EV-CC-AC1-M3-CBC-RCM-ETH-3G - AC charging controller

1018702

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AC charging controller in accordance with IEC 61851-1, server for load distribution to up to 5 clients, OCPP 1.6J via 3G modem, Modbus/TCP via Ethernet, connection of RFID reader and energy meter via RS-485, DC residual current monitoring, connector release in the event of power failure

Product description

Mode 3 controller for charging electric vehicles in accordance with IEC 61851-1 for charging case B and C with integrated DC residual current monitoring, Ethernet communication interface and 3G mobile network modem.

Commercial data

Item number	1018702
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	XWBRCA
GTIN	4055626503974
Weight per piece (including packing)	611.3 g
Weight per piece (excluding packing)	480 g
Country of origin	DE

Technical data

Product properties

Product type	AC charging controller
Product family	CHARX control advanced plus
Charging mode	Mode 3, Case B + C
Operating mode	Stand-Alone
	Client
	Server
Modem for communication present	yes
Number of charging points	1

Electrical properties

Type of charging current	AC

Measuring range: Residual current

Rated frequency f_n	≤ 2000 Hz
Nominal differential current	± 300 mA
Residual current $I_{\Delta n}$	30 mA (AC)
	6 mA (DC)
Rated current I_n	32 A (Three-phase, 4x6 mm²)
	48 A (Single-phase)
Tripping time for $I_{\Delta n}$	< 180 ms
Response time for 2 x $I_{\Delta n}$	< 70 ms
Tripping time for 5x$I_{\Delta n}$	< 20 ms

Input data

Digital

Number of digital inputs	5
Description of the input	Digital input
Nominal current I_N	≤ 4 mA
Nominal input voltage U_N	12 V
Input voltage range	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 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)

Switching

Output name	Relay output $C_{1.2}$
Minimum switching power	4000 VA
Maximum switching voltage	250 V AC (External supply)
Max. switching current	16 A

Switching

Output name	Motor switching output
Maximum switching voltage	12 V (Internal supply)
Max. switching current	1 A (maximum)

Connection data

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
Conductor cross-section rigid	0.14 mm² ... 1.5 mm²
Conductor cross-section flexible	0.2 mm² ... 1 mm²
Conductor cross-section AWG	26 ... 16

Interfaces

Interface	Ethernet (1x)
	Cellular communication (3G/2G)

Wireless

Interface description	HSPA/GSM/GPRS/EDGE cellular interface for communicating with higher-level management systems using the OCPP 1.6J communication protocol
Frequency	900 MHz (HSPA)
	2100 MHz (HSPA)
	850 MHz (GSM/GPRS/EDGE)
	900 MHz (GSM/GPRS/EDGE)
	1800 MHz (GSM/GPRS/EDGE)
	1900 MHz (GSM/GPRS/EDGE)
Transmission power	2 W (GSM 850 (Class 4))
	2 W (GSM 950 (Class 4))
	1 W (GSM 1800 (Class 1))
	1 W (GSM 1900 (Class 1))
	+ 24 dBm (UMTS/HSPA (Class 3))
Number	1
Connection method	SMA (male)
Impedance	50 Ω
SIM Interface	Micro SIM (3FF)
Protocols supported	OCPP 1.6J

RS-485

Interface	RS-485 2-wire

Bus system	RS-485
Connection method	Screw connection
Number of interfaces	1 (for energy measurement device and RFID reader)
Number of supported devices	2
Transmission speed range	4.8 kbps ... 115.2 kbps (adjustable)
Protocols supported	Modbus/RTU (Master)

Ethernet

Interface	Ethernet
Connection method	RJ45 jack
Number of interfaces	1
Serial transmission speed	10/100 Mbps
Transmission length	100 m
Protocols supported	Modbus/TCP

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	< 2000 m
Permissible humidity (operation)	30 % ... 95 % (non-condensing)

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Noise immunity	EN 61000-6-2
Immunity to the discharge of static electricity	EN 61000-4-2: 8 kV air, 4 kV contact discharge
Immunity to electromagnetic fields	EN 61 000-4-3, 80---1000 MHz, 10 V/m
Immunity to conducted high frequency	EN 61 000-4-6, 0.15...80 MHz, 10 V
Immunity to fast transients (Burst)	EN 61 000-4-4, 2 kV pos. and neg., 5 kHz
Housing	DIN 43880

Noise emission

Standards/regulations	EN 61000-6-3

Standards and regulations

Standards

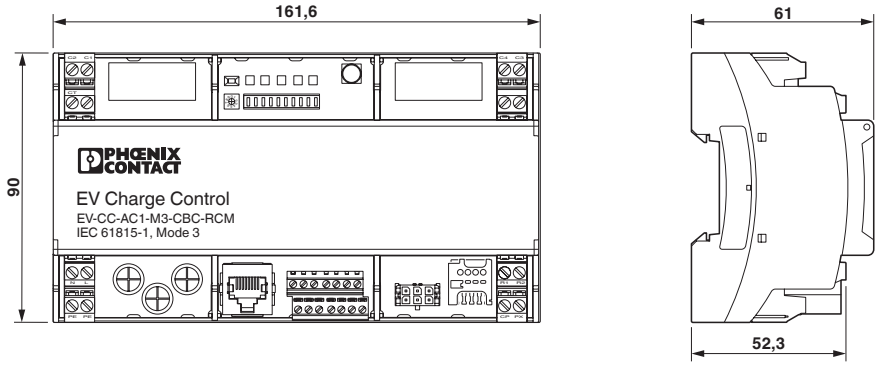
Standards/regulations	IEC 61851-1

Mounting

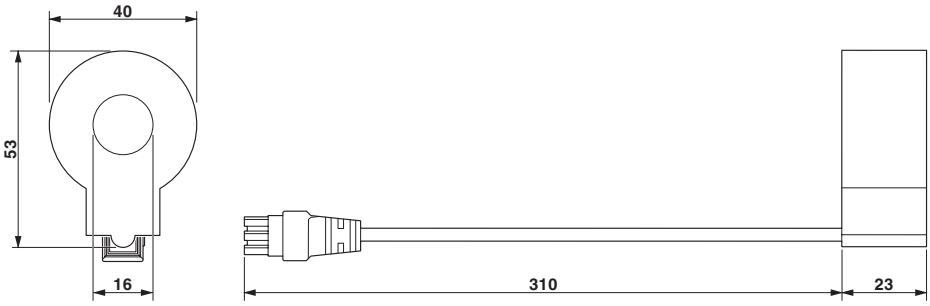
Mounting type	DIN rail mounting
Assembly note	DIN rail mounting
Mounting position	any

Drawings

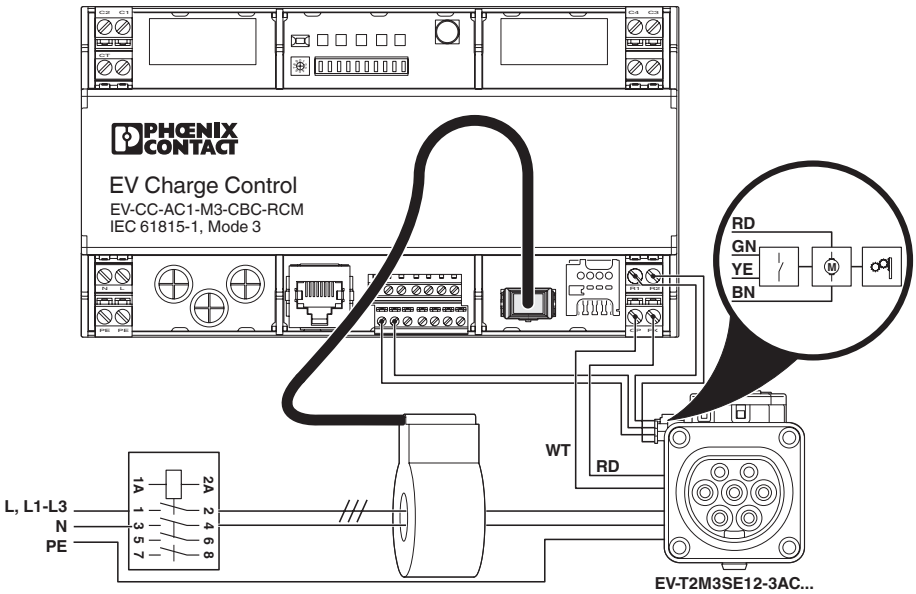
Dimensional drawing



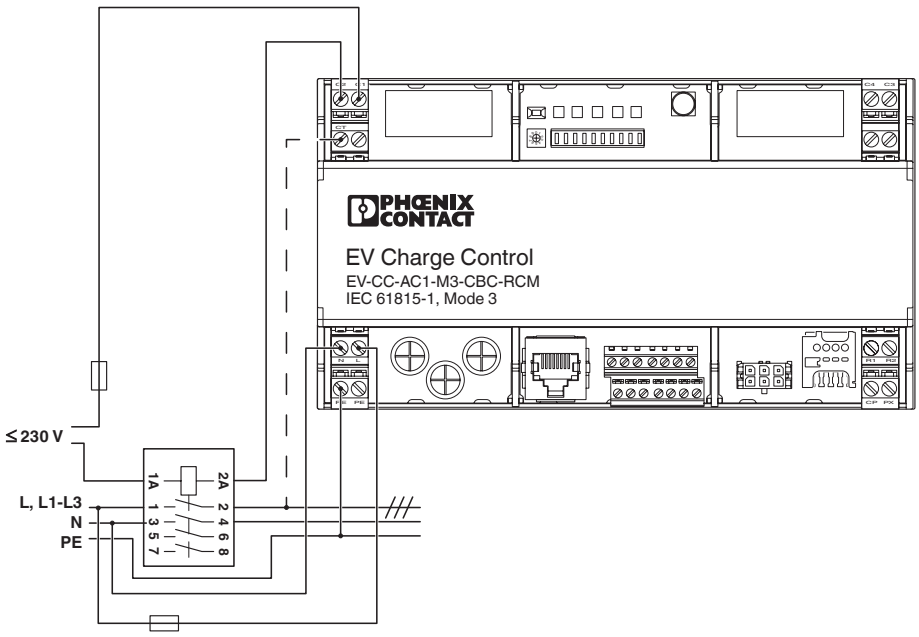
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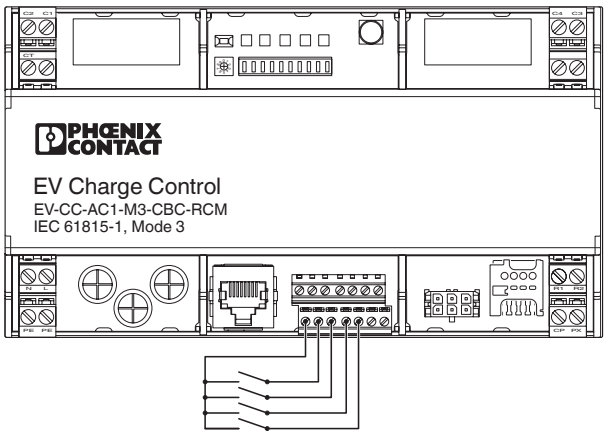
Connection diagram



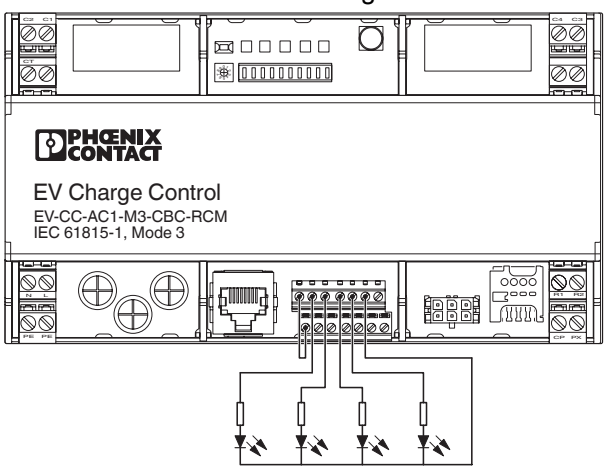
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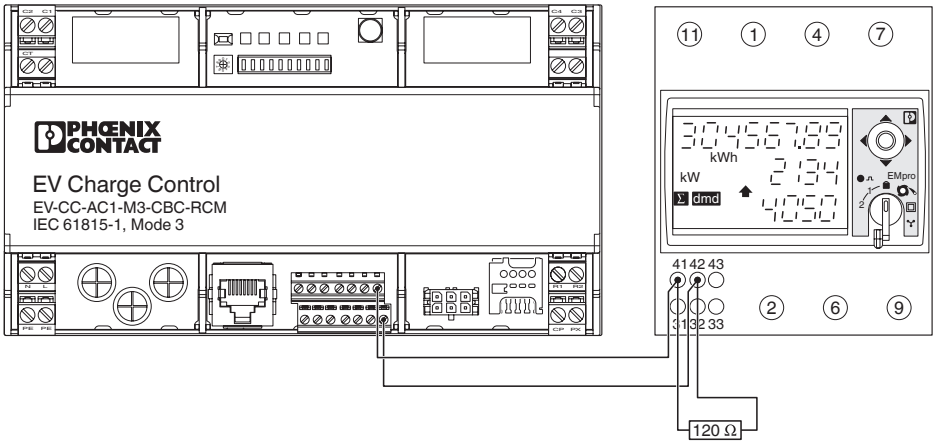
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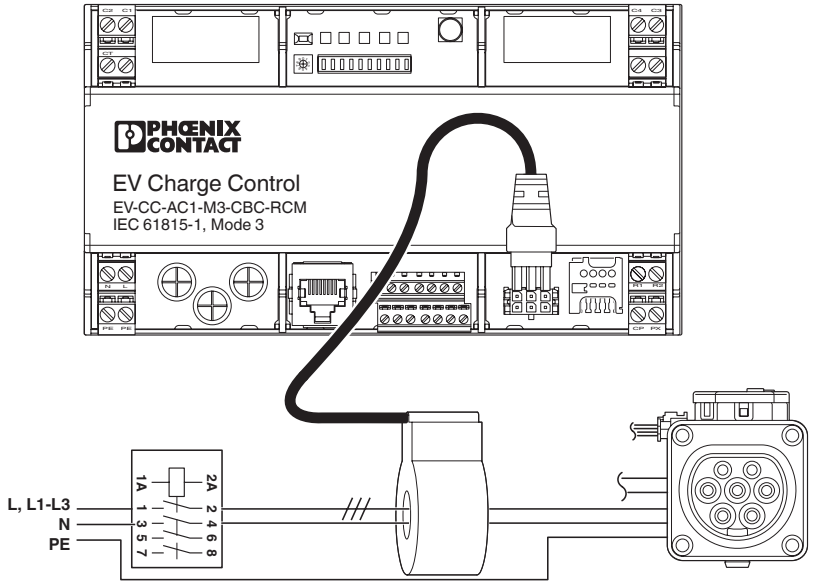
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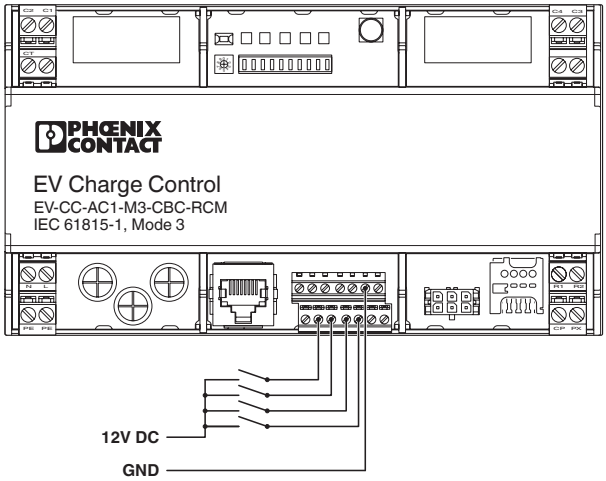
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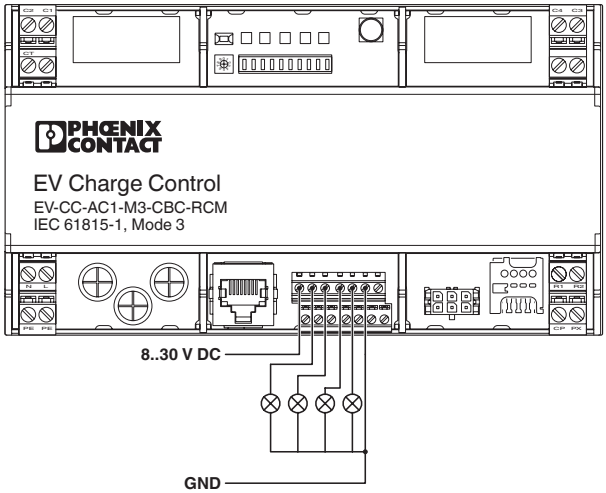
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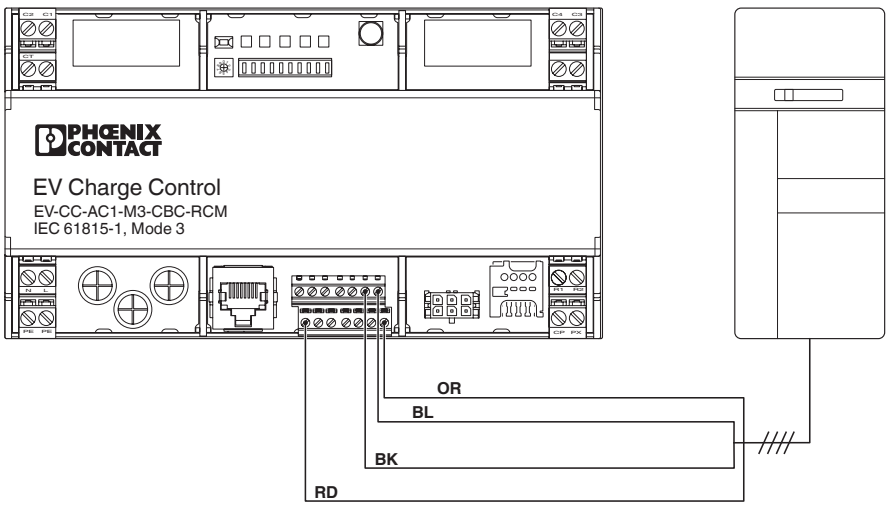
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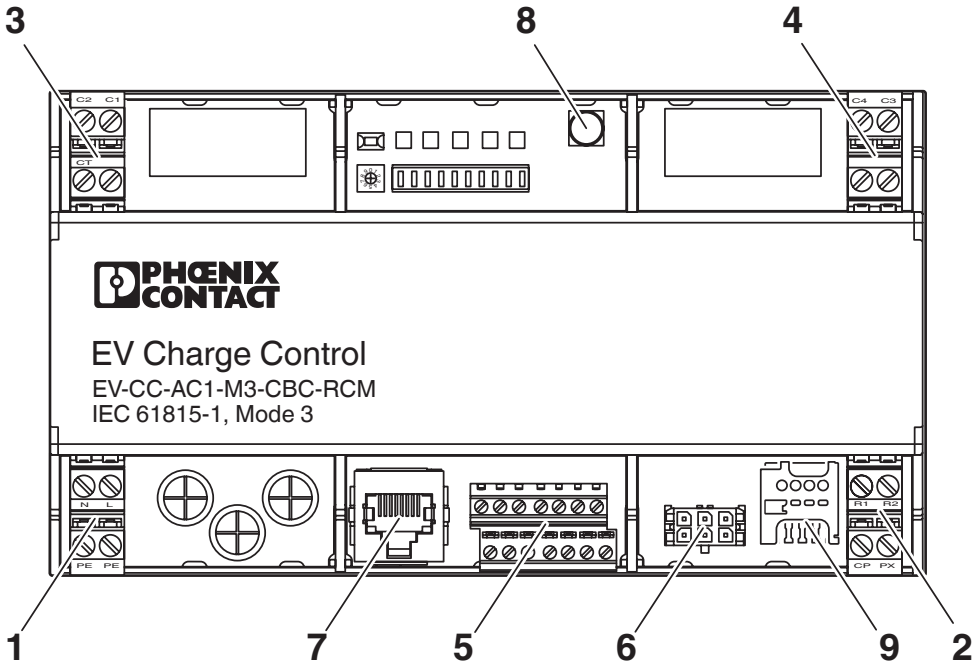
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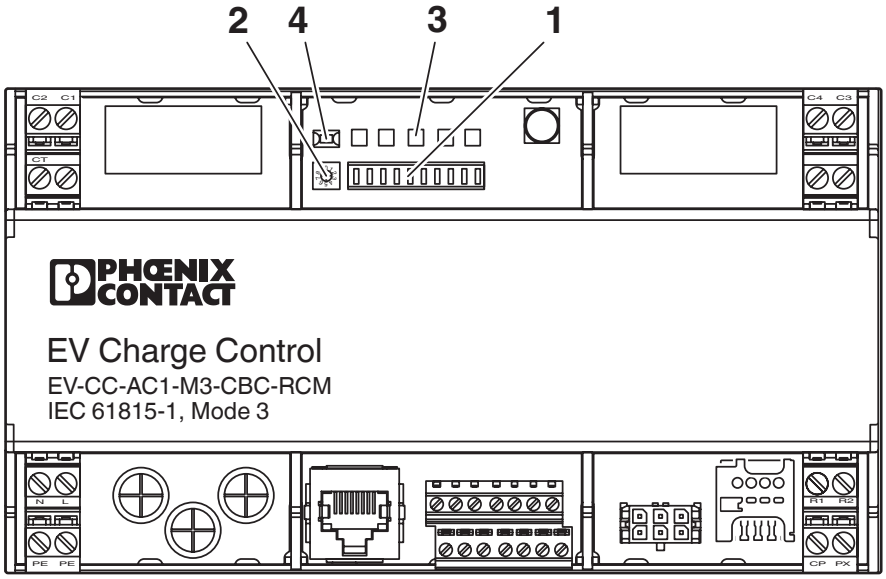
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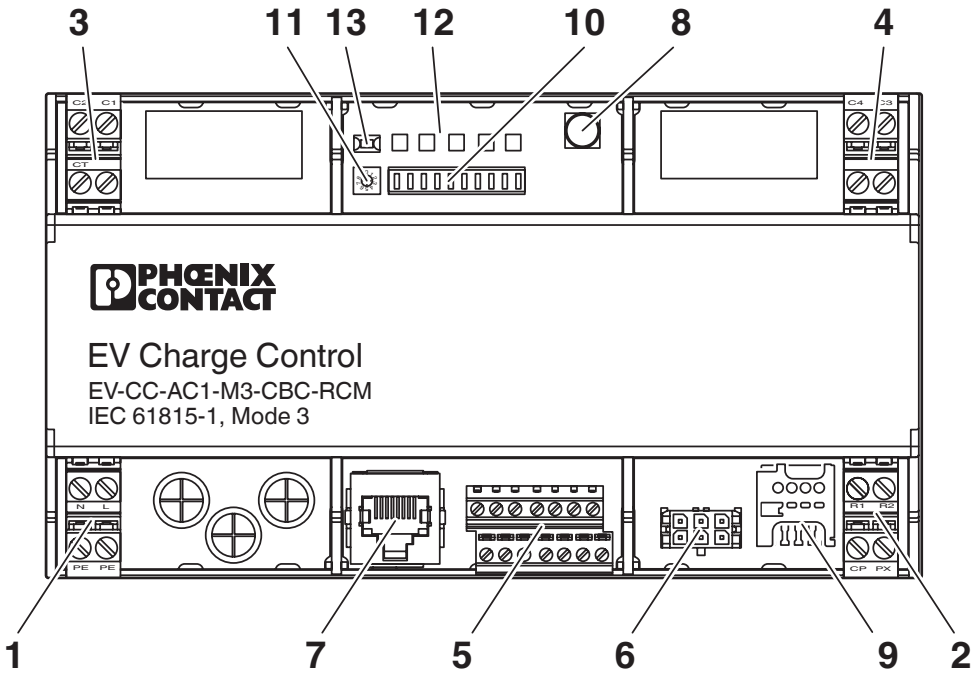
Schematic diagram



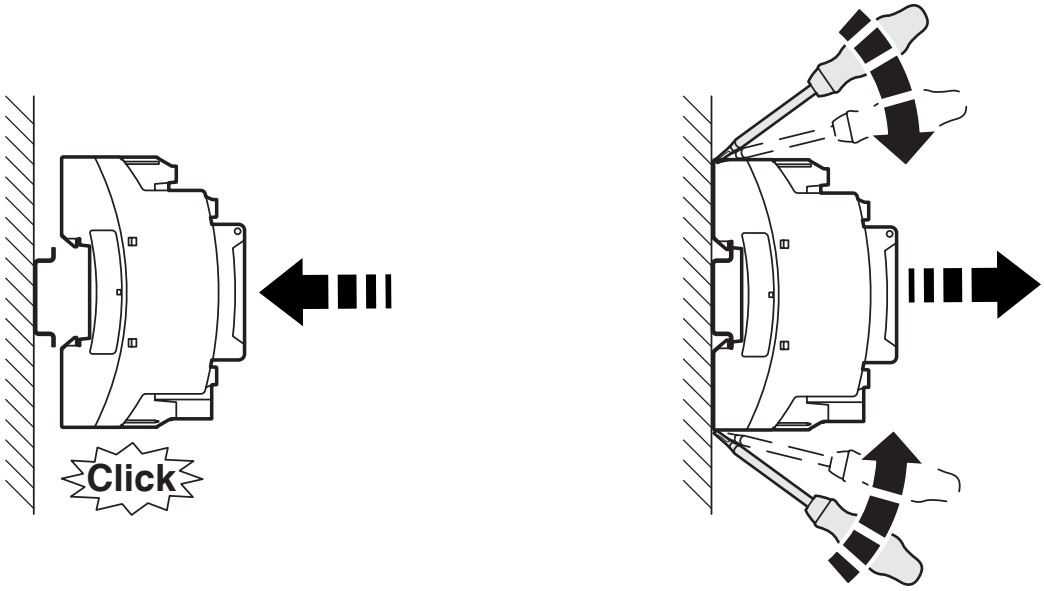
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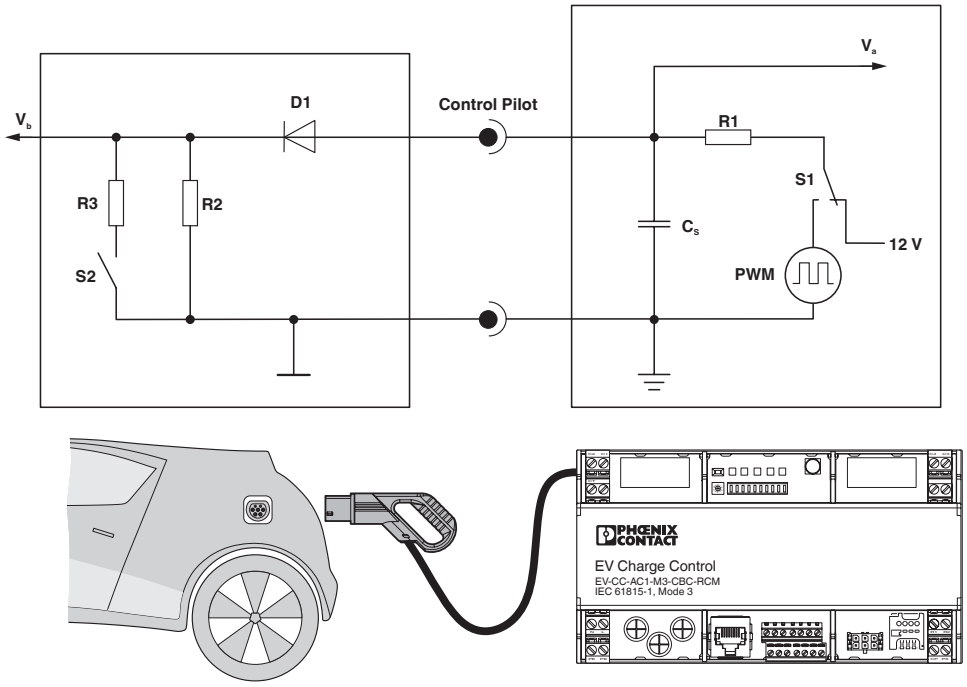
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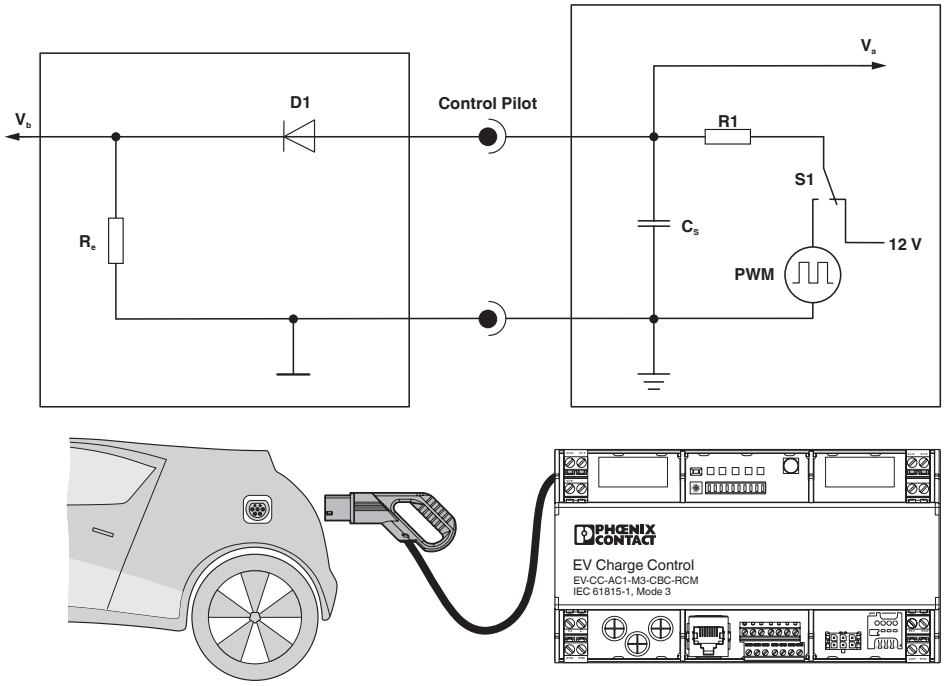
Schematic diagram



Schematic diagram



Schematic diagram



Classifications

ECLASS

ECLASS-15.0	27144703
ECLASS-13.0	27144703

ETIM

ETIM 10.0	EC002889

UNSPSC

UNSPSC 21.0	39121800

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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com