EM-CP-PP-ETH - AC charging controller

2902802

https://www.phoenixcontact.com/us/products/2902802

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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.

Commercial data

Item number	2902802
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	EM01
Product key	XWBBBA
Catalog page	Page 61 (C-7-2019)
GTIN	4046356681032
Weight per piece (including packing)	322.8 g
Weight per piece (excluding packing)	260 g
Customs tariff number	85371098
Country of origin	DE

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Technical data

Product properties

Product type	AC charging controller
Product family	CHARX control advanced
Application	AC charging controller for commercial applications (EU)
Operating mode	Stand-Alone
	Client
Charging standard	Type 2
Charging mode	Mode 3, Case B + C

Data management status

Article revision	15

System properties

Charging controllers

Number of charging points	1

Electrical properties

Type of charging current	AC 3-phase
Current consumption	< 1 W
Locking release in the event of mains failure	With EM-EV-CLR-12V locking release module (Item No. 2903246) as an option

Supply

Supply voltage	230 V
Supply voltage range	110 V AC ... 240 V AC (nominal voltage range)
	95 V AC ... 264 V AC
Max. current consumption	40 mA
Nominal power consumption	< 1 W (No-load)
Frequency range	45 Hz ... 65 Hz

Input data

Digital

Number of digital inputs	4
Frequency range	50 Hz ... 60 Hz
Nominal current I_N	≤ 8 mA
Nominal input voltage U_N	24 V
Input voltage range U1	-3 V ... 5 V (Off)
Input voltage range U2	15 V ... 30 V (On)

Output data

Digital

Output name	4 digital outputs
Connection technology	Screw connection
Maximum output voltage	30 V
Maximum output current	0.2 A (Total current for all outputs; internally supplied)
Maximum output current per channel	0.6 A (Per output; externally supplied)

Digital

Output name	Relay output $V_{1.2}$
Maximum switching voltage	250 V AC
Max. switching current	2 A

Switching

Output name	Relay output $C_{1.2}$
Minimum switching capacity	1500 VA
Maximum switching voltage	250 V AC (External supply)
Max. switching current	2 A

Switching

Output name	Relay output $R_{1.3}$ and $R_{2.4}$
Minimum switching capacity	180 VA
Maximum switching voltage	30 V AC/DC (External supply)
Max. switching current	2 A

Connection data

Conductor connection

Connection method	Screw connection
Conductor cross section rigid	0.2 mm² ... 4 mm²
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12

Interfaces

Interface	Ethernet (1x)

RS-485

Interface	RS-485 2-wire
Bus system	RS-485
Connection method	Screw connection
Number of interfaces	1
Number of supported devices	1
Transmission speed	9.6 kbps (Standard)
Transmission speed range	2.4 kbps ... 19.2 kbps (adjustable)
Data flow control/protocols	Modbus/RTU (slave)

Ethernet

Interface	Ethernet
Bus system	RJ45

Connection method	RJ45 jack
Number of interfaces	1
Serial transmission speed	10/100 Mbps
Transmission length	max. 100 m (with shielded, twisted-pair data cable)
Protocols supported	Modbus/TCP

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (non-condensing)

Approvals

Conformity/Approvals

Conformance	CE-compliant

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Noise immunity	EN 61000-6-2
Housing	DIN 43880
Noise emission	EN 61000-6-3

Standards and regulations

Standards

Standards/regulations	IEC 61851-1

Mounting

Mounting type	DIN rail mounting
Mounting position	any

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Drawings

Application drawing

Charging controller

Charging contactor
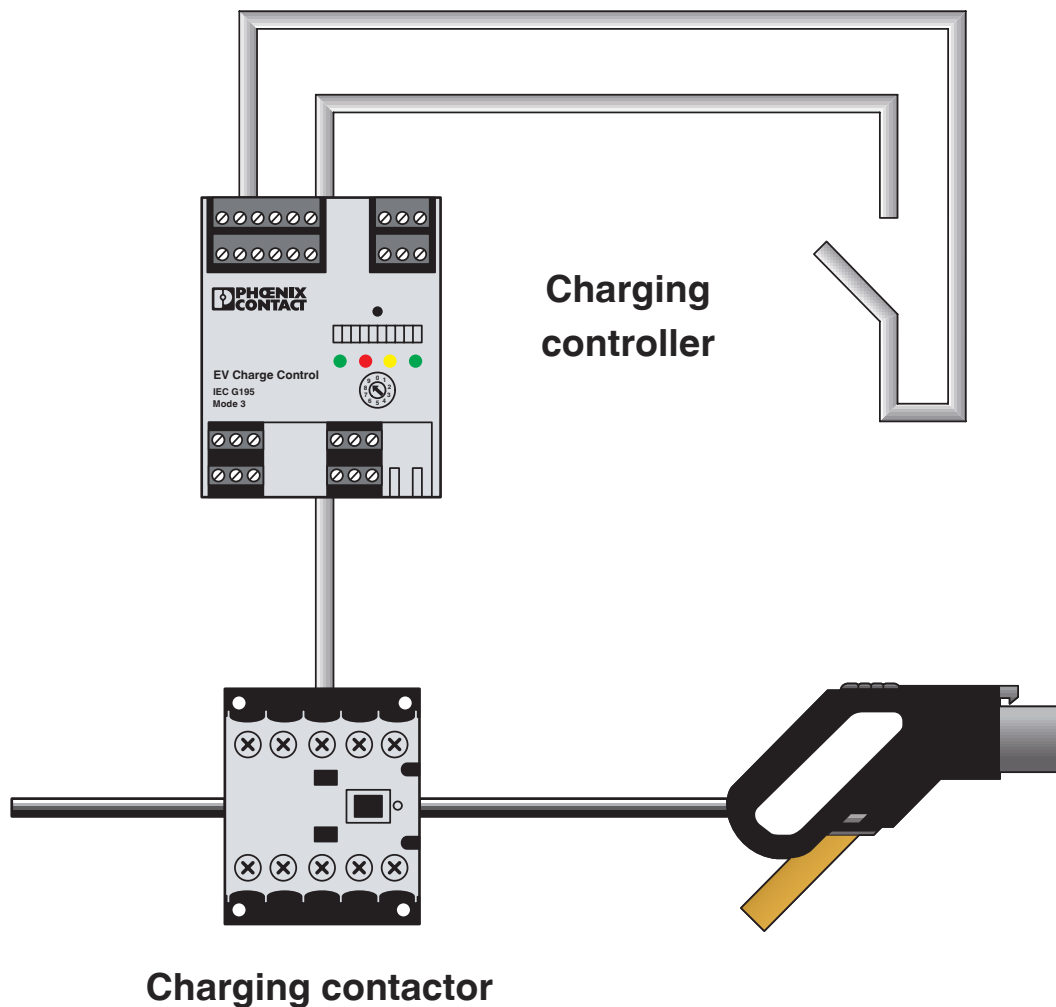
Simple charging point with permanently connected cable

Application drawing

Control center
Controller

Charging
controller

DC motor
Lock

Charging contactor
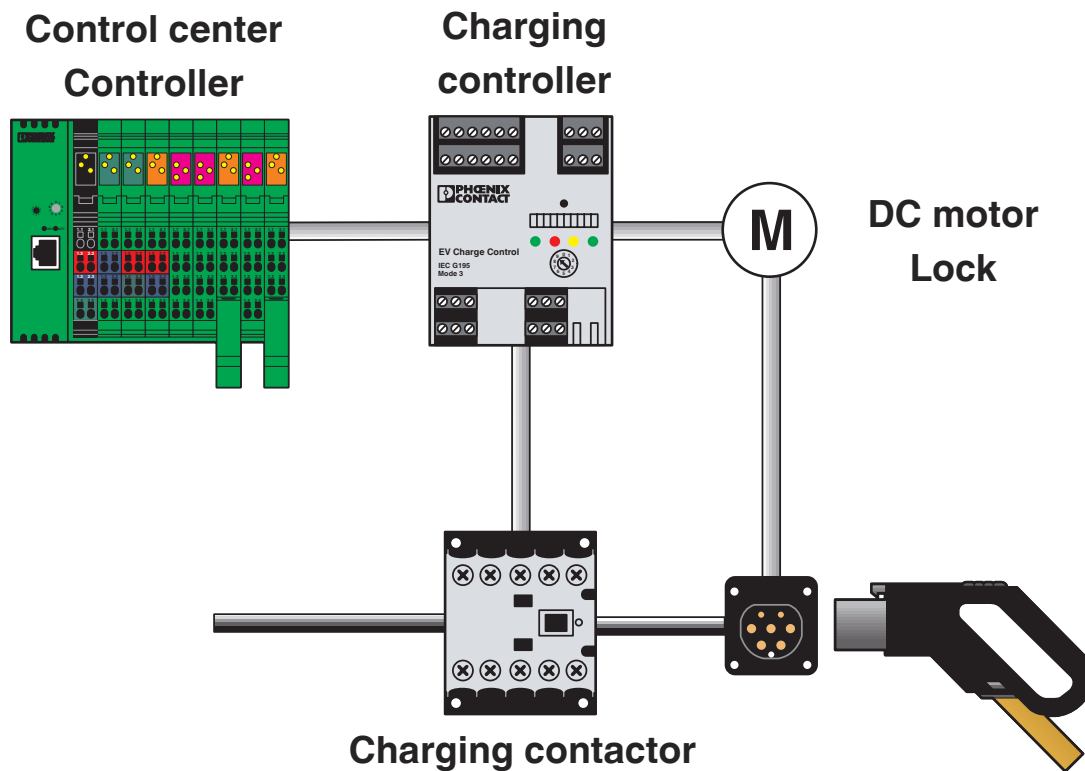
EV Charge Control interacting with a central controller

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, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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Accessories

EM-EV-CLR-12V - Voltage monitoring device

2903246

https://www.phoenixcontact.com/us/products/2903246

The EV Charge Lock Release monitors the 12 V operating voltage of the electrically driven plug locking actuator, routes locking and unlocking signals, and sends an unlocking pulse to the actuator when the operating voltage fails.

EEM-EM357 - Measuring device

2908588

https://www.phoenixcontact.com/us/products/2908588

3-phase energy meter for active power measurement with direct measurement in grids of up to 500 V/80 A, with S0 output, with digital input and RS-485 interface, certified in accordance with the MID directive

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EV-RCM-C1-AC30-DC6 - Differential current monitoring

1622450

https://www.phoenixcontact.com/us/products/1622450

The residual current module is used for AC and DC residual current detection in AC charging points. The higher-level safety equipment (e.g., residual current circuit breaker) is protected against potential DC residual currents. A 1 or 2-channel product version is available.

EV-RCM-C2-AC30-DC6 - Differential current monitoring

1622451

https://www.phoenixcontact.com/us/products/1622451

The residual current module is used for AC and DC residual current detection in AC charging points. The higher-level safety equipment (e.g., residual current circuit breaker) is protected against potential DC residual currents. A 1 or 2-channel product version is available.

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EV-T2G3C-3AC32A-5,0M6,0ESBK01 - AC charging cable

1627355

https://www.phoenixcontact.com/us/products/1627355

CHARX connect comfort, AC charging cable, with vehicle charging connector and open cable end, for charging electric vehicles (EV) with alternating current (AC) via type 2 vehicle charging inlets, with protective cap, Type 2, IEC 62196-2, 32 A / 480 V (AC), housing: black, gray, PHOENIX CONTACT logo, cable: 5 m, black, straight

SD-FLASH-2GB-EV-EMOB - Program/configuration memory

1624092

https://www.phoenixcontact.com/us/products/1624092

Program and configuration memory for storing the application program and other files in the file system of the PLC, plug-in, 2 GB with license key for the function block libraries for E-Mobility

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