single-Core Processor
RAM	512 Mbyte (RAM)
Data storage	8 GByte (eMMC)
User interface	Web-based management
Security functions	IP, port, protocol

### Data interfaces

Interface	Ethernet
Number	2
Connection method	RJ45 jack
Number of MAC addresses	2
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	Configuration and diagnostics
Number	1
Connection method	Micro-USB type C
Protocols supported	RNDIS

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## Technical data

### Data interfaces

Interface	Energy meter
Bus system	RS-485
Transmission speed	9.6 kbps ... 115.2 kbps (Automatic setting in accordance with the selected energy meter)
Interface	RFID readers
Bus system	RS-485
Transmission speed	9.6 kbps ... 115.2 kbps (Automatic setting in accordance with the selected RFID reader)
Interface	CHARX control modular system bus
Number	1
Connection method	DIN rail bus connectors

### Function interfaces

Interface	Vehicle interface
Communication protocol	IEC 61851-1
	ISO 15118
	GB/T 18487
Proximity	IEC 61851-1
	GB/T 18487
Charging cases	Mode 3, Case B + C
Control voltage	± 12 V (Locking actuator)
Rated current	2 A
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Interface	Residual current detection
Sensor supply voltage	12 V DC
Error state signal level	12 V (Different terminal points)
	0 V (Different terminal points)
Test & Reset signal level	12 V
Interface	Temperature monitoring
Sensor type	Pt 1000
	PTC chain
Tripping characteristic	configurable
Interface	Contact control
Interface description	Floating switch contact
Switching voltage	max. 250 V AC (Necessary for ISO 15118 communication)
	max. 30 V DC
Rated current	2 A
Interrupting rating	max. 1500 VA

### Inputs

Description of the input	Digital input
Number inputs	4

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## Technical data

### Inputs

Nominal input voltage $U_N$	12 V
Input voltage range	0 V ... 3 V (Off)
	9 V ... 15 V (On)
Function	configurable

### Outputs

Output name	Digital output
Number outputs	4
Operating mode	High-Side (Output switched to internal 12 V voltage)
	Low-Side (Output switched to GND potential)
Output voltage	12 V (High-side operation)
	$\leq 12$ V (Low-side operation)
Output current	max. 600 mA
Function	configurable

### Connection data

Connection technology	pluggable
	Push-in technology
Conductor cross section solid	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	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (with ferrules)
Conductor cross section AWG	24 ... 16
Stripping length	8 mm
	10 mm (for contactor control)

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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## Classifications

### eCl@ss

eCl@ss 11.0	27144703
eCl@ss 9.0	27144703

### ETIM

ETIM 7.0	EC002889
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## Approvals

### Approvals

Approvals

EAC

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## Approvals

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Ex Approvals

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### Approval details

EAC		RU*DE*01.B.85589/2
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## Accessories

### Accessories

#### Cable set

Cable set - CHARX SEC JST-RCM-CBL - 1360462



CHARX control modular, Cable set, Cables with plug-in contact at one end, 4-pos., Exclusively for connecting the EV-RCM-6DC-WAT residual current sensor - 1309697 to modules in the CHARX control modular charging controller family, length: 0.4 m

#### Infrastructure socket outlet

Set - EV-T2M3SO12-3P-P-SET - 1164422



CHARX connect, Set, Combination of infrastructure charging socket, protective cover, and rear protective cap for strain relief and touch protection, rear protective cover screw connection, with temperature sensors, with LED status indicator within the protective cover, can be reconnected, For charging electric vehicles (EV) with alternating current (AC), Compatible with infrastructure charging plugs, Type 2, IEC 62196-2, 32 A / 480 V (AC), without cable, 3-position, Rear panel mounting, M5 thread, Premium with LED cover, "PHOENIX CONTACT" logo

Set - EV-T2M3SO12-4P-P-SET - 1164423



CHARX connect, Set, Combination of infrastructure charging socket, protective cover, and rear protective cap for strain relief and touch protection, rear protective cover screw connection, with temperature sensors, with LED status indicator within the protective cover, can be reconnected, For charging electric vehicles (EV) with alternating current (AC), Compatible with infrastructure charging plugs, Type 2, IEC 62196-2, 32 A / 480 V (AC), without cable, 4-position, Rear panel mounting, M5 thread, Premium with LED cover, "PHOENIX CONTACT" logo

## AC charging controller - CHARX SEC-3050 - 1139018

### Accessories

#### Set - EV-T2M3SO12-3P-BL-SET - 1268358



CHARX connect, Set, Combination of infrastructure charging socket, protective cover, and rear protective cap for strain relief and touch protection, rear protective cover screw connection, with LED status indicator within the protective cover, can be reconnected, For charging electric vehicles (EV) with alternating current (AC), Compatible with infrastructure charging plugs, Type 2, IEC 62196-2, 32 A / 480 V (AC), without cable, 3-position, Rear panel mounting, M5 thread, Basic with LED cover, "PHOENIX CONTACT" logo

#### Set - EV-T2M3SO12-4P-BL-SET - 1268355



CHARX connect, Set, Combination of infrastructure charging socket, protective cover, and rear protective cap for strain relief and touch protection, rear protective cover screw connection, with LED status indicator within the protective cover, can be reconnected, For charging electric vehicles (EV) with alternating current (AC), Compatible with infrastructure charging plugs, Type 2, IEC 62196-2, 32 A / 480 V (AC), without cable, 4-position, Rear panel mounting, M5 thread, Basic with LED cover, "PHOENIX CONTACT" logo

#### Set - EV-T2M3SO12-3P-B-SET - 1164420



CHARX connect, Set, Combination of infrastructure charging socket, protective cover, and rear protective cap for strain relief and touch protection, rear protective cover screw connection, can be reconnected, For charging electric vehicles (EV) with alternating current (AC), Compatible with infrastructure charging plugs, Type 2, IEC 62196-2, 32 A / 480 V (AC), without cable, 3-position, Rear panel mounting, M5 thread, Basic, "PHOENIX CONTACT" logo

#### Set - EV-T2M3SO12-4P-B-SET - 1164417



CHARX connect, Set, Combination of infrastructure charging socket, protective cover, and rear protective cap for strain relief and touch protection, rear protective cover screw connection, can be reconnected, For charging electric vehicles (EV) with alternating current (AC), Compatible with infrastructure charging plugs, Type 2, IEC 62196-2, 32 A / 480 V (AC), without cable, 4-position, Rear panel mounting, M5 thread, Basic, "PHOENIX CONTACT" logo

### Residual current monitoring module

#### Differential current monitoring - EV-RCM-6DC-WAT - 1309697



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.

## AC charging controller - CHARX SEC-3050 - 1139018

### Accessories

Differential current monitoring - EV-RCM-6DC-WAT-X10 - 1309695



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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### RFID device

RFID device - EV-RFID-ELT-PCB - 1309772



RFID card reader for connection to CHARX control modular charging controllers

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RFID device - EV-RFID-ELT-PCB-X10 - 1309752



RFID card reader for connection to CHARX control modular charging controllers

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RFID device - EV-RFID-ELT-IP65 - 1309687



RFID card reader for connection to CHARX control modular charging controllers