ETEC

www.etek-electric.com

EV Charger Selection Guide

Always for your safety

Applicable to all kinds of
new energy vehicles

ETEK ELECTRICAL WUHU CO.,LTD.

Ver. 2024.1

Always for your safety

COMPANY INTRODUCTION

Zhejiang ETEK Electrical Technology Co., Ltd. (Abbreviation: ETEK Electric) is a professional manufacturing company dedicated to the research, development, production, and sales of low-voltage electrical appliances. The company was established in 2011 and is located in Wenzhou City, Zhejiang Province. At present, the company has 40K sqm of modern manufacturing bases in Wenzhou and Wuhu with over 500 employees, including over 50 R&D and technical personnel. ETEK Electric has multiple production workshops for mold design, parts manufacturing, welding, and assembly. Additionally, they have multiple automated production lines for MCB and RCCB. Our products include MCB, RCCB, RCBO, AFDD, MCCB, ACB, EV Chargers, Photovoltaic DC products, etc., which can meet the needs of different countries and are widely used in fields such as residential, commercial, and industrial.

Beginning in 2018, ETEK Electric began to invest heavily in the research and development of new energy products. After more than two years of unremitting efforts, the new sub-brand "ETEC" EV Charger products were officially put into production. protection, safety and reliability; humanized design, convenient operation; excellent applicability, simple installation, economical and practical. At the same time, combined with the continuous improvement of the international and domestic markets, especially the European Union's charging standards for new energy electric vehicles, combined with the requirements of the IEC61851 standard, the company independently developed the latest generation of controllers. The product has a DLB current balance working mode, real-time monitoring of the main circuit current, and automatic adjustment of output charging. current, effectively protecting the electricity safety of the main current circuit. The company has also researched and developed the controller system of OCPP2.0 communication protocol to provide convenient and effective technical support for the operation of charging piles.

ETEK Electric has passed ISO9001 quality management system and environmental management system certification. The company have built our own low-voltage electrical testing center, and most of the testing items can meet the requirements of international IEC standards, in addition, our products have obtained international CB, TUV, VDE, CE, RoHS and other quality certificates.

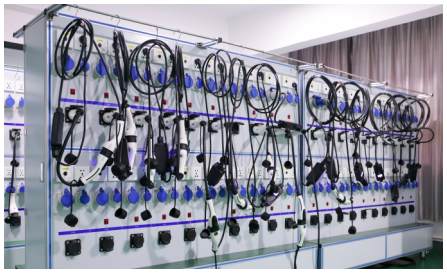
We also support OEM, ODM, OBM, SKD, CKD and other business cooperation models, and provide customers with a full range of services covering market cultivation, technical training, and factory construction.

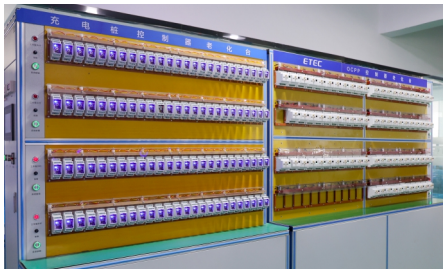
Looking forward to the future, ETEK Electric will be committed to becoming a globally renowned manufacturer in the power distribution and electrical industry, safeguarding the power safety of global customers, and helping the development of green and digital energy.

Wenzhou Factory

Wuhu Factory

WORKSHOPS





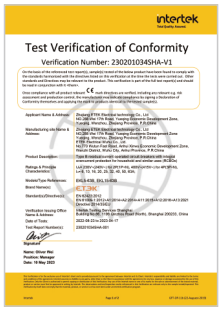
INTERNATIONAL CERTIFICATION


ATTESTATION
of conformity with European Directives


ATTESTATION
of conformity with European Directives


ATTESTATION
of conformity with European Directives


ATTESTATION
of conformity with European Directives


Test Verification of Conformity
Verification Number: 230201034SHA-V1


CERTIFICATE
of Conformity
Low Voltage Directive 2014/35/EU


Zertifikat Certificate


Zertifikat Certificate


CERTIFICATE
of Conformity
Electrical Equipment (Safety) Regulations 2016

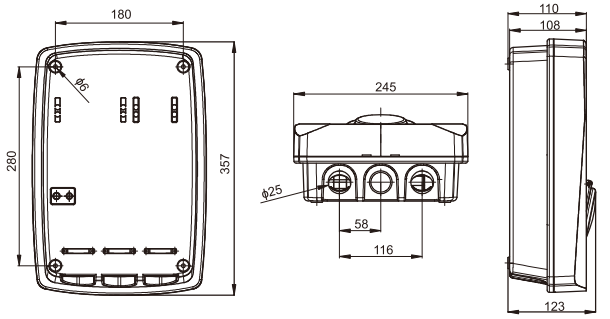

VDE Prüf- und Zertifizierungsinstitut
ZEICHENGENEHMIGUNG
MARKS APPROVAL

CONTENTS

EKEC1 Series

EV Charging Station ---------- Standard_ IEC61851-1

Overall Installation Drawing (mm)



Technical Data

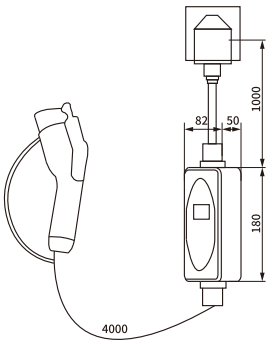
EV Charging Modes		Mode 3 Charging	
Power Supply		1P+N+PE	3P+N+PE
Rated Voltage		AC 240V±10%	AC 420V±10%
Rated Power		3.6kW,7.2kW	11kW,22kW
Rated Current		Max 16A, Max 32A	
Rated Frequency		50Hz	
Over Voltage Category (OVC)		OVC III	
Insulation Resistance		R > 1 MΩ	
AC Withstand Voltage		1430V	
Impulse Dielectric Withstand Voltage (1,2 µs/50 µs)(Uimp)		4kV	
Protection Against Electric Shock		Class I	
Electrical Life(Contactor)		100,000	
Electrical Life(Interface)		100,000	
Standby Power Consumption		<8W	
Type of EV Connection		Case B(Socket Version)/Case C(Cable Version)	
Universal Interface		T1: SAE J1772, T2: IEC/EN 62196-2, GB/T: 20234.2-2015	
Support Protocol	Basic type	Modbus-RTU	
	Commercial type	OCPP1.6J+Modbus for external MID meter	
Functional	Basic type	DLB,LED,LCD,RFID,Lock	
	Commercial type	DLB,DLM,LED,LCD,RFID,Metering,Lock,OTA Firmware update, Embeded website,Wifi/4G/Ethernet communication,Master&Slave mode	
Protection	Basic type	Earth leakage(type A 30mA+DC6mA); Over temperature protection	
	Commercial type	Earth leakage(type A 30mA+DC6mA); Under/Over voltage protection Over Current protection; Over temperature protection	
Pollution Degree		PD 3	
IP Protection Class		IP54	
Altitude During Operation (m)		<2000m	
Altitude of Test Laboratory		<50m	
Work Humidity		3%~95%	
Operation Temperature		-25°C~55°C	
Cooling		Natural Air Cooling	
Mounting Method		Mounted on Walls, Poles or Equivalent positions	
Normal Environmental Conditions		Indoor Use; Outdoor Use	

The AC chargers require external MCB for overload protection and short-circuit protection to be installed in upstream distribution box

EKEC2 Series

Portable EV Charger ---------- Standard_ IEC61851-1

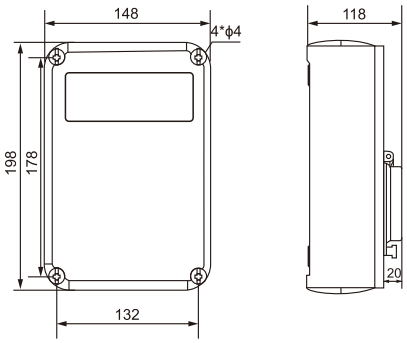
Overall Installation Drawing (mm)



Technical Data

EV Charging Modes	Mode 2 Charging
Power Supply	1P+N+PE
Rated Voltage	3.6kW, 7.3kW
Rated Power	AC 240V±10%
Rated Current	Max 16A, Max 32A
Rated Frequency	50Hz
Over Voltage Category (OVC)	OVC III
Insulation Resistance	R > 1 MΩ
AC Withstand Voltage	1430V
Impulse Dielectric Withstand Voltage (1,2 µs/50 µs)(Uimp)	4kV
Protection Against Electric Shock	Class I
Electrical Life(Contactor)	100,000
Electrical Life(Interface)	100,000
Standby Power Consumption	<8w
Residual Current Protection	AC30mA+DC6mA
Strength	IK10
Universal Interface	T1:SAE J1772, T2:IEC/EN 62196-2, GB/T:20234.2-2015
Pollution Degree	PD 3
IP Protection Class	IP65
Altitude During Operation (m)	<2000m
Altitude of Test Laboratory	<50m
Work Humidity	3%~95%
Operation Temperature	-25°C~55°C
Cooling	Natural Air Cooling
Mounting Method	Mounted on Walls, Poles or Equivalent Positions
Normal Environmental Conditions	Indoor Use; Outdoor Use

Overall Installation Drawing (mm)



Technical Data

EV Charging Modes	Mode 3 Charging	
Power Supply	1P+N+PE	3P+N+PE
Rated Voltage	AC 240V±10%	AC 420V±10%
Rated Power	3.6kW,7.2kW	11kW,22kW
Rated Current	Max 16A, Max 32A	
Rated Frequency	50Hz	
Over Voltage Category (OVC)	OVC III	
Insulation Resistance	R > 1 MΩ	
AC Withstand Voltage	1430V	
Impulse Dielectric Withstand Voltage (1,2 μs/50 μs)(Uimp)	4kV	
Protection Against Electric Shock	Class I	
Electrical Life(Contactor)	100,000	
Electrical Life(Interface)	100,000	
Standby Power Consumption	<8w	
Type of EV Connection	Case B(Socket Version)/Case C(Cable Version)	
Universal Interface	T1:SAE J1772,T2: IEC/EN 62196-2,GB/T: 20234.2-2015	
Support Protocol	Modbus-RTU	
Functional	DLB,LED,LCD,RFID,Lock	
Protection	RDC-DD DC6mA; Over temperature protection	
Pollution Degree	PD 3	
IP Protection Class	IP54	
Altitude during Operation (m)	<2000m	
Altitude of Test Laboratory	<50m	
Work Humidity	3%~95%	
Operation Temperature	-25°C~55°C	
Cooling	Natural Air Cooling	
Mounting Method	Mounted on Walls, Poles or Equivalent Positions	
Normal Environmental Conditions	Indoor Use; Outdoor Use	

The AC charging station needs an external MCB+type A type RCCB/Type A RCBO to be installed in the upstream distribution box

Overall Installation Drawing (mm)

Technical Data

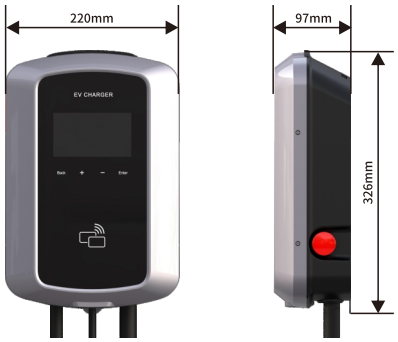
EV Charging Modes		Mode 3 Charging
Power Supply		1P+N+PE
Rated Voltage		3.6kW, 7.3kW
Rated Power		AC 240V±10%
Rated Current		Max 32A
Rated Frequency		50Hz
Over Voltage Category (OVC)		OVC III
Insulation Resistance		R > 1 MΩ
AC Withstand Voltage		1430V
Impulse Dielectric Withstand Voltage (1,2 µs/50 µs)(Uimp)		4kV
Protection against Electric Shock		Class I
Electrical Life(Contactor)		100,000
Electrical Life(Interface)		100,000
Standby Power Consumption		<8w
Ocpp1.6J Protocol		Suppport Ethernet/Wifi Communication
Type of EV Connection		Case C(Cable Version)
Universal Interface		T1: SAE J1772, T2: IEC/EN 62196-2, GB/T: 20234.2-2015
Support Protocol	Basic type	Modbus-RTU
	Commercial type	OCPP1.6J
Functional	Basic type	DLB,LED,LCD,RFID,Integreted metering on board
	Commercial type	DLB,LED,LCD,RFID,Integreted metering on board,OTA Firmware update, Embeded website,Wifi/4G/Ethernet communication
Protection	Basic type	RDC-DD DC6mA; Under/Over voltage protection Over Current protection; Over temperature protection
	Commercial type	RDC-DD DC6mA; Under/Over voltage protection Over Current protection; Over temperature protection
Pollution Degree		PD 3
IP Protection Class		IP54
Altitude during Operation (m)		<2000m
Altitude of Test Laboratory		<50m
Work Humidity		3%~95%
Operation Temperature		-25°C~55°C
Cooling		Natural Air Cooling
Mounting Method		Mounted on Walls, poles or Equivalent Positions
Normal Environmental Conditions		Indoor Use; Outdoor Use

The AC charging station needs an external MCB+type A type RCCB/Type A RCBO to be installed in the upstream distribution box

EKEC6 Series

EV Charging Station ---------- Standard_ IEC61851-1

Overall Installation Drawing (mm)

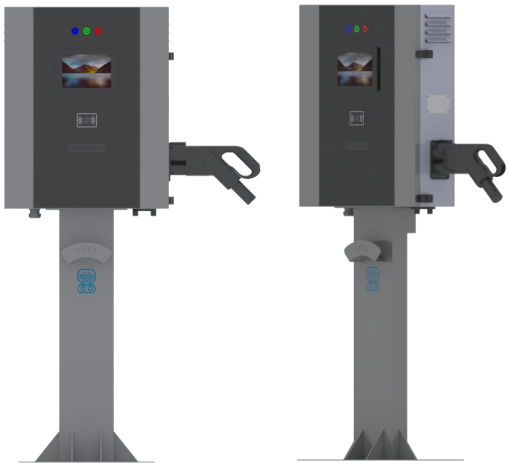


Technical Data

EV Charging Modes	Mode 3 Charging	
Power Supply	1P+N+PE	3P+N+PE
Rated Voltage	AC 240V±10%	AC 420V±10%
Rated Power	3.6kW,7.2kW	11kW,22kW
Rated Current	Max 16A, Max 32A	
Rated Frequency	50Hz	
Over Voltage Category (OVC)	OVC III	
Insulation Resistance	R > 1 MΩ	
AC Withstand Voltage	1430V	
Impulse Dielectric Withstand Voltage (1,2 μs/50 μs)(Uimp)	4kV	
Protection against Electric Shock	Class I	
Electrical Life(Contactor)	100,000	
Electrical Life(Interface)	100,000	
Standby Power Consumption	<8w	
Type of EV Connection	Case C(Cable Version)	
Universal Interface	T1: SAE J1772, T2: IEC/EN 62196-2, GB/T: 20234.2-2015	
Support Protocol	Basic type	Modbus-RTU
	Commercial type	OCPP1.6J
Functional	Basic type	DLB,LED,LCD,RFID,Integreted metering on board
	Commercial type	DLB,LED,LCD,RFID,Integreted metering on board,OTA Firmware update, Embeded website,Wifi/4G/Ethernet communication
Protection	Basic type	RDC-DD DC6mA; Under/Over voltage protection Over Current protection; Over temperature protection
	Commercial type	RDC-DD DC6mA; Under/Over voltage protection Over Current protection; Over temperature protection
Pollution Degree	PD 3	
IP Protection Class	IP54	
Altitude during Operation (m)	<2000m	
Altitude of Test Laboratory	<50m	
Work Humidity	3%~95%	
Operation Temperature	-25°C~55°C	
Cooling	Natural Air Cooling	
Mounting Method	Mounted on Walls, Poles or Equivalent Positions	
Normal Environmental Conditions	indoor Use; Outdoor Use	
The AC charging station needs an external MCB+type A type RCCB/Type A RCBO to be installed in the upstream distribution box		

EKEDC1-20-40kW

Low Power Charging Solution ---------- Standard_ IEC61851-1



Brief Description

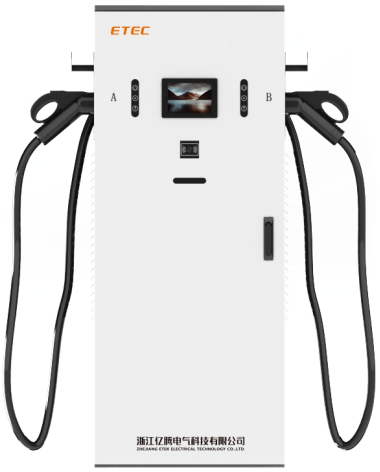
The charging pile adopts simple column design, covers a very small area. It is very suitable for small power charging scenario with site limitation and distribution limitation.

Technical Data

Power	20kW/30kW/40kW
Connector	GBT/CCS1/CHAdeMO/CCS2
Max Power	40kW
Emergency Stop Button	Yes
Communication Protocol	OCPP1.6J or other
Input Voltage	380V (-25%,+25%) AC
Frequency	50Hz±10%
Output Voltage	50V~1000VDC
Protection Grade	IP54
Power distribution	Single gun
Power factor	⩾0.99
Peak efficiency	95.5%
Overall efficiency	94%
Auxiliary power supply	12V
Humidness	⩽95%
Soft startup time	3-8S
Output voltage error	⩽±0.5%
Output current error	at ⩾30A, ⩽±1%; at <30A, ⩽±0.3A
Voltage accuracy	⩽0.5%
Steady flow accuracy	⩽1%
Voltage ripple	⩽1%
Current sharing	⩽5%
Load adjustment rate	⩽1%
Emc	IEC 61851-21-2
Starting mode	Swipe card/small program scan code
Insulation resistance	⩾10MΩ
Withstand voltage	AC2500V
Display screen	7" touch screen
Installation mode	Floor/wall hanging
Operating temperature	-35°C～+55°C
Altitude	⩽2000m (Customization required for more than 2000 meters)
Charging gun length	3m/4m/5m
Outer dimension	596.3mm×205.5mm×620.5mm (Width×Depth×Height)
Harmonic distortion	⩽5%

EKEDC2-60-120kW

Best Seller ---------- Standard_ IEC61851-1



Brief Description

The best-selling model at home and abroad, strong compatibility, compatible with 20/40kW module, power range covers 60kW to 120kW.

Technical Data

Power	20kW/40kW/60kW/80kW/90kW/100kW/120kW
Connector	GBT/CCS1/CHAdeMO/CCS2
Max Power	120kW
Emergency Stop Button	Yes
Communication Protocol	OCPP1.6J or other
Input Voltage	380V (-25%,+25%) AC
Frequency	50Hz±10%
Output Voltage	50V~1000VDC
Protection Grade	IP54
Power distribution	Average power distribution
Power factor	⩾0.99
Peak efficiency	95.5%
Overall efficiency	94%
Auxiliary power supply	12V
Humidness	⩽95%
Soft startup time	3-8S
Output voltage error	⩽±0.5%
Output current error	at ⩾30A, ⩽±1%; at <30A, ⩽±0.3A
Voltage accuracy	⩽0.5%
Steady flow accuracy	⩽1%
Voltage ripple	⩽1%
Current sharing	⩽5%
Load adjustment rate	⩽1%
Emc	IEC 61851-21-2
Starting mode	Swipe card/small program scan code
Insulation resistance	⩾10MΩ
Withstand voltage	AC2500V
Display screen	7" touch screen
Installation mode	Floor
Operating temperature	-35°C～+55°C
Altitude	⩽2000m (Customization required for more than 2000 meters)
Charging gun length	5m/7m/8m
Outer dimension	700mm×400mm×1870mm (Width×Depth×Height)
Harmonic distortion	⩽5%

EKEDC3-160-240kW

Fast Charge ---------- Standard_ IEC61851-1

Brief Description

The cabinet meets the customized requirements of the State grid. The screen part adopts integrated design, and the depth of 600mm is more stable. It has 8 standard modules and can be expanded up to 240kW.

Technical Data

Power	160kW/180kW/210kW/240kW
Connector	GBT/CCS1/CHAdeMO/CCS2
Max Power	80kW
Emergency Stop Button	Yes
Communication Protocol	OCPP1.6J or other
Input Voltage	380V (-25%,+25%) AC
Frequency	50Hz±10%
Output Voltage	50V~1000VDC
Protection Grade	IP54
Power distribution	Average power distribution
Power factor	⩾0.99
Peak efficiency	95.5%
Overall efficiency	94%
Auxiliary power supply	12V
Humidness	⩽95%
Soft startup time	3-8S
Output voltage error	⩽±0.5%
Output current error	at ⩾30A, ⩽±1%; at <30A, ⩽±0.3A
Voltage accuracy	⩽0.5%
Steady flow accuracy	⩽1%
Voltage ripple	⩽1%
Current sharing	⩽5%
Load adjustment rate	⩽1%
Emc	IEC 61851-21-2
Starting mode	Swipe card/small program scan code
Insulation resistance	⩾10MΩ
Withstand voltage	AC2500V
Display screen	7" touch screen
Installation mode	Floor
Operating temperature	-35°C～+55°C
Altitude	⩽2000m (Customization required for more than 2000 meters)
Charging gun length	3m/4m/5m
Outer dimension	700mm×600mm×1900mm (Width×Depth×Height)
Harmonic distortion	⩽5%

EKEDC4-120-300kW-Three-Gun-Charger

Customized version ---------- Standard_ IEC61851-1

Brief Description

The three-gun customized model is a DC EV Charging Station with 3 charging points, which can be customized according to customer requirements European standard, China standard, Japanese standard, American standard different power configuration and charging gun GBT / CCS2 / CCS1 / CHAdeMO /T2 /T1/Tesla configuration, DC maximum 300A, AC maximum 22kW.

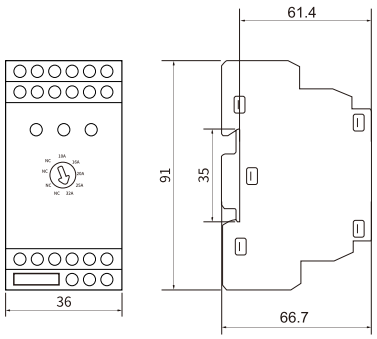
Technical Data

Power	120kW/180kW/240kW/200kW +22kw +22kw
Connector	GBT/CCS1/CHAdeMO/CCS2
Max Power	300kW
Emergency Stop Button	Yes
Communication Protocol	OCPP1.6J or other
Input Voltage	380V (-25%,+25%) AC
Frequency	50Hz±10%
Output Voltage	50V~1000VDC
Protection Grade	IP54
Power distribution	Three gun
Power factor	≥0.99
Peak efficiency	95.5%
Overall efficiency	94%
Auxiliary power supply	12V
Humidness	≤95%
Soft startup time	3-8S
Output voltage error	≤±0.5%
Output current error	at ≥30A, ≤±1%; at <30A, ≤±0.3A
Voltage accuracy	≤0.5%
Steady flow accuracy	≤1%
Voltage ripple	≤1%
Current sharing	≤5%
Load adjustment rate	≤1%
Emc	IEC 61851-21-2
Starting mode	Swipe card/small program scan code
Insulation resistance	≥10MΩ
Withstand voltage	AC2500V
Display screen	7" touch screen
Installation mode	Floor
Operating temperature	-35°C～+55°C
Altitude	≤2000m (Customization required for more than 2000 meters)
Charging gun length	3m/4m/5m
Outer dimension	596.3mm×205.5mm×620.5mm (Width×Depth×Height)
Harmonic distortion	≤5%

EKEPC2-C/S Mode 3 EV Charge Controller

Standard_ IEC61851-1
SAEJ1772

Overall and Installation Dimension(mm)



Brief Description

EKEPC2-C/S is using for AC EV Charging Station complies with IEC61851-1 or SAEJ1772 standard and DIN EN6075 installation requirement. The output of the controller is used to connect to the AC contactor that switches on/off the load, Max current can up to 63A.

The EKEPC2 controller is Modbus-RTU protocol with RS485 communication, which can communication with controller read or write commands for charger, the controller addtional functions including: non-contact IC card connection module, residual current monitoring unit, DLB management, LCD dislay, kWh Meter, Electronic lock, external emergency stop pushbutton, etc. These function must be NOTED when ordering.

Technical Specification

Model	EKEPC2-C/S
Mode	Mode 3 charging
Operating Voltage	AC230V±10%, 50Hz
Output the PWM Signal	Max: 32A,10A/16A/20A/25A/32A adjustable Max: 16A,6A/8A/13A/16A Max: 63A(customized)
Basic Function	Overtemperature protection
Additional Function	1:RCMU DC6mA leakage monitoring with an auxiliary device of RCMU 2:Swipe RFID card/NFC start or stop charging function with an auxiliary device of RFID module and cards 3:LCD display function with an auxiliary device of LCD screen 4:Elecronic lock function with a device electronic lock 5:DLB function with an auxiliary device of CT or kW·h meter 6:Overvolatge & Undervoltage protection 7:Over current protection 8:Voltage, current, power for real time monitoring with an auxiliary of kWh meter 9:Emergency stop function with an auxiliary device of pushbutton switch
Protocol(communication)	Modbus-RTU protocol and RS485 communication
Output Auxiliary Voltage	DC12V/100mA, DC5V/100mA
Ambient Temperature	-40°C ~ +50°C
Humidity	⩽85%
IP Degree	IP22
Cooling Method	Natural cooling
Installation Method	Din-Rail mounted

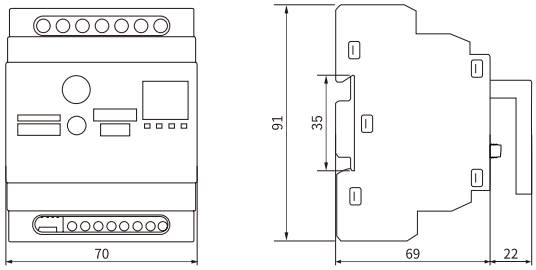
EKEPC3 Mode 3 EV Charge Controller

Standard_ IEC61851-1
SAEJ1772

Antenna-4G

Antenna-WiFi

Overall and Installation Dimension(mm)



Brief Description

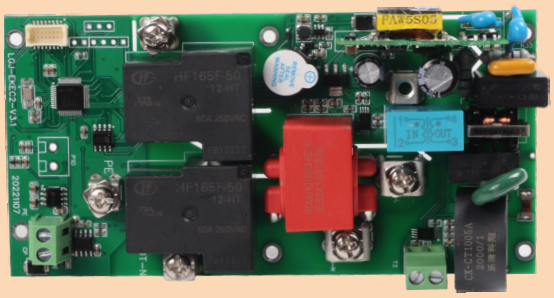
EKEPC3 is using for AC EV Charging Station complies with IEC61851-1 or SAEJ1772 standard and DIN EN6075 installation requirement.
The output of the relay is used to connect to the AC contactor that switches on/off the load, max current can up to 63A.
The EKEPC3 controller is OCPP1.6J protocol with WIFI, 2G-4G, ethernet net communication, which can communication with charger with a OCPP1.6J protocol backend, also we can support a RS485 communication for kWh meter, the controller addtional functions including : non-contact IC card connection module, residual current monitoring unit, DLB management, LCD dislay, kWM Meter, electronic lock, external emergency stop pushbutton, etc. These function must be NOTED when ordering.

Technical Specification

Model	EKEPC3-C/S
Mode	Mode 3 charging
Operating Voltage	AC230V±10%, 50Hz
Output the PWM Signal	Max:32A, 1-32A adjustable
Basic Function	Overtemperature protection
Additional Function	1:RCMU DC6mA leakage monitoring with an auxiliary device of RCMU 2:Swipe RFID card/NFC start or stop charging function with an auxiliary device of RFID module and cards 3:LCD display function with an auxiliary device of LCD screen 4:Elecronic lock function with a device electronic lock 5:DLB function with an auxiliary device of CT or kW·h meter 6:Overvolatge & Undervoltage protection 7:Over current protection 8:Voltage,current, power for real time monitoring with an auxiliary of kWh meter 9:Emergency stop function with an auxiliary device of pushbutton switch
Protocol(communication)	OCPP1.6J protocol, Wifi, ethernet communication Modbus-RTU protocol and RS485 communication only for kW·h meter
Output Auxiliary Voltage	DC12V/100mA, DC5V/100mA
Ambient Temperature	-40°C ~ +50°C
Humidity	⩽85%
IP Degree	IP22
Cooling Method	Natural cooling
Installation Method	Din-Rail mounted

EKEPCB1 Model 2 EV Charger PCB Board

Standard_ IEC61851-1
SAEJ1772



Brief Description

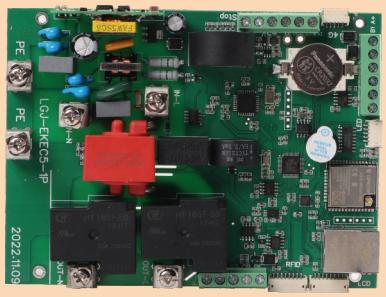
EKEPCB1 is using for mode 2 portable EV charger complies with IEC61851-1 or SAEJ1772 standard, input voltage is 230V~, max current up to 32A, charging current can selection, it has functional of status indicating, LCD display, charging time reservation, free PE connection, protection of over temperature, over/under voltage, over current and residual current current protection AC30mA+DC6mA.

Technical Specification

Model	EKEPCB1-C
Mode	Mode 2 charging
Operating Voltage	AC230V±10%,50Hz
Output the PWM Signal	Max: 16A,6A/8A/10A/13A/16A adjustable Max: 32A,6A/8A/10A/13A/16A/20A/25A/32A adjustable
Basic Function	1:IEC62955 standard AC 30mA and DC6mA leakage monitoring 2:Overtemperature protection 3:Overvolatge & undervoltage protection 4:Over current protection 5:Voltage,current,Power for real time monitoring
Additional Function	LCD display function with an auxiliary device of LCD screen
Output Auxiliary Voltage	DC12V/100mA, DC5V/100mA
Ambient Temperature	-40°C ~ +50°C
Humidity	⩽85%
Cooling Method	Natural cooling
Installation Method	PCB mounted

EKEPCB2 Model 3 EV Charger PCB Board

Standard_ IEC61851-1
SAEJ1772



Brief Description

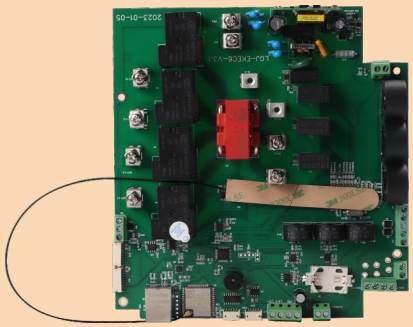
EKEPCB2 is using for AC EV Charging Station complies with IEC61851-1 or SAEJ1772 standard and PCB installation requirement.
The output of the controller adopts relay switching load, the rated voltage is 230V~, and the rated current can be adjusted between 1A and 32A.
The EKEPCB2 controller is OCPP1.6J protocol with WIFI, Ethernet net communication, which can communicate with controller with a OCPP1.6J protocol backend, also we can support a RS485 communication for kWh meter.
The controller addtional functions including :non-contact IC card connection module, residual current monitoring unit, DLB management, LCD dislay, kWH Meter, Electronic lock, external emergency stop pushbutton, etc. These function must be NOTED when ordering.

Technical Specification

Model	EKEPCB2-C/S
Mode	Mode 3 charging
Operating Voltage	AC230V±10%, 50Hz
Output the PWM Signal	Max: 32A, 1-32A adjustable
Basic Function	1:RCMU DC6mA leakage monitoring 2:Overtemperature protection 3:Overvolatge & undervoltage protection 4:Over current protection 5:Voltage, current, power for real time monitoring
Additional Function	1:Swipe RFID card/NFC start or stop charging function with an auxiliary device of RFID module and cards 2:LCD display function with an auxiliary device of LCD screen 3:Elecronic lock function with a device electronic lock 4:DLB function with an auxiliary device of CT or kWh meter 5:Emergency stop function with an auxiliary device of pushbutton switch
Protocol(communication)	OCPP1.6J Protocal , wifi & ethernet or add external 4G module communication
Output Auxiliary Voltage	DC12V/100mA, DC5V/100mA
Ambient Temperature	-40°C ~ +50°C
Humidity	⩽85%
Cooling Method	Natural cooling
Installation Method	PCB mounted

EKEPCB3 Model 3 EV Charger PCB Board

Standard_ IEC61851-1
SAEJ1772

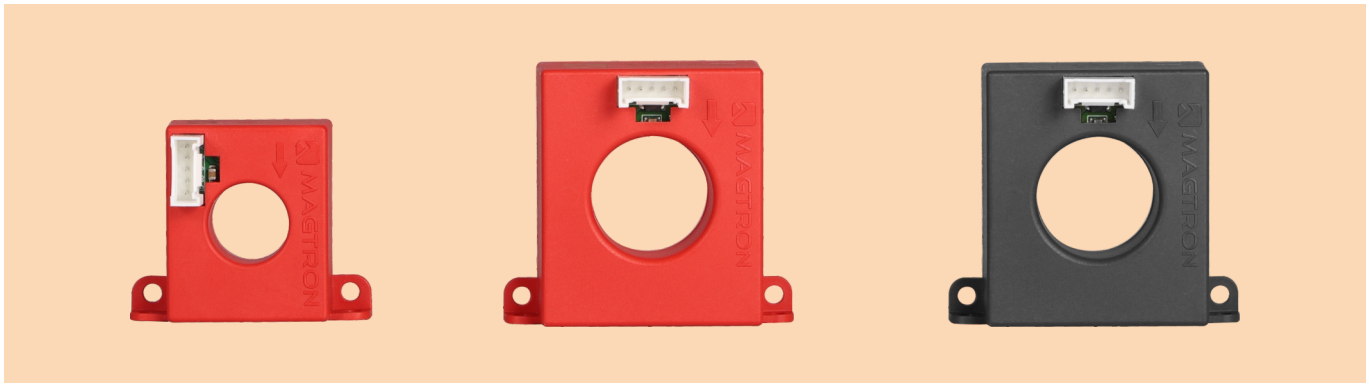


Brief Description

EKEPCB3 is using for AC EV Charging Station complies with IEC61851-1 or SAEJ1772 standard and PCB installation requirement.
The output the controller is using the relay switches on/off the load, the rated voltage is 230V~, and the rated current can be adjusted from 1A to 32A.
The EKEPCB3 controller is OCPP1.6J protocol with WIFI, Ethernet net communication, which can communicate with controller with a OCPP1.6J protocol backend, also we can support a RS485 communication for kWh meter.
The controller addtional functions including: non-contact IC card connection module, residual current monitoring unit, DLB management, LCD dislay, kWH Meter, Electronic lock, external emergency stop pushbutton, etc. These function must be NOTED when ordering.

Technical Specification

Model	EKEPCB3-C/S
Mode	Mode 3 charging
Operating Voltage	AC400V±10%, 50Hz
Output the PWM Signal	Max: 32A, 1-32A adjustable
Basic Function	1:RCMU DC6mA leakage monitoring 2:Overtemperature protection 3:Overvolatge & undervoltage protection 4:Over current protection 5:Voltage, current, power for real time monitoring
Additional Function	1:Swipe RFID card/NFC start or stop charging function with an auxiliary device of RFID module and cards 2:LCD display function with an auxiliary device of LCD screen 3:Elecronic lock function with a device electronic lock 4:DLB function with an auxiliary device of CT or kWh meter 5:Emergency stop function with an auxiliary device of pushbutton switch
Protocol(communication)	OCPP1.6J Protocal ，wifi & ethernet or add external 4G module communication
Output Auxiliary Voltage	DC12V/100mA, DC5V/100mA
Ambient Temperature	-40°C ~ +50°C
Humidity	≤85%
Cooling Method	Natural cooling
Installation Method	PCB mounted

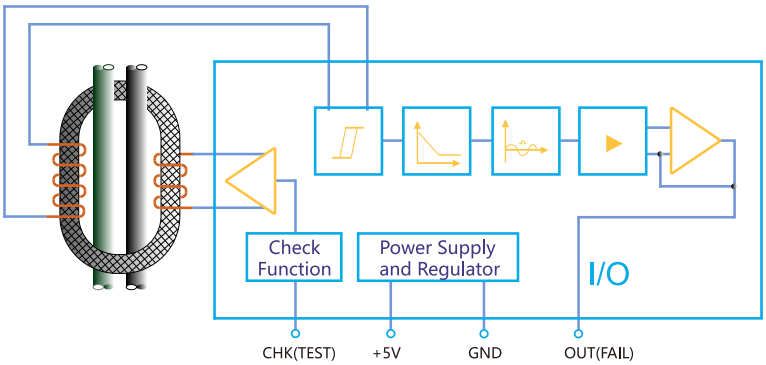


RCMU Function

RCMU Function Brief Outline

When the charging station is working, if there is a DC leakage current signal, the RCMU will immediately output a fault signal and cut off the output power within 300ms, ensuring the safety and reliability of personal and property. If the fault is eliminated, the charging station will automatically restart charging according to the program within 3S. Before charging, the RCMU module of the device will automatically carry out the accuracy and detection of the DC leakage current to ensure the safe and reliable operation of the device.

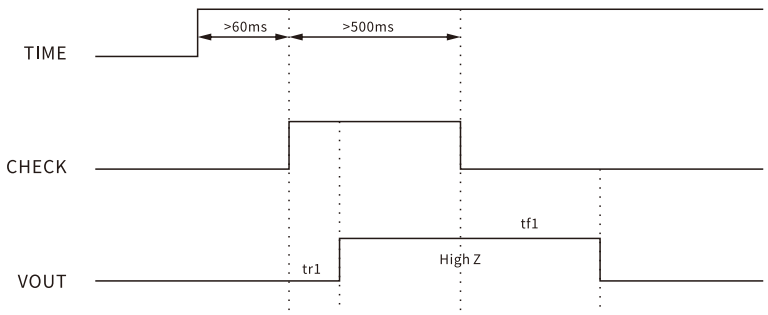
RCMU Use



RCMU Self-Check Function

When the main circuit is not working, the leakage current is 0, and Vout is at low level (0V) at this time .
(a)When the CHK PIN pin is set to high level (3.3-5V), Vout rises from low level to high voltage (Vcc) at this time.
(b) When the CHK PIN pin is set to low level (0.2v), the Vout generated at this time drops to low level (0V);
When the above (a) and (b) are completed, it is judged that the residual current sensor is functioning normally.
When the readme function is not working, you can add a 0 ohm resistor to the CHK PIN pin and ground it.

Self Test Sequence Diagram



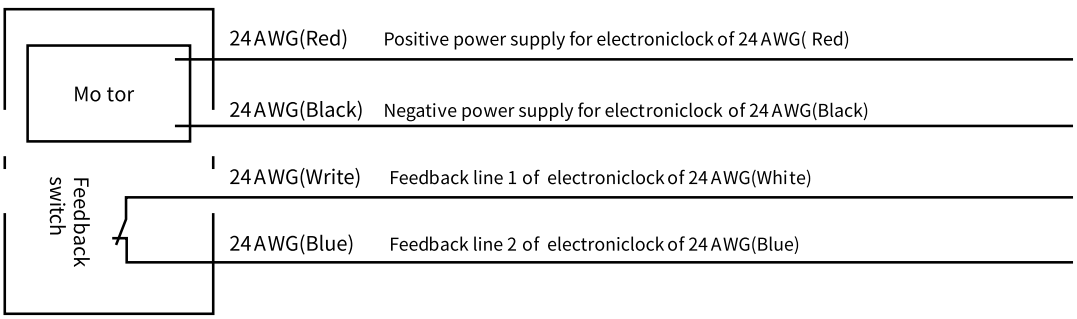
Impluse Electronic Lock Technical Parameters

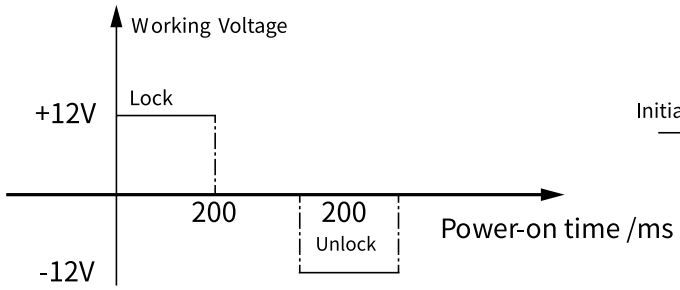
Working Power Supply	DC12V/500mA
Max. Working Current	⩽500mA
No-Load Current	<50mA
Locking Mechanism Retention Force	<80N
Locking Mechanism Breaking Force	⩾200N
Angle of Rotation	⩽90°
Response Time	<50ms
Maximum Power-on Time	3.5s
Complete Lock Time	<300ms
Ambient Temperature	-40°C-+80°C
Electrical Life	⩾30,000 cycles
Insulation Resistance	500MΩ
Power-on Action Time	0.2s<t<1.0s
Pulse Duty Factor	35%
Protection Degree	IP55
Manual Unlocking Pull	⩽5N
Manual Unlock Life	⩾30,000 cycles

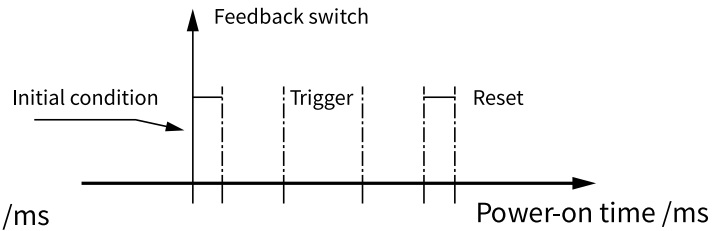
Function Description

Red Line(+12V)	Black Line(0V)	Status	Feedback Signal
+12V	0V	Lock Condition	Switch Connected
0V	+12V	Unlock Condition	Switch Disconnected

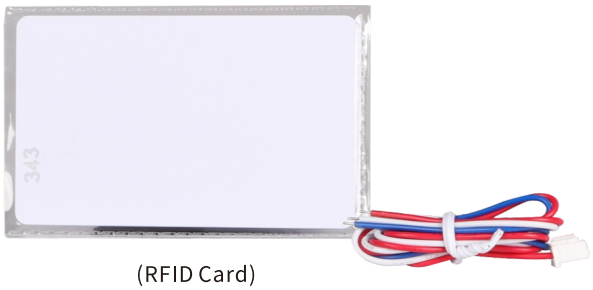
Electrical Wiring Principle



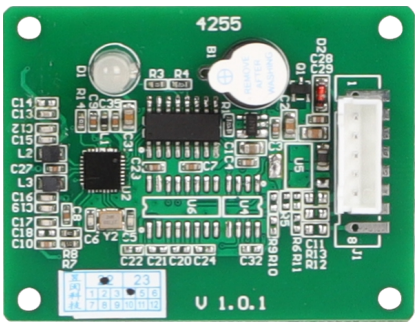




RFID Function



(RFID Card)



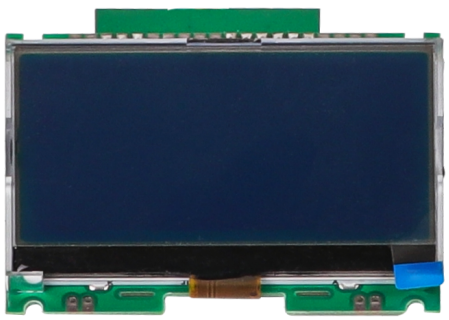
(RFID Module)

Function Brief Introduction

The charging station can be configured with contactless IC card swiping function, and charging can only be carried out through authorized IC card. If the IC card is lost, the internal dip switch can be used to set the IC card losing module. There are 2 IC cards which are authorized by the factory, unless specify that we can provide more IC cards.

LCD Display Function

The charging station can provide an analog input function, the input analog is AC0-1.0V, which is used to display the current working current. When the detected working current is greater than the set current value, the charging station will reduce the charging current to the set current value. Thereby ensuring the safe and reliable operation of the charging station.



Display Content

EKEC Series Charging Station

Operation voltage: 220V Set current: 32.0A Output Current: 32.0A
Electricity consumption: 15.8kWh
Charging time: 1 h 01 min 01 s
Operation status:Charging
Device status:Normal
Communication status : Connecting

The charging station with a LCD to display which can show the working status and charging related data, it is convenient and intuitive.

DLB Function

Function Brief Introduction

This function is the automatic distribution of charging current, through an external current transformer (the output current is AC5A), the longest wiring length of the transformer is 100mm (2.5 square).

During the charging process, the charging station will monitor the online charging current in real time and make corresponding adjustments.

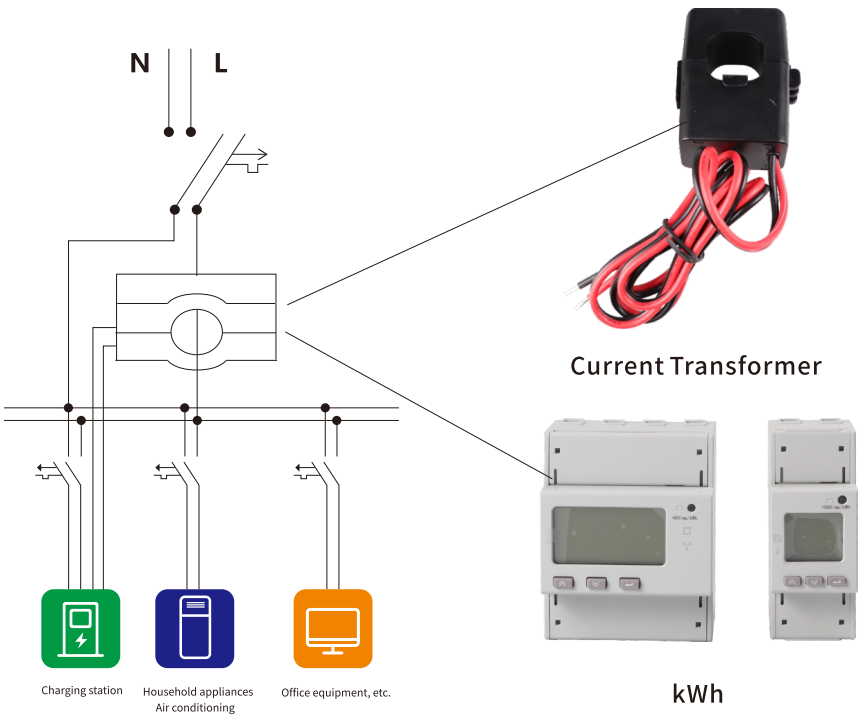
When it is detected that the current of the main circuit is greater than the set current, the charging station will reduce the charging current until the charging is stopped.

When it is detected that the current of the main circuit is less than the set current, the charging station will continue to increase thecharging current until 32A or 63A.

In this state, the maximum charging current of the charging station is 32A and 63A.

While the charging current is uncertain, the current setting switch of the charging station becomes the transformation ratio setting switch of the current transformer. The transformation ratio of the external current transformer is set by software or factory setting. The factory default current transformer transformation ratio is 100A/5A.

DLB Function Application Legend



Current Transformer Access Function

The charging station can provide an analog input function, the input analog is AC0-50A, which is used to display the current working current. When the detected working current is greater than the set current value, the charging station will reduce the charging current to the set current value.

Thereby ensuring the safe and reliable operation of the charging station.

EKEP Series AC Charging Station Plug

Standard_IEC62196-1
IEC62196-2

Main Parameter

Electrical Performance

Operation Voltage	230V±10% 50Hz/400V±10%50Hz
Operation Current	16A、32A
Continuously Using Time	Continuously working 24h
Conductive Terminal Temperature Rise	≤50K
Insulation Resistance	≥500MΩ、DC500V
Withstand Voltage	2500V/min
Contact Resistance	≤0.3Ω

Mechanical Features

Mechainical Life	5,0000 times or more
Insertion / Pulling Force During Connection	45N~80N
Withstanding Impact	Tolerable to 2 ton car rolling or 1m height drop without damage

Major Material

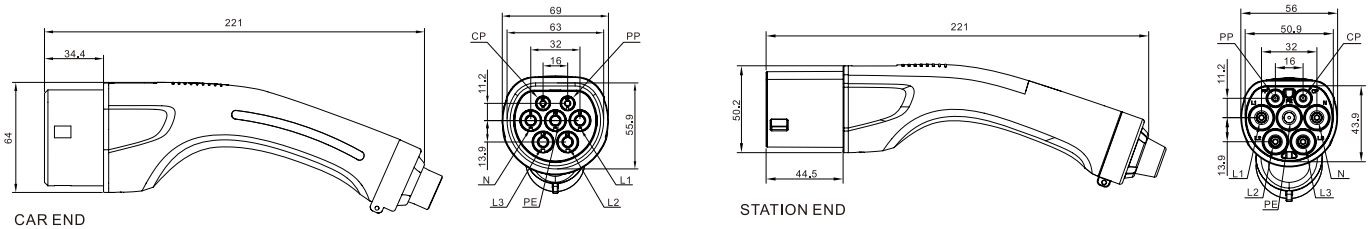
Conductor Material	Copper alloy + silver plating
Enclosure Material	Thermoplastic flame retardant plastic, flame retardant grade UL94V-0

Ambient Condition

Ambient Temperature	-40°C ~ +50°C
Humidity	<85%

Product Dimension

Unit: mm

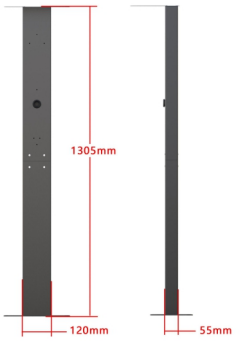


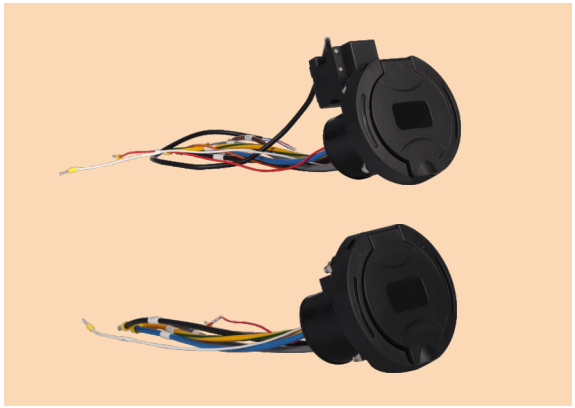
EKEC2ZJ Portable Charger Support

1.Suit for all portable EV charger
2.Easy for installation

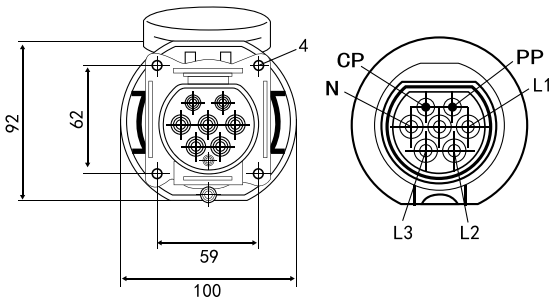
EKLZ AC Charging Station Post

1.Combined type, reduce volume
2.Aluminum alloy material, light wight
3.A baffle at the top protecting the sunlight and rain

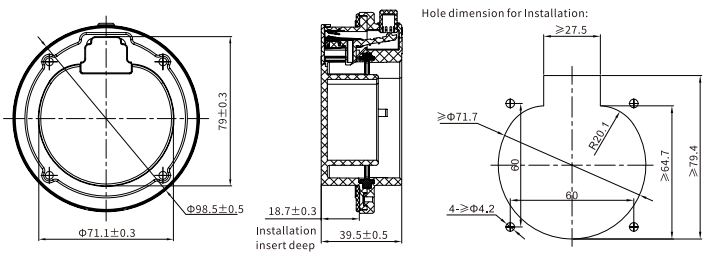




EKES Series AC Charging Station Socket



EKEH AC Charging Station Fixed Base for Plug

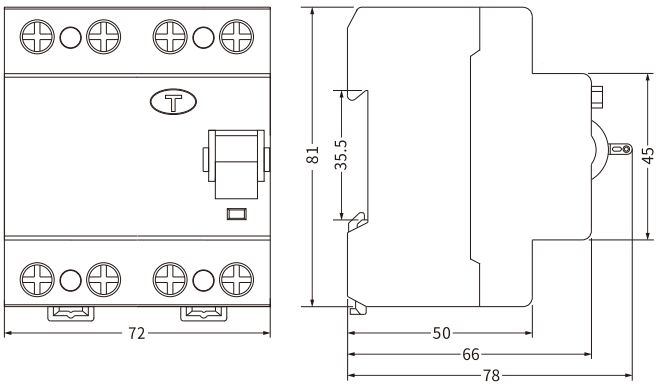


RCCB Type B EV EKL1-63B 10kA

Residual Current Circuit Breaker

Standard_ IEC61008-1
IEC62423

Overall and Installation Dimension(mm)



Technical Data

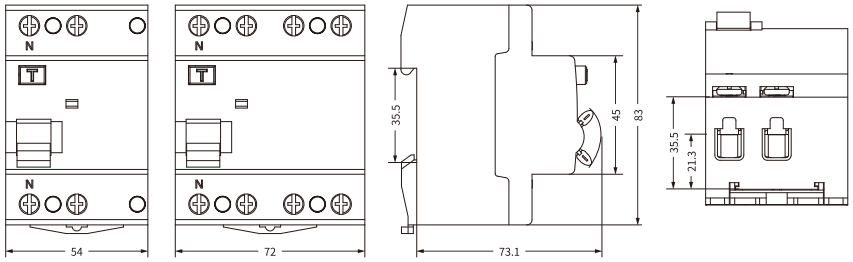
Standard	IEC/EN61008-1, IEC62423
Protection	Ground fault
Type of trip	Electro-magnetic
Type of protection (electric leakage)	B
No.of poles	2P(1P+N), 4P(3P+N)
Rated currents (In)	16,25,40,63A
Rated sensitivity currents I△n	30,100,300mA
Residual current off-time under I△n	⩽ 0.1s
Rated residual making and breaking capacity(I△m)	500A(In⩽50A), 10In(In>50A)
Rated voltage (Ue)	1P+N: 230/240V~, 3P+N:400/415V~
Rated frequency	50/60Hz
Rated breaking capacity	10,000A
SCPD fuse	10000
Rated impulse withstandard voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2.5kV
Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar/U-type busbar
Max. terminal size for cable	25mm^2
Max. tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

RCCB Type B EV EKL6-100B 10kA

Residual Current Circuit Breaker

Standard_ IEC61008-1
IEC62423

Overall and Installation Dimension(mm)



Technical Data

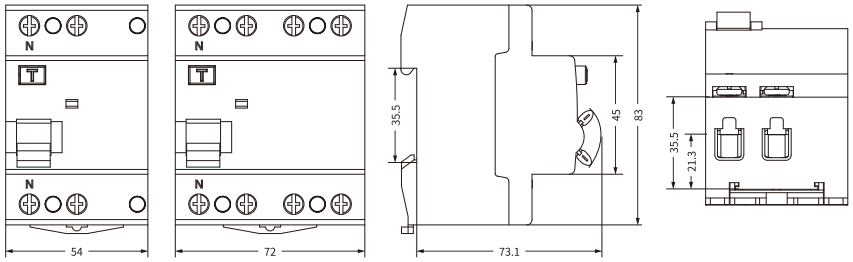
Standard	IEC61008-1, IEC62423
Protection	Ground fault
Type of trip	Electro-magnetic
Type of protection (electric leakage)	B
No.of poles	2P(1P+N), 4P(3P+N), N Pole on left
Insulation voltage Ui	500V
Rated currents (In)	16,25,40,63,80,100A
Rated sensitivity currents I△n	30,100,300mA
Residual current off-time under I△n	⩽ 0.1s
Rated residual making and breaking capacity(I△m)	500A(In⩽50A), 10In(In>50A)
Rated voltage (Ue)	2P: 240V~, 4P: 415V~
Rated frequency	50/60Hz
Rated breaking capacity	10,000A
SCPD fuse	10000
Rated impulse withstandard voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2.5kV
Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles
Contact position indicator	Yes
Ground fault indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar/Fork-type busbar
Max.terminal size for cable	35mm^2
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

RCCB Type EV EKL6-63EV 10kA

Residual Current Circuit Breaker

Standard_ IEC61008-1
IEC62955

Overall and Installation Dimension(mm)



Technical Data

Standard	IEC61008-1, IEC62955
Protection	Ground fault
Type of trip	Electro-magnetic
Type of protection (electric leakage)	A
No.of poles	2P(1P+N), 4P(3P+N) , N Pole on left
Insulation voltage Ui	500V
Rated currents (In)	25,40,63A
Rated sensitivity currents I△n	30mA
Rated residual operating current(I△dc)	6mA
Residual current off-time under I△n	⩽ 0.1s
Rated residual making and breaking capacity(I△m)	500A(In⩽50A), 10In(In>50A)
Rated voltage (Ue)	2P: 240V~, 4P: 415V~
Rated frequency	50/60Hz
Rated breaking capacity	10,000A
SCPD fuse	10000
Rated impulse withstandard voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2.5kV
Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles
Contact position indicator	Yes
Ground fault indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +55°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar/U-type busbar
Max.terminal size for cable	35mm^2
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Life

In	Operating cycles		Operating frequency (operations/h)
	On-load operating cycles	Off-load operating cycles	
16,25	2000	2000	240
40,63,80,100	2000	1000	120

Breaking Time of Residual Current

Max. breaking time					
In(A)	IΔn(A)	IΔn	2IΔn	5IΔn	5,10,20,50,100,200,500A
16,25,40,63,80,100	0.03, 0.1, 0.3	0.1s	0.08s	0.04s	0.04s

Wiring The suitable conductors should be used for connection,see table below for relative parameters.

Rated current In (A)	Cross section area s (mm^2)	Tightening torque (N.m)
16	2.5	2.5
25	4	2.5
40	10	2.5
63	16	2.5
80	25	2.5
100	35	2.5

Detectable Wave Form

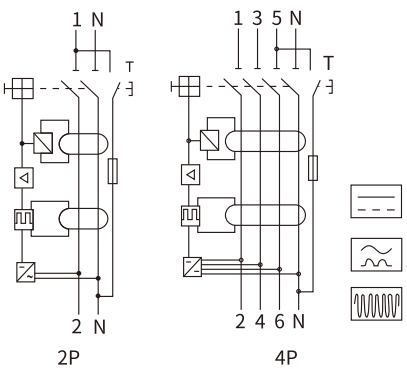
Class	Description
AC	Tripping is ensured for slowly increasing sinusoidal AC residual currents.
A	Tripping is ensured for sinusoidal AC residual currents and for pulsed DC residual currents, whether applied suddenly or increasing slowly.
B	Tripping is ensured for sinusoidal AC residual currents pulsed DC residual currents, alternating residual sinusoidal currents up to 1000Hz, pulsating direct residual currents and for smooth direct residual currents, whether applied suddenly or increasing slowly.

Tripping Sensitivity

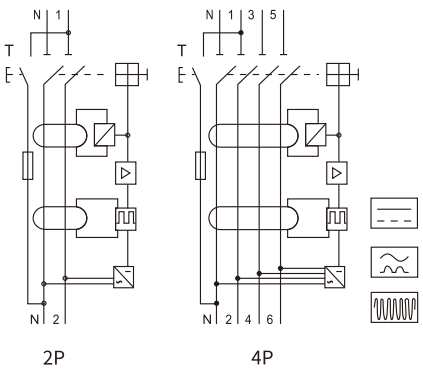
30mA: Additional protection against direct contact.
100mA: Co-ordinated with the earth system according to the formula IΔn ＜ 50/R, to provide protection against indirect contacts.
300mA: Protection against indirect contacts, as well as fire hazard.

Circuit Diagram

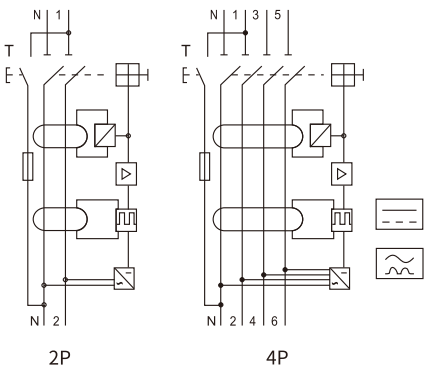
- EKL1-63B(H)



- EKL6-100B

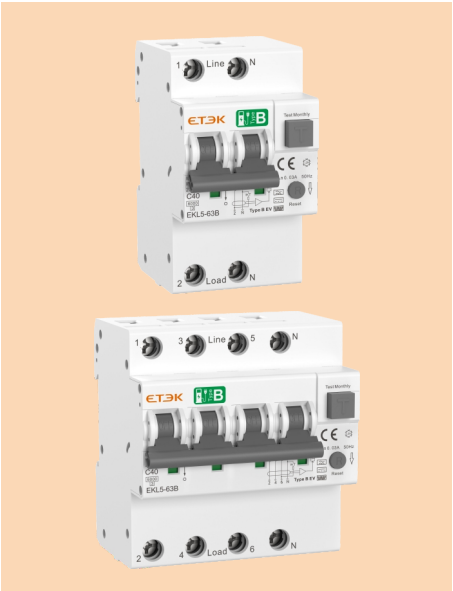


- EKL6-63EV

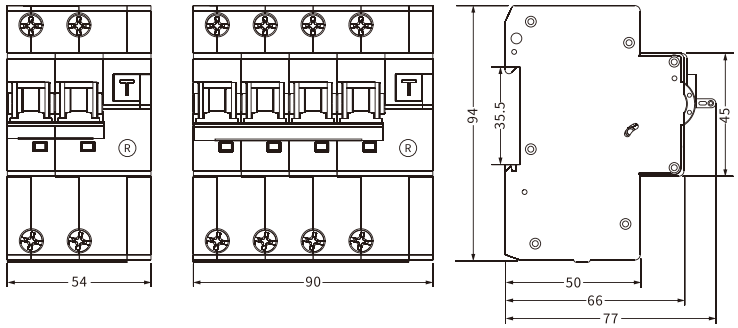


RCBO Type B EV EKL5-63B 10kA

RCCB with Overcurrent Protection ---------- Standard_ IEC61009-1
IEC62423



Overall and Installation Dimension(mm)



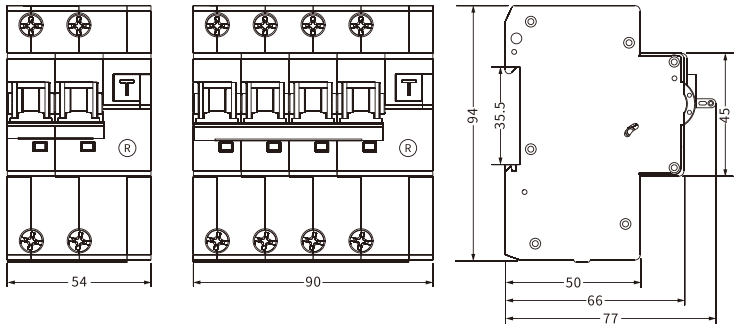
Technical Data

Standard	IEC/EN61009-1 ,IEC/EN62423
Protection	Ground fault, Overcurrent and short circuit, Over-voltage(selectable)
Type of trip	Ground fault : Electronic
	Overload and short circuit :Thermo-magnetic
Type of protection (electric leakage)	B
No.of poles	1P+N 3module , 3P+N 5module, N line with disconnected
Rated currents (In)	6,10,16,20,25,32,40,50,63A
Rated sensitivity currents I△n	30,100,300mA
Residual current off-time under I△n	⩽ 0.1s
Rated residual making and breaking capacity(I△m)	500A(In⩽50A), 10In(In>50A)
Rated voltage (Ue)	1P+N:230/240V~,3P+N:400/415V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A, 10,000A
Energy Limiting Class	3
Rated impulse withstandard voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In, D:(10-20) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Ground fault indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	25mm^2
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top

RCBO Type EV EKL5-63EV 10kA

RCCB 30mA+RDC-MD DC6mA ---------- Standard_ IEC61009-1
IEC62423

Overall and Installation Dimension(mm)



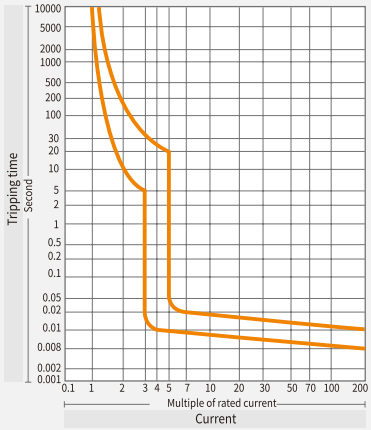
Technical Data

Standard	IEC/EN61009-1 ,IEC/EN62423
Protection	Ground fault, Overcurrent and short circuit, Over-voltage(selectable)
Type of trip	Ground fault : Electronic
	Overload and short circuit :Thermo-magnetic
Type of protection (electric leakage)	A
No.of poles	1P+N 3module , 3P+N 5module, N line with disconnected
Rated currents (In)	16,20,25,32,40,50,63A
Rated sensitivity currents I△n	30mA
Rated sensitivity currents I△dc	6mA
Residual current off-time under I△n	⩽ 0.1s
Rated residual making and breaking capacity(I△m)	500A(In⩽50A), 10In(In>50A)
Rated voltage (Ue)	1P+N:230/240V~,3P+N:400/415V~
Rated frequency	50/60Hz
Rated breaking capacity	10,000A
Energy Limiting Class	3
Rated impulse withstandard voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Ground fault indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	25mm^2
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top

Tripping Characteristic

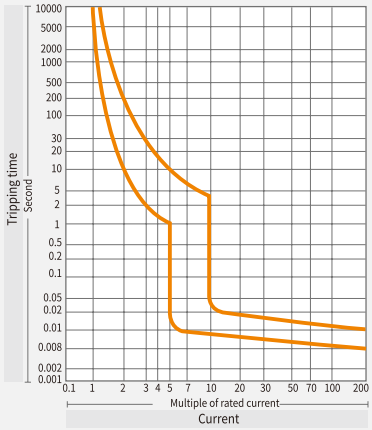
Curve	Rated current	Condition						
		Thermal release				Magnetic release		
		Non-tripping	Tripping	Non-tripping	Tripping time	Holding current	Tripping current	Tripping time
B	6-63A	1.13×In		⩽1h		3×In		⩾0.1
			1.45×In		<1h		5×In	<0.1
C	6-63A	1.13×In		⩽1h		5×In		⩾0.1
			1.45×In		<1h		10×In	<0.1
D	6-63A	1.13×In		⩽1h		10×In		⩾0.1
			1.45×In		<1h		20×In	<0.1

B curve



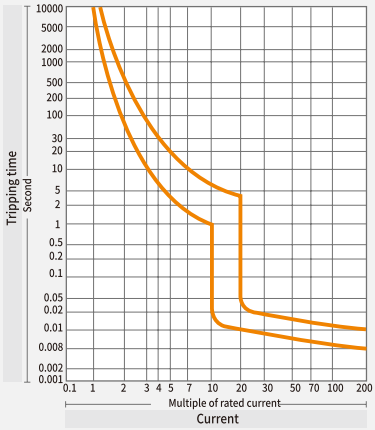
Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

D curve



Loads with high inrush current
- transformer, solenoid valve, 2 pole motor

Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Types

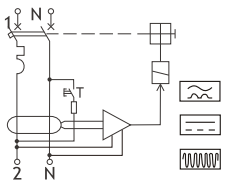
Both RCCBs and RCBOs are devided into types depending on the operating function:
Type AC ⏦: For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
Type A ⏦: For which tripping is ensued for residual sinusoidal alternating currents and residual pulsating direct currents, whethe rsuddenly applied or slowly rising.

Tripping Sensitivity Data

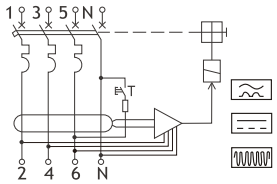
RCD with a rated residual current of maximum 30mA are used for personnel, material and fire protection, as well as for protection against direct contact.
RCD with a rated residual current of maximum 300mA are used as preventative fire protection in case of insulation faults.
RCD with a rated residual current of 100mA co-ordinated with the earth system according to the formula IΔn<50/R, to provide protection again indirect contacts.

Circuit Diagram

- EKL5-63B

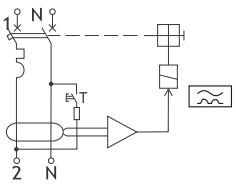


2P

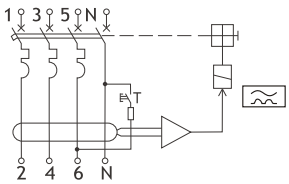


4P

- EKL5-63EV



2P



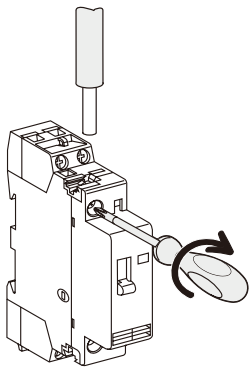
4P

Technical Data

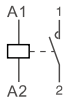
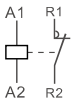
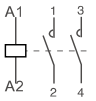
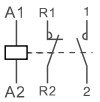
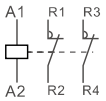
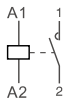
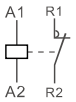
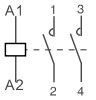
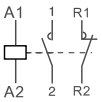
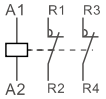
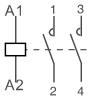
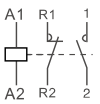
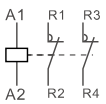
Standard	IEC61095
Poles	1P, 2P, 3P, 4P
Method of control	Automatic
Rated operational voltage Ue (V)	AC250V (1P, 2P), AC400V (3P, 4P)
Number of main contacts	1P: 1NO,1NC; 2P: 1NO+1NC, 2NO2NC 3P: 3NO, 3NC; 4P: 2N0+2NC, 3NO+1NC, 4N0, 4NC
Rated impulse withstand voltage Uimp (V)	4kV
Rated operational currents Ie (A)	16-125A (AC-7a), 6-50A (AC-7b)
Rated frequency (Hz)	50/60Hz
Utilization category	AC-7a/AC-7b
Rated control supply voltage Us	AC24V; AC110V; AC220-240V
Mechanical life (times)	10×10^6
Electrical life (times)	10×10^5

Connection Parameter

Type		Rated Current	Lenght tripping	Circuit	Tightening torque	Copper cables	
						Rigid	Flexible or Ferrule
							
EKMF	PZ1: 4mm	16-100A	9mm	Control	0.8N.m	1.5~2.5mm² 2x1.5mm²	1.5~2.5mm² 2x2.5mm²
		16-25A	9mm	Power	0.8N.m	1.5~6mm²	1~4mm²
	PZ2: 6mm	40-63A	14mm	Power	3.5N.m	6~25mm²	6~16mm²
		100A	14mm	Power	3.5N.m	6x3.5mm²	6~35mm²

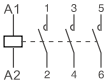
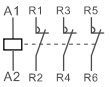
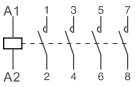
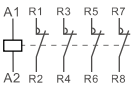
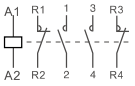
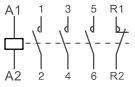
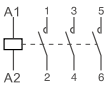
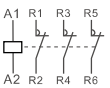
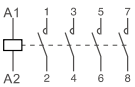


Automatic Type Product Selection Form

Modules	Poles	Contactor Model	Rated Current		Coil voltage VAC	Circuit Diagram	
			AC-1, AC-7a	AC-3, AC-7b			
 1 Modules	1P	EKMF-1610	16A	6A	24 110 230		1NO
		EKMF-2010	20A	7A			
		EKMF-2510	25A	9A			
		EKMF-1601	16A	6A			1NC
		EKMF-2001	20A	7A			
		EKMF-2501	25A	9A			
	2P	EKMF-1620	16A	6A			2NO
		EKMF-2020	20A	7A			
		EKMF-2520	25A	9A			
		EKMF-1611	16A	6A			1NO+1NC
		EKMF-2011	20A	7A			
		EKMF-2511	25A	9A			
		EKMF-1602	16A	6A			2NC
		EKMF-2002	20A	7A			
		EKMF-2502	25A	9A			
 2 Modules	1P	EKMF-3210	32A	12A	24 110 230		1NO
		EKMF-4010	40A	18A			
		EKMF-6310	63A	25A			
		EKMF-3201	32A	12A			1NC
		EKMF-4001	40A	18A			
		EKMF-6301	63A	25A			
	2P	EKMF-3220	32A	12A			2NO
		EKMF-4020	40A	18A			
		EKMF-6320	63A	25A			
		EKMF-3211	32A	12A			1NO+1NC
		EKMF-4011	40A	18A			
		EKMF-6311	63A	25A			
		EKMF-3202	32A	12A			2NC
		EKMF-4002	40A	18A			
		EKMF-6302	63A	25A			
 3 Modules	2P	EKMF-8020	80A	32A	24 110 230		2NO
		EKMF-10020	100A	40A			
		EKMF-12520	125A	50A			
		EKMF-8011	80A	32A			1NO+1NC
		EKMF-10011	100A	40A			
		EKMF-12511	125A	50A			
		EKMF-8002	80A	32A			2NC
		EKMF-10002	100A	40A			
		EKMF-12502	125A	50A			

Modular Contactor

Standard_ IEC/EN61095
IEC60947-4-1

Modules	Poles	Contactor Model	Rated Current		Coil voltage VAC	Circuit Diagram
			AC-1, AC-7a	AC-3, AC-7b		
 2 Modules	3P	EKMF-1630	16A	6A	24 110 230 380	 3NO
		EKMF-2030	20A	7A		
		EKMF-2530	25A	9A		
		EKMF-1603	16A	6A		 3NC
		EKMF-2003	20A	7A		
		EKMF-2503	25A	9A		
	4P	EKMF-1640	16A	6A		 4NO
		EKMF-2040	20A	7A		
		EKMF-2540	25A	9A		
		EKMF-1604	16A	6A		 4NC
		EKMF-2004	20A	7A		
		EKMF-2504	25A	9A		
		EKMF-1622	16A	6A		 2NO+2NC
		EKMF-2022	20A	7A		
		EKMF-2522	25A	9A		
		EKMF-1631	16A	6A		 3NO+1NC
		EKMF-2031	20A	7A		
		EKMF-2531	25A	9A		
 3 Modules	3P	EKMF-3230	32A	12A	24 110 230 380	 3NO
		EKMF-4030	40A	18A		
		EKMF-6330	63A	25A		
		EKMF-3203	32A	12A		 3NC
		EKMF-4003	40A	18A		
		EKMF-6303	63A	25A		
	4P	EKMF-3240	32A	12A		 4NO
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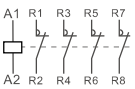
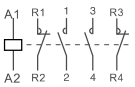
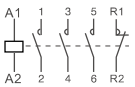
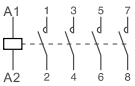
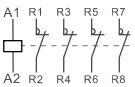
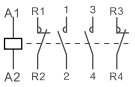
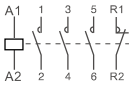
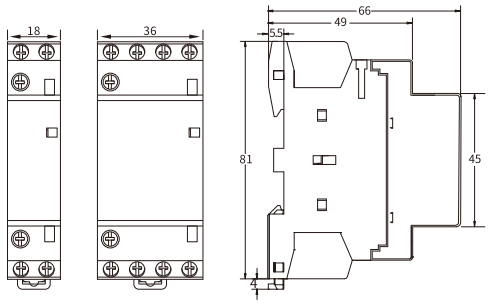
		EKMF-6340	63A	25A		
		EKMF-3204	32A	12A		 4NC
		EKMF-4004	40A	18A		
		EKMF-6304	63A	25A		
		EKMF-3222	32A	12A		 2NO+2NC
		EKMF-4022	40A	18A		
		EKMF-6322	63A	25A		
		EKMF-3231	32A	12A		 3NO+1NC
		EKMF-4031	40A	18A		
		EKMF-6331	63A	25A		
 6 Modules	4P	EKMF-8040	80A	32A	24 110 230 380	 4NO
		EKMF-10040	100A	40A		
		EKMF-12540	125A	50A		
		EKMF-8004	80A	32A		 4NC
		EKMF-10004	100A	40A		
		EKMF-12504	125A	50A		
		EKMF-8022	80A	32A		 2NO+2NC
		EKMF-10022	100A	40A		
		EKMF-12522	125A	50A		
		EKMF-8031	80A	32A		 3NO+1NC
		EKMF-10031	100A	40A		
		EKMF-12531	125A	50A		

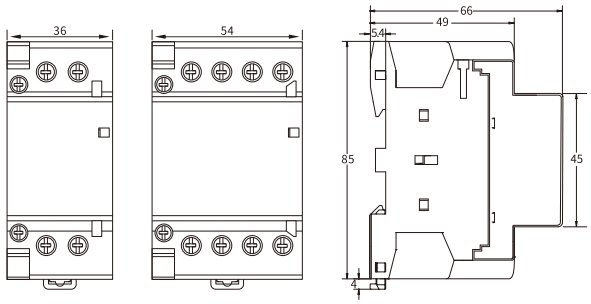
Consumption

Poles	Rated Current		Control voltage (VAC)	Power consumption		Max. power
	AC-7a	AC-7b		Holding	Inrush	
1P	16A	6A	230	2.8VA	11.5VA	1.2W
	20A	7A	230	2.8VA	11.5VA	1.2W
	25A	9A	230	2.8VA	11.5VA	1.2W
2P	16A	6A	230	2.8VA	11.5VA	1.2W
	20A	7A	230	2.8VA	11.5VA	1.2W
	25A	9A	230	2.8VA	11.5VA	1.2W
	32A	12A	230	4.1VA	31VA	1.6W
	40A	18A	230	4.1VA	31VA	1.6W
	63A	25A	230	4.1VA	31VA	1.6W
	100A	-	230	4.1VA	31VA	2.1W
3P	16A	6A	230	4.1VA	31VA	1.6W
	20A	7A	230	4.1VA	31VA	1.6W
	25A	9A	230	4.1VA	31VA	1.6W
	32A	12A	230	7VA	48VA	2.1W
	40A	18A	230	7VA	48VA	2.1W
	63A	25A	230	7VA	48VA	2.1W
4P	16A	6A	230	4.1VA	31VA	1.6W
	20A	7A	230	4.1VA	31VA	1.6W
	25A	9A	230	4.1VA	31VA	1.6W
	32A	12A	230	7VA	48VA	2.1W
	40A	18A	230	7VA	48VA	2.1W
	63A	25A	230	7VA	48VA	2.1W
	100A	-	230	13VA	106VA	4.2W

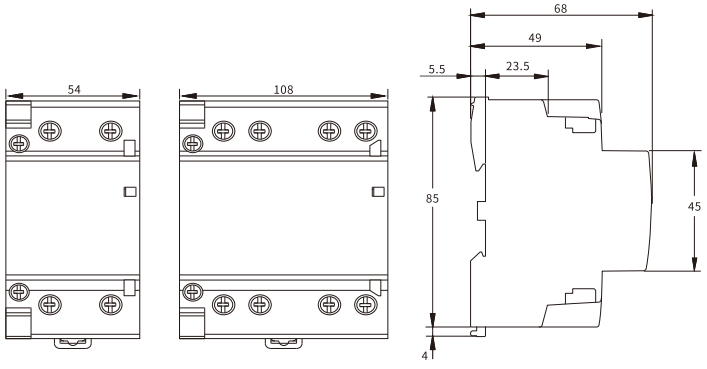
Overall and Installation Dimension(mm)



EKMF-16/20/25A



EKMF-32/40/63A



EKMF-80/100/125A

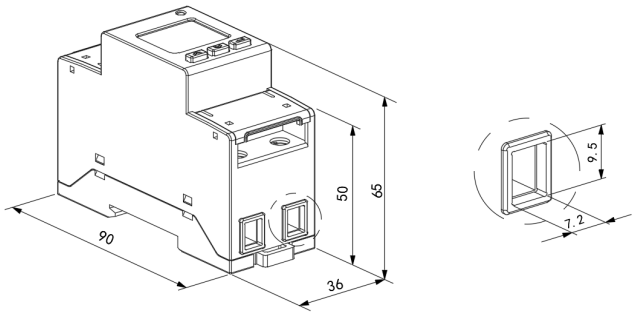
EKEM2D

Single Phase Smart Meter ---------- Standard_ IEC62053-21

Technical Data

Voltage	Reference voltage	AC 230V
	Reference frequency	50Hz
	Power consumption	<10VA
Current	Reference current	0.5-10(80)A
	Consumption	<4VA
Accuracy of measuring		Class B
Range of measuring		000000.00~99999999kWh
Clock accuracy		Error≤0.5s/d
Active pulse	Pulse width	80±20ms
	Pulse constant	1000imp/kWh
Communication	Interface	RS485(A+、B-)
	Connection mode	Shielded twisted pair conductors
	Protocol	MODBUS-RTU
Max. tightening torque		<1.8Nm
Work temperature		-25°C to +55°C
Storage Temperature		-40°C to +70°C
Relative humidity		≤95%(No condensation)
Altitude		<2000m

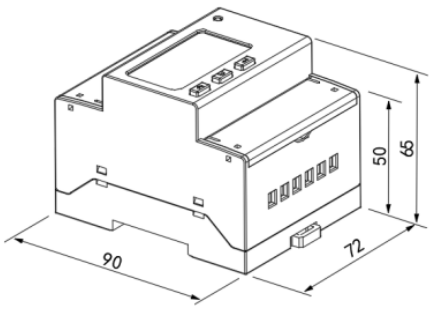
Overall and Installation Dimension(mm)



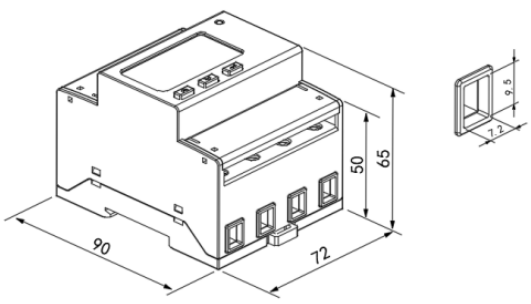
Technical Data

Specification		3 phase 3 wires	3 phase 4 wires
Voltage	Reference voltage	3×100V, 3×400V	3×57.7/100V, 3×230/4000V
	Voltage range	3×100V~3×450V	3×57.7/100V~3×260/450V
	Consumption	<10VA(Single phase)	
	Impedance	>2MΩ	
	Accuracy class	Error±0.2%	
Current	Input current	0.01-1(6)A (Secondary access model) 0.5-10(80)A(Direct access model)	
	Consumption	<1VA Single phase rated current	
	Accuracy class	Error±0.2%	
Power		Active, reactive, apparent power, error±0.5%	
Frequency		45～65Hz, Error±0.2%	
Active Energy Class(kWh)		C(kWh)	
Clock		≤0.5s/d	
Energy pulse output		1 active photocoupler output	
Width of pulse		80±20ms	
Pulse constant		10000imp/kWh	
Interface and communication protocol		RS485:Modbus RTU	
Range of communication address		Modbus RTU:1~ 247	
Baud rate		1200bps~38400bps	
working temperature		-25°C to +55°C	
Relative humidity		≤95%(No condensation)	

Overall and Installation Dimension(mm)



connect via CT



direct connect

The product data referred to in the company shall be subject to material object. Subject to change without notice. The company has the final right to interpret.

Green paper printing.

ETEC

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