

ETEC

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PRODUCT SELECTION GUIDE

Always for your safety

Applicable to all kinds of
new energy vehicles





Technical Data

EV Charging Modes	Mode 3 Charging
Rated Voltage	AC 240V±10%, AC 420V±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
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
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
Colling	Natural Air Cooling
Mounting Method	Mounted on Walls, Poles or Equivalent positions
Normal Environmental Conditions	Indoor Use; Outdoor Use
Product Dimension(mm)	357*245*123
Installation Dimension(mm)	180*280

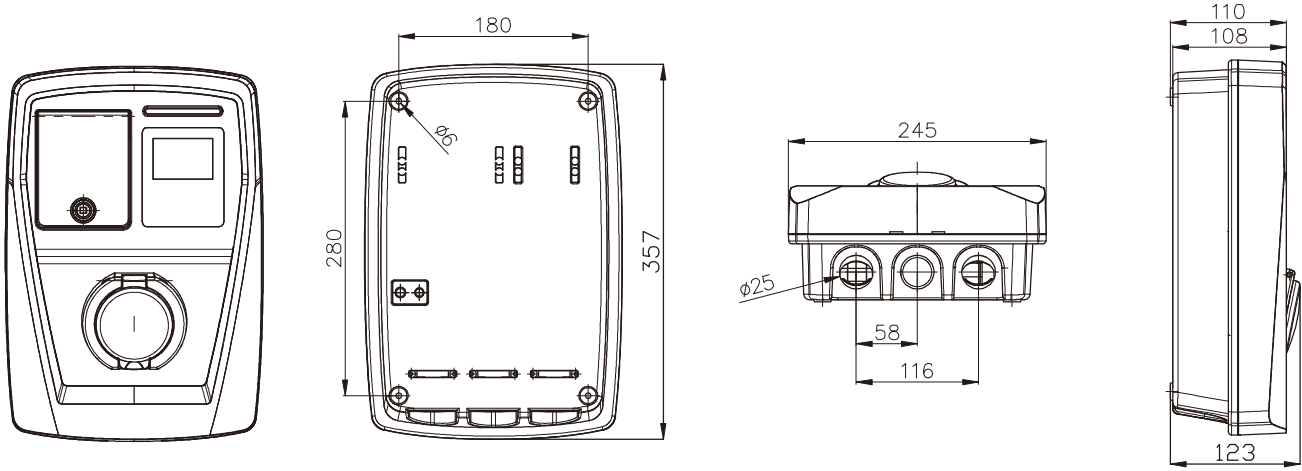
The AC chargers require external MCB for overload protection and short-circuit protection to be installed in upstream distribution box

Product Selection

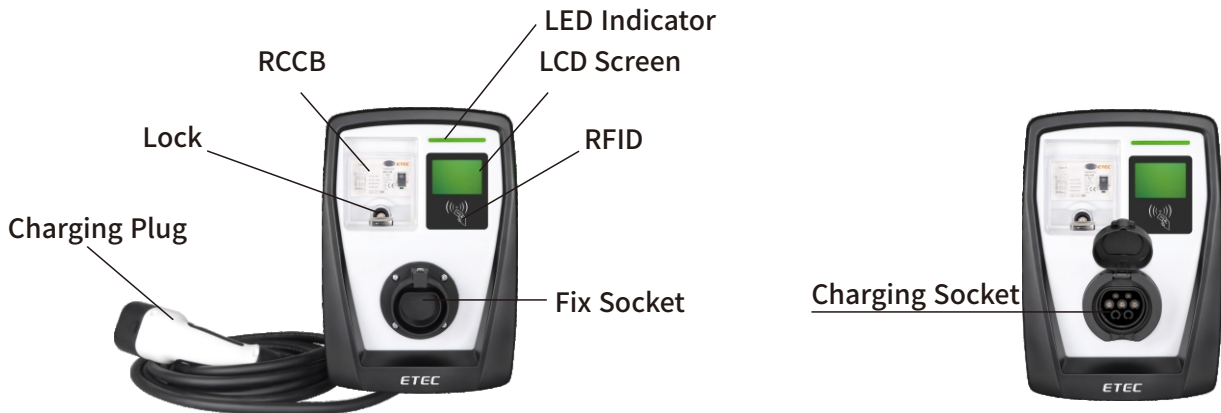
		● : Default Green : Simple Choice Blue : Multiple Choice	Selection Code
Model			EKEC1
Net Mode	Modbus-RTU Protocol	Support RS485 communication baud rate: 9600,8n,1 address:1-255 default:255(broadcast address)Communication using EKEPC2 controller	M
	Ocpp1.6J Protocol	Support Ethernet/Wifi/4G/3G/2G Communication using EKEPC3 controller	O
	Remark	SIM card support band and area: LTE-FDD: B1/B3/B5/B7/B8/B20/B28 LTE-TDD: B38/B40/B41 GSM: B2/B3/B5/B8 Area: EMEA/APAC	
Case B/C	Socket Type(Case B)		S
	Cable type(Case C) default value is 5m,other lengths can be customized		C
Socket&Plug Standard	American standard Type 1(T1):SAE J1772		T1
	European standard Type 2(T2)T2:IEC/EN 62196-2		T2
	Chinese standard :GB/T20234.2-2015		GBT
Power	3.6KW,AC230V±10% 50Hz,16A,1P+N+PE		3
	7.3KW,AC230V±10% 50Hz,32A,1P+N+PE		7
	11KW,AC400V±10% 50Hz,16A,3P+N+PE		11
	22KW,AC400V±10% 50Hz,32A,3P+N+PE		22
Protection	Configuration Device		
Overtemperature Protection		Chip Overtemperature Protection	●
Residual Current protection	Type A RCCB+RCMU	Type A 30mA+DC6mA Residual Current Protection	A
	Type A EV RCCB		B
	Type B RCCB	Type B 30mA+DC Residual Current Protection	C
	Type A RCBO+RCMU	Type A 30mA+DC6mA Residual Current+Overload +Short Circuit Protection	D
	Type A EV RCBO		E
	RCMU	IEC62955 Standard AC30mA+DC6mA Residual Current protection (Should at least install a Type A RCD in front of charger)	F
PEN Fault Protection	Relay	Using for UK TN-C-S system for PEN loss protection	0
RFID	RFID module with card	Support to swipe RFID card stop&start charging	1
Electronic Lock	Electronic Lock	Support lock the plug when charging	2
DLB	Current Transformer	CT connected in main circuit only for single phase	3
	kWH meter(out Station)	kWH meter connected in main circuit both for single phase or three phase, other brand meter using please check the charger usage manual	4
LCD Display	COG 2.8 Inch display screen		5
OV&UV Protection, Over Current Protection, Voltage, Current, Power for Real Time Monitoring	kWH meter (in station)	Ocpp1.6J Protocol default choose a kWH meter with MID certificate	6
Surge Protective	SPD	Only for single phase	7
Emergency Stop	Emergency stop switch		8

Note: Model selection example: EKEC1-M-S-T2-22-A-12345678

EKEC1 Overall Installation Drawing



Product Introduction





Technical Data

EV Charging Modes	Mode 2 Charging
Rated Voltage	AC 240V±10%
Rated Current	Max 16A 3.5kW~ /Max 32A 7.3kW~
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
Streng	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
Colling	Natural Air Cooling
Mounting Method	Mounted on Walls, Poles or Equivalent Positions
Normal Environmental Conditions	Indoor Use; Outdoor Use

Function Data

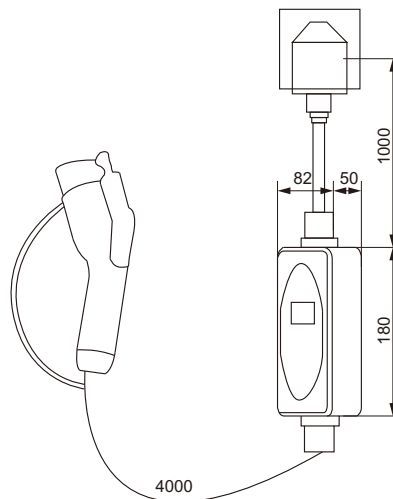
Status Indicating LED	
LCD Display	
Current Selection	3.6kW(6A/8A/10A/13A/16A) 7kW(6A/8A/10A/13A/16A/20A/25A/32A)
Charging Time Reservation	
Free PE Connection	
Over Temperature	
Over/Under Voltage Protection	
Over Current Protection	

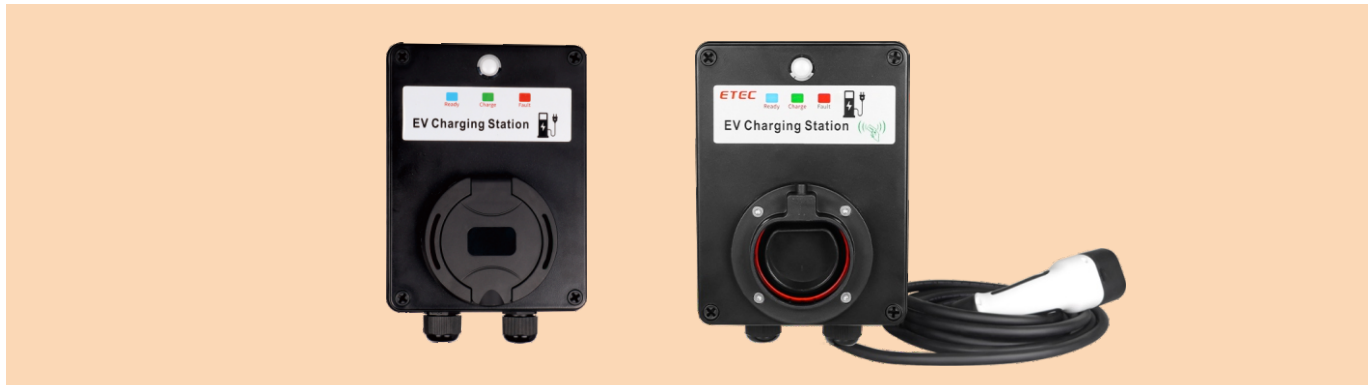
Product Selection

		Green: Simple Choice	Selection Code
			EKEC2
Model	Design Style A		A
	Design Style B		B
Power	3.6kW,AC230V±10% 50Hz,16A,1P+N+PE		3
	7.3kW,AC230V±10% 50Hz,32A,1P+N+PE		7
Car Side Plug	American Standard Type 1(T1):SAE J1772		T1
	European Standard Type 2(T2):IEC/EN 62196-2		T2
	Chinese Standard :GB/T20234.2-2015		GBT
Power Side Plug	CEE	7kW only can choose CEE	CEE
	Schuko		Schuko
	GB		GB
	UK		UK
	NEMA 6-20		NEMA
	AU		AU
	NZ		NZ
	Other (should confirm the plug before place a order)		
Bag	Bag with non woven bag B		B
	Without non-woven bag blank		

Note: Model Selection Example: EKEC2-A-3-T2-Schuko-B

EKEC2 Overall Drawing





Technical Data

EV Charging Modes	Mode 3 Charging
Rated Voltage	AC 240V \pm 10%, AC 420V \pm 10%
Rated Current	Max 16A, Max 32A
Rated Frequency	50Hz
Over Voltage Category (OVC)	OVC III
Insulation Resistance	R > 1 M Ω
AC Withstand Voltage	1430V
Impulse Dielectric Withstand Voltage (1,2 μ s/50 μ s)(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
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 $^{\circ}$ C~55 $^{\circ}$ C
Colling	Natural Air Cooling
Mounting Method	Mounted on Walls, Poles or Equivalent Positions:
Normal Environmental Conditions	Indoor Use;Outdoor Use
Product Dimension(mm)	357*245*123
Installation Dimension(mm)	180*280

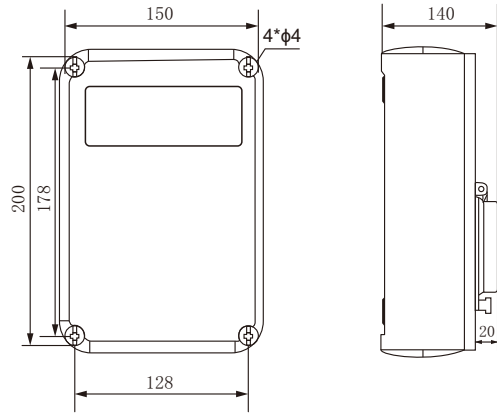
The AC chargers require external MCB for overload protection and short-circuit protection to be installed in upstream distribution box

Product Selection

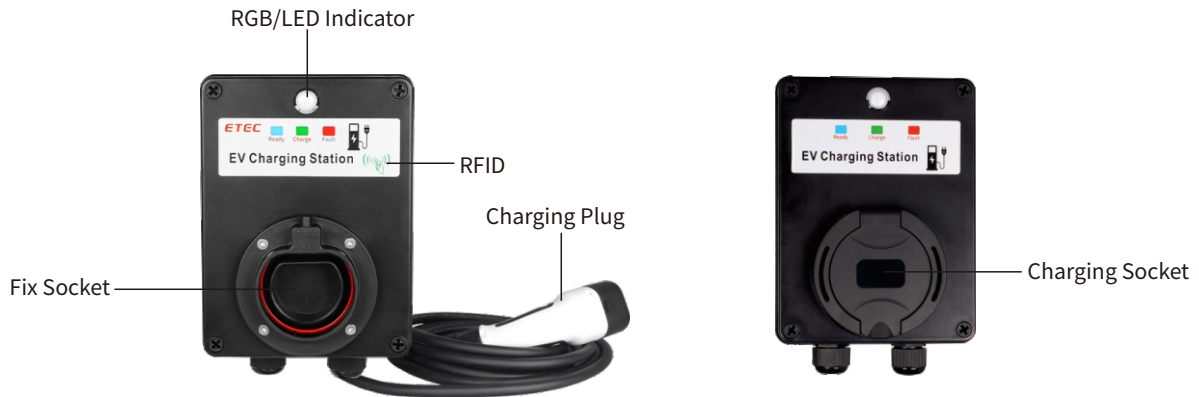
		● : Default Green : Simple Choice Blue : Multiple Choice	Selection Code
Model			EKEC4
Case B/C	Socket Type(Case B)		S
	Cable Type(Case C) default value is 5m,other lengths can be customized		C
Socket&Plug Standard	American Standard Type 1(T1):SAE J1772		T1
	European Standard Type 2(T2):IEC/EN 62196-2		T2
	Chinese Standard :GB/T20234.2-2015		GBT
Power	3.6KW,AC230V±10% 50Hz,16A,1P+N+PE		3
	7.3KW,AC230V±10% 50Hz,32A,1P+N+PE		7
	11KW,AC400V±10% 50Hz,16A,3P+N+PE		11
	22KW,AC400V±10% 50Hz,32A,3P+N+PE		22
Protection	Configuration Device		
Overtemperature Protection		Chip Overtemperature Protection	●
Residual Current Protection	RCMU	IEC62955 standard AC30mA+DC6mA residual current protection (Should at least install a Type A RCD in front of charger)	●
PEN Fault Protection	Relay	Using for UK TN-C-S system for PEN loss protection	0
RFID	RFID module with card	Support to swipe RFID card stop and start charging	1
Electronic Lock	Electronic Lock	Support to lock the plug when charging	2
DLB	Current Transformer	CT connected in main circuit only for single phase	3
	kWH meter(out Station)	kWH meter connected in main circuit both for single phase or three phase, other brand meter using please check the charger usage manual	4
OV&UV protection, Over current protection, voltage, current, Power for real time monitoring	kWH meter (in station)	a kWH meter with MID certificate	6
Surge Protective	SPD	Only for single phase	7
Emergency Stop	Emergency Stop Switch		8

Note: Model Selection Example: EKEC4-S-T2-22-12

EKEC4 Overall Installation Drawing



Product Introduction





Technical Data

EV Charging Modes	Mode 3 Charging
Rated Voltage	AC 240V \pm 10%
Rated Current	Max 32A
Power	Max:7.3kW
Rated Frequency:	50Hz
Over Voltage Category (OVC)	OVC III
Insulation Resistance	R > 1 M Ω ;
AC Withstand Voltage	1430V
Impulse Dielectric Withstand Voltage (1,2 μ s/50 μ s)(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	Support 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
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
Colling	Natural Air Cooling
Mounting Method	Mounted on Walls, poles or Equivalent Positions
Normal Environmental Conditions	Indoor Use;Outdoor Use
Product Dimension(mm)	357*245*123
Installation Dimension(mm)	180*280

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

Product Selection

		● : Default Green : Simple Choice Blue : Multiple Choice	Selection Code
Model			EKEC5
Net Mode	Ocpp1.6J Protocol	Support Ethernet, Wifi Communication using EKEPC2 controller	●
Case C	Cable type(Case C) default value is 5m,other lengths can be customized		●
Socket&Plug Standard	American standard Type 1(T1):SAE J1772		T1
	European Standard Type 2(T2):IEC/EN 62196-2		T2
	Chinese Standard :GB/T20234.2-2015		GBT
Power	3.6KW,AC230V±10% 50Hz,16A,1P+N+PE		3
	7.3KW,AC230V±10% 50Hz,32A,1P+N+PE		7
Protection	Configuration Device		
Overtemperature Protection		Chip Overtemperature Protection	●
Residual Current Protection	RCMU	IEC62955 standard AC30mA+DC6mA residual current protection (Should at least install a Type A RCD in front of charger)	●
PEN Fault Protection	Relay	Using for UK TN-C-S system for PEN loss protection	0
RFID	RFID Module with Card	Support to swipe RFID card stop and start charging	1
DLB	Current Transformer	CT connected in main circuit only for single phase	3
	kWH meter(out Station)	kWH meter connected in main circuit both for single phase or three phase, other brand meter using please check the charger usage manual	4
Emergency Stop	Emergency Stop Switch		●
Box Color		Silver Color Box	S
		Green Color Box	G
		Red Color Box	R

Note: Model Selection Example: EKEC5-T2-7-1-S

EKEC5 Overall Installation Drawing





Technical Data

EV Charging Modes	Mode 3 Charging
Rated Voltage	AC 240V \pm 10%, AC 420V \pm 10%
Rated Current	Max 16A, Max 32A
Rated Frequency:	50Hz
Over Voltage Category (OVC)	OVC III
Insulation Resistance	R > 1 M Ω ;
AC Withstand Voltage	1430V
Impulse Dielectric Withstand Voltage (1,2 μ s/50 μ s)(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
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 $^{\circ}$ C~55 $^{\circ}$ C
Colling	Natural Air Cooling
Mounting Method	Mounted on Walls, Poles or Equivalent Positions:
Normal Environmental Conditions	indoor Use;Outdoor Use
Product Dimension(mm)	357*245*123
Installation Dimension(mm)	180*280

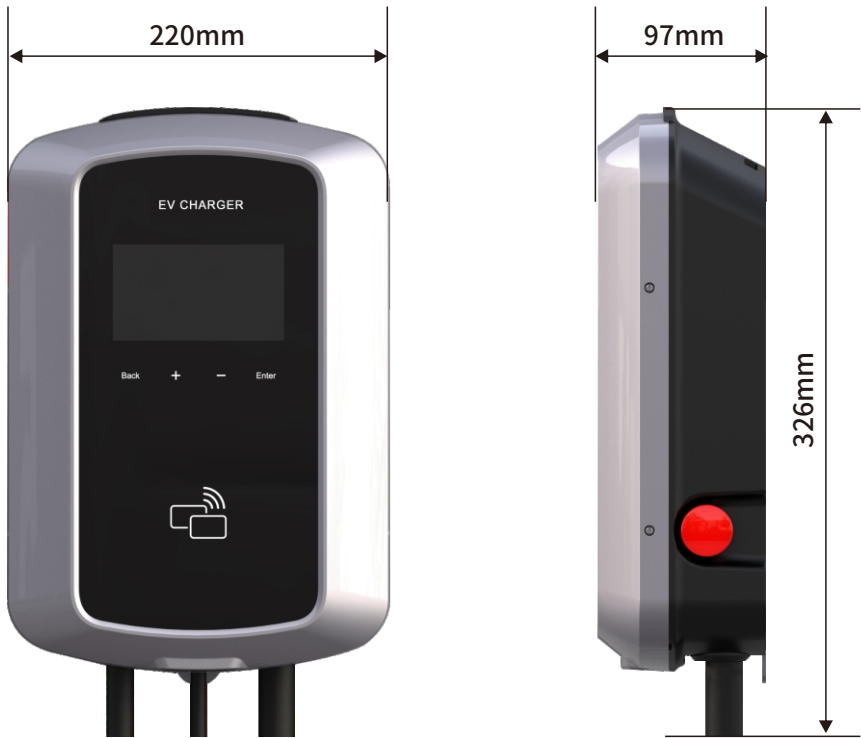
The AC chargers require external MCB for overload protection and short-circuit protection to be installed in upstream distribution box

Product Selection

		● : Default Green : Simple Choice Blue : Multiple Choice	Selection Code
Model			EKEC6
Net Mode	Ocpp1.6J Protocol	Support Ethernet, Wifi/4G/3G/2G Communication using EKEPC3 controller	●
	Remark	SIM card support band and area: LTE-FDD: B1/B3/B5/B7/B8/B20/B28 LTE-TDD: B38/B40/B41 GSM: B2/B3/B5/B8 Area: EMEA/APAC	
Case C	Cable type(Case C) default value is 5m,other lengths can be customized		●
Socket&Plug Standard	American standard Type 1(T1):SAE J1772		T1
	European Standard Type 2(T2):IEC/EN 62196-2		T2
	Chinese Standard :GB/T20234.2-2015		GBT
Power	3.6KW,AC230V±10% 50Hz,16A,1P+N+PE		3
	7.3KW,AC230V±10% 50Hz,32A,1P+N+PE		7
	11KW,AC400V±10% 50Hz,16A,3P+N+PE		11
	22KW,AC400V±10% 50Hz,32A,3P+N+PE		22
Protection	Configuration Device		●
Overtemperature Protection		Chip Overtemperature Protection	●
Residual Current Protection	RCMU	IEC62955 standard AC30mA+DC6mA residual current protection (Should at least install a Type A RCD in front of charger)	●
RFID	RFID Module with Card	Support swipe RFID card stop and start charging	1
DLB	Current Transformer	CT connected in main circuit only for single phase	3
	kWH meter(out Station)	kWH meter connected in main circuit both for single phase or three phase, other brand meter using please check the charger usage manual	4
LCD Display	COG 4 Inch Display Screen		5
Emergency Stop	Emergency Stop Switch		●
Box Color		Silver Color Box	S
		Silver+Red Color Box	R
		Silver+Green Color Box	G
		Silver+Blue Color Box	B

Note: Model Selection Example: EKEC6-T2-22-15-S

EKEC6 Overall Installation Drawing

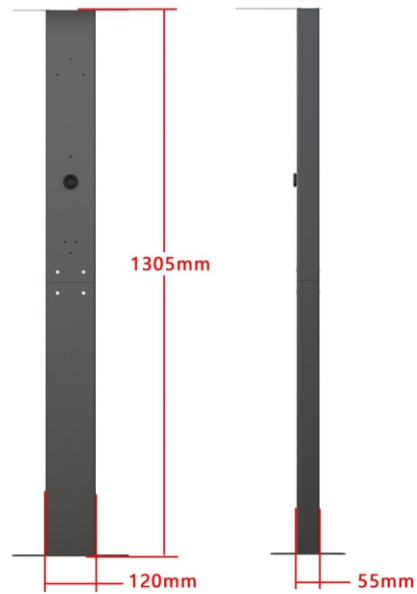
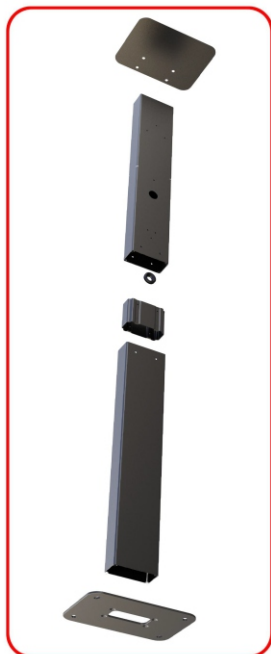




- Highlight
- 1.Suit for all portable EV charger
 - 2.Easy for installing

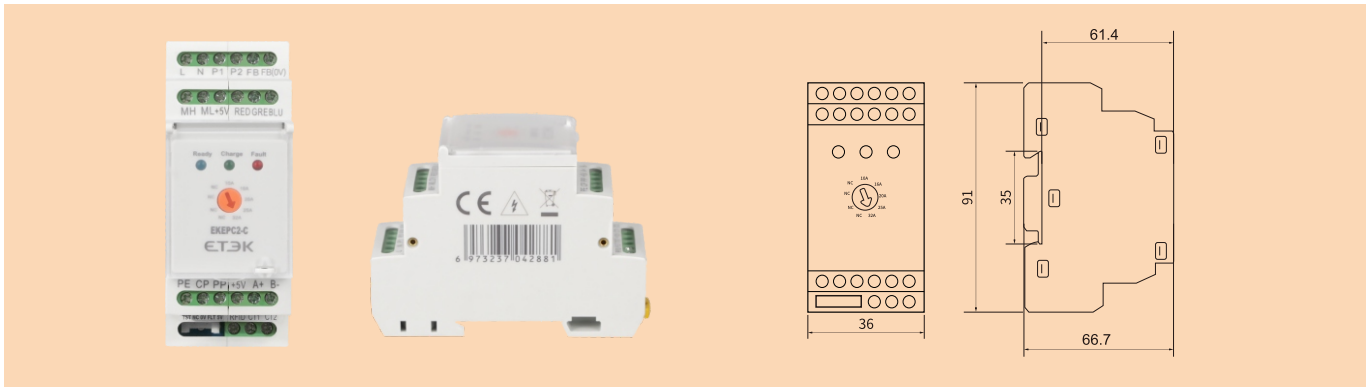


Overall Installation Drawing



Highlight

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

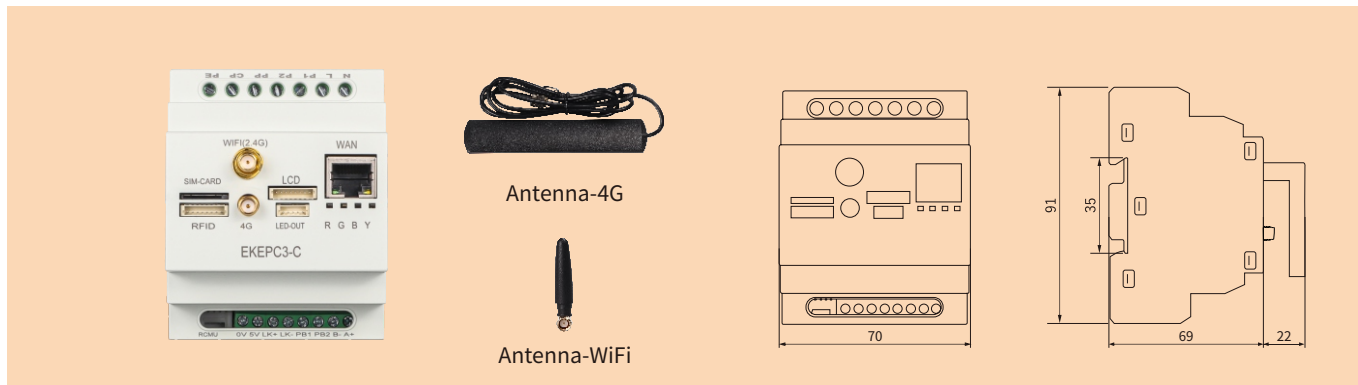


Brief Description

EKEPC2-C/S is using for AC EV Charging Station complies with IEC61851 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 EKEPC2 controller is Modbus-RTU protocol with RS485 communication,which can communication with controller read or write commands for charger,the controller additional functions including :non-contact IC card connection module(residual current monitoring unit),DLB management,LCD display,KWM Meter,Electronic lock,external emergency stop pushbutton,etc.These functiond must be NOTED when ordering

Technical Specification

Model	EKEPC2-C/S
Mode	Mode 3 charging
Operating Voltage	AC230V \pm 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	2:Overtemperature protection
Additional Function	1:RCMU DC6mA leakage monitoring with a axuliary device of RCMU 2:swipe RFID card/NFC start or stop charging function with a axuliary device of RFID module and cards 3:LCD display function with a auxiliary device of LCD screen 4:Electronic lock function with a device Electronic lock 5:DLB function with a axuliary device of CT or kWh meter 6:Overvoltage&Undervoltage protection 7:Over current protection 8:voltage,current,Power for real time monitoring with a axuliary of kWh meter 9:Emergency Stop function with a axuliary device of Pushbutom switch
Protocol(communication)	-Modbus-RTU Protocol and RS485 communication
Output Auxiliary Voltage	DC12V/100mA\DC5V/100mA
Ambient Temperature	-40 $^{\circ}$ C-+50 $^{\circ}$ C
Humidity	\leq 85%
IP Degree	IP22
Colling Method	Natural cooling
Installation Method	Din-Rail mounted

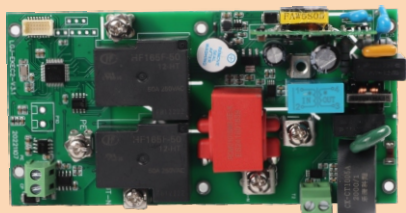


Brief Description

EKEPC3 is using for AC EV Charging Station complies with IEC61851 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 controller with a OCPP1.6J Protocol backend,also we can support a RS485 communication for KWH meter,the controller additional functions including : non-contact IC card connection module(residual current monitoring unit),DLB management,LCD display,KWM Meter,Electronic lock, external emergency stop pushbutton,etc.These functions 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	2:Overtemperature protection
Additional Function	1:RCMU DC6mA leakage monitoring with a axuliary device of RCMU 2:swipe RFID card/NFC start or stop charging function with a axuliary device of RFID module and cards 3:LCD display function with a auxiliary device of LCD screen 4:Electronic lock function with a device Electronic lock 5:DLB function with a axuliary device of CT or kWH meter 6:Overvoltage&Undervoltage protection 7:Over current protection 8:voltage,current,Power for real time monitoring with a axuliary of kWH meter 9:Emergency stop function with a axuliary device of pushbuttom switch
Protocol(communication)	-OCPP1.6J Protocol,Wifi,Ethernet communication -Modbus-RTU Protocol and RS485 communication only for kWH meter
Output Auxiliary Voltage	DC12V/100mA\DC5V/100mA
Ambient Temperature	-40°C-+50°C
Humidity	<=85%
IP Degree	IP22
Colling Method	Natural cooling
Installation Method	Din-Rail mounted

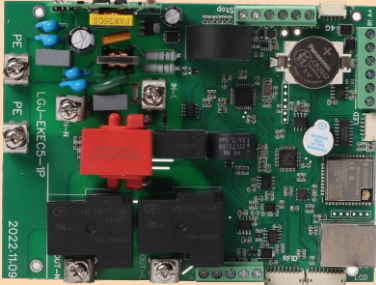


Brief Description

EKEPCB1 is using for model 2 portable EV charger complies with IEC61851 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/S
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:Overvoltage&Undervoltage protection 4:Over current protection 5:voltage,current,Power for real time monitoring
Additional Function	LCD display function with a auxiliary device of LCD screen
Output Auxiliary Voltage	DC12V/100mA\DC5V/100mA
Ambient Temperature	-40°C-+50°C
Humidity	<=85%
Colling Method	Natural cooling
Installation Method	PCB mounted



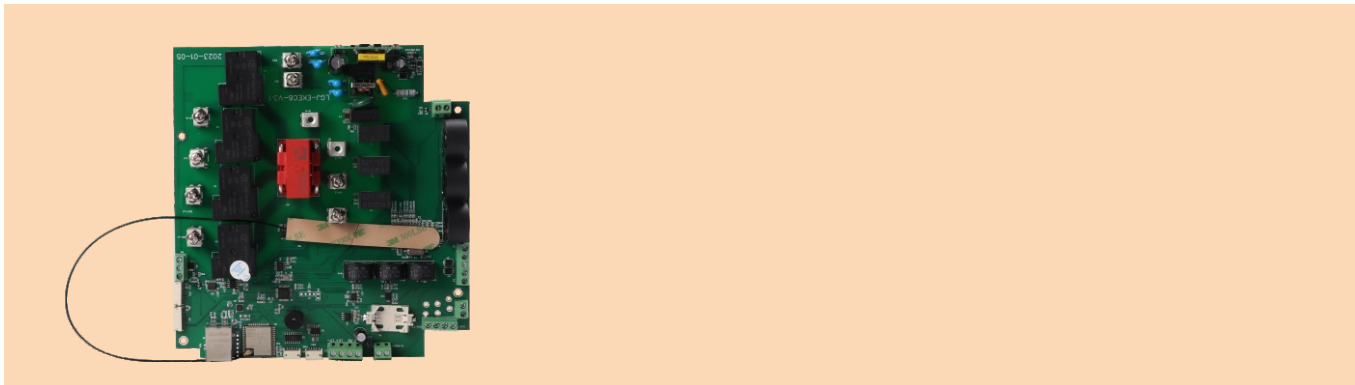
Brief Description

EKEPCB2 is using for AC EV Charging Station complies with IEC61851 or SAEJ1772 standard and PCB installation requirement. The output of the relay is used to connect to the realy that switches on/off the load,Rated voltage is 230V~,Rated current can adjustable form 1A-32A.

The EKEPCB2 controller is OCPP1.6J protocol with WIFI,Ethernet net communication,which can communication with controller with a OCPP1.6J Protocol backend,also we can support a RS485 communication for KWH meter,the controller additional functions including : non-contact IC card connection module(residual current monitoring unit),DLB management,LCD display,KWM 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
Outputthe PWM Signal	Max:32A,1-32A adjustable
Basic Function	1:RCMU DC6mA leakage monitoring 2:Overtemperature protection 3:Overvoltage&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 a axiliary device of RFID module and cards 2:LCD display function with a auxiliary device of LCD screen 3:Electronic lock function with a device Electronic lock 4:DLB function with a axiliary device of CT or kWH meter 5:Emergency Stop function with a axiliary device of Pushbutom switch
Protocol(communication)	-OCPP1.6J Protocol,Wifi,Ethernet communication -Modbus-RTU Protocol and RS485 communication only for kWH meter
Output Auxiliary Voltage	DC12V/100mA\DC5V/100mA
Ambient Temperature	-40°C+50°C
Humidity	<=85%
Colling Method	Natural cooling
Installation Method	PCB mounted



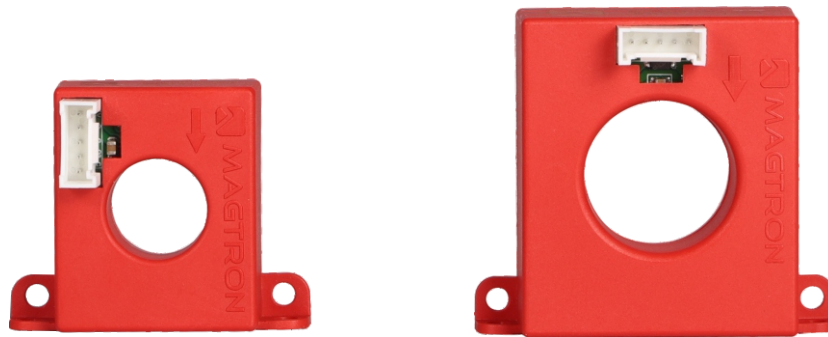
Brief Description

EKEPCB3 is using for AC EV Charging Station complies with IEC61851 or SAEJ1772 standard and PCB installation requirement. The output of the relay is used to connect to the really that switches on/off the load, Rated voltage is 400V~, Rated current can adjustable form 1A-32A.

The EKEPCB3 controller is OCPP1.6J protocol with WIFI, Ethernet net communication, which can communication with controller with a OCPP1.6J Protocol backend, also we can support a RS485 communication for KWH meter, the controller additional functions including: non-contact IC card connection module (residual current monitoring unit), DLB management, LCD display, KWM 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	<ol style="list-style-type: none"> 1: RCMU DC6mA leakage monitoring 2: Overtemperature protection 3: Overvoltage & Undervoltage protection 4: Over current protection 5: voltage, current, Power for real time monitoring
Additional Function	<ol style="list-style-type: none"> 1: swipe RFID card/NFC start or stop charging function with a auxiliary device of RFID module and cards 2: LCD display function with a auxiliary device of LCD screen 3: Electronic lock function with a device Electronic lock 4: DLB function with a auxiliary device of CT or kWH meter 5: Emergency Stop function with a auxiliary device of Pushbutom switch
Protocol (communication)	<ul style="list-style-type: none"> - OCPP1.6J Protocol, Wifi, Ethernet communication - Modbus-RTU Protocol and RS485 communication only for kWH meter
Output Auxiliary Voltage	DC12V/100mA \ DC5V/100mA
Ambient Temperature	-40°C +50°C
Humidity	≤ 85%
Colling Method	Natural cooling
Installation Method	PCB mounted

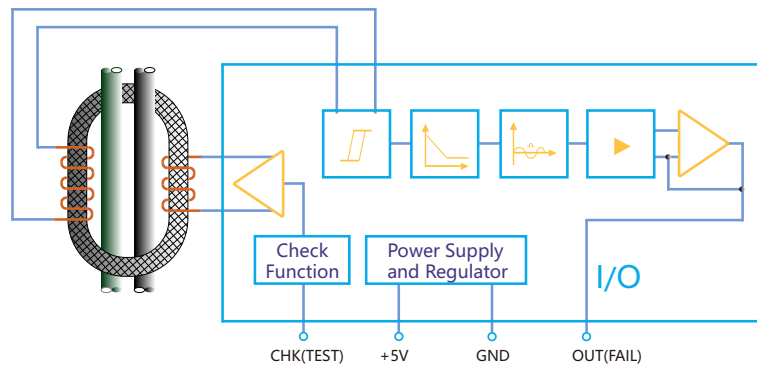


RCMU Function

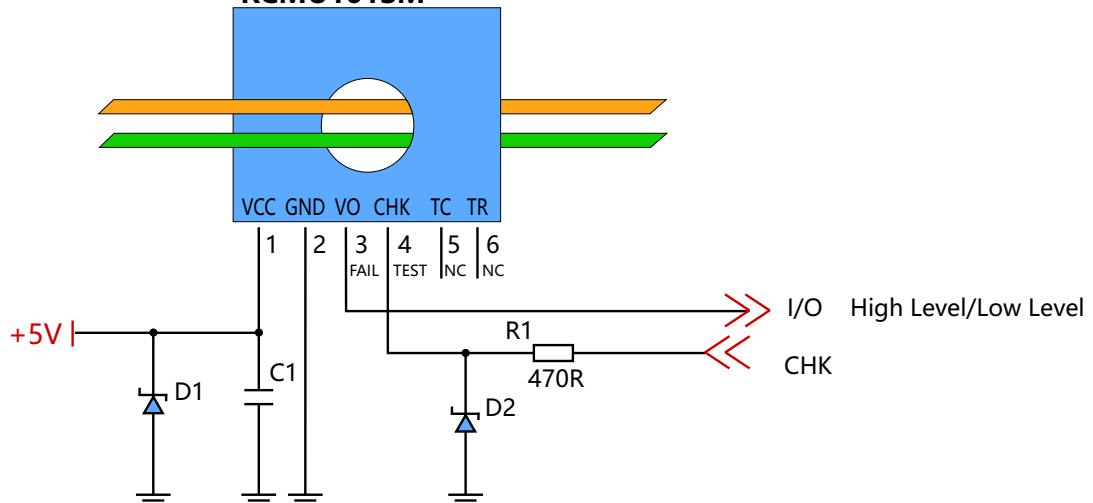
RCMU Function Brief Outline

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



RCMU101SM

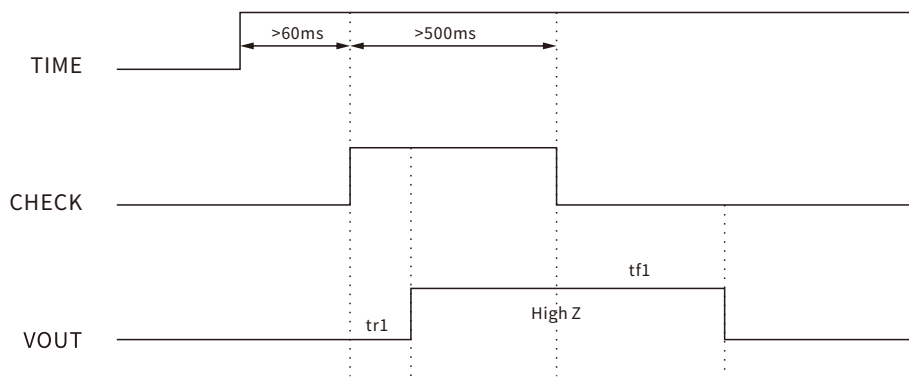


RCMU Function

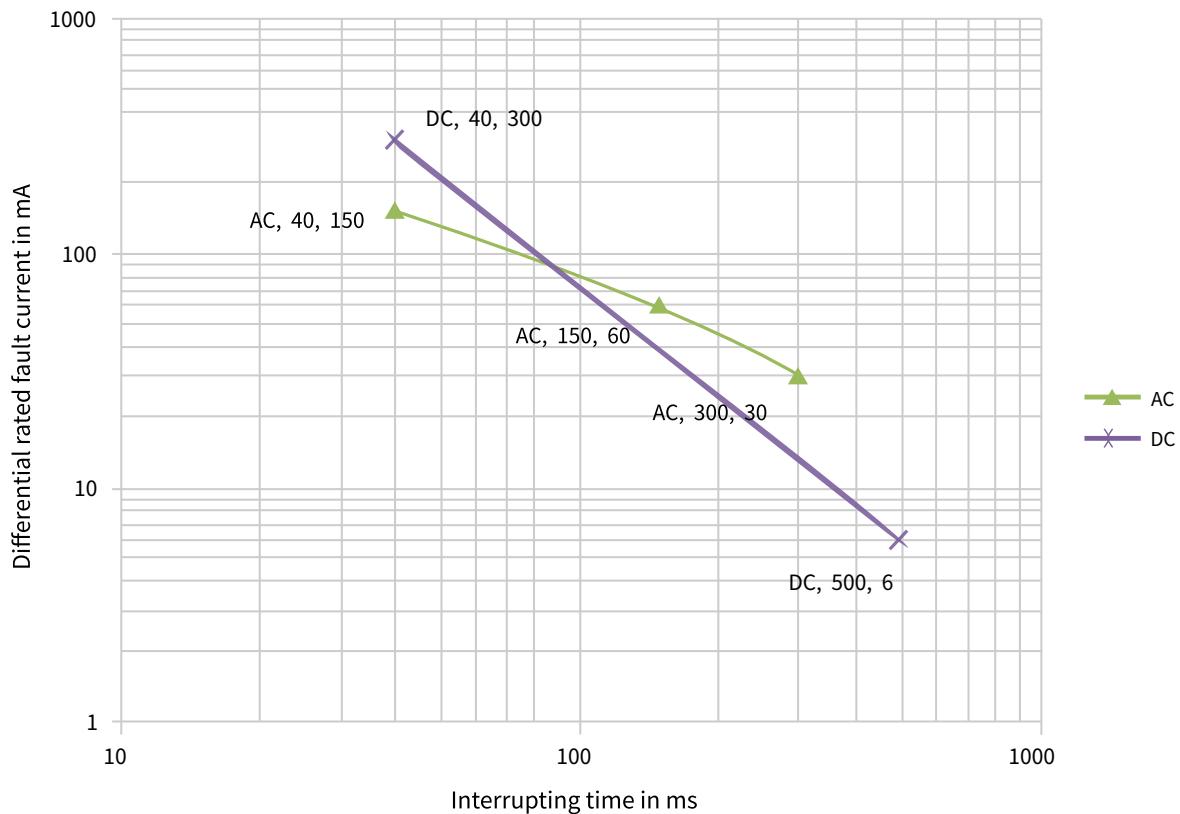
RCMU Self-Check Function

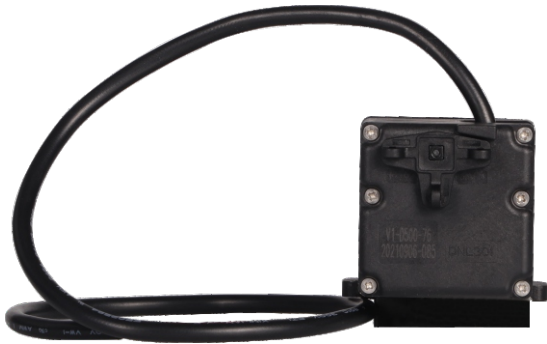
When the main circuit is not working, the leakage current is 0, and Vout is at low level (0V) at this time .
 (a) When the CHK PIN pin is set to high level (3.3-5V), Vout rises from low level to high voltage (Vcc) at this time.
 (b) When the CHK PIN pin is set to low level (0.2v), the Vout generated 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



Interrupt time according to IEC62752 & IEC 62955





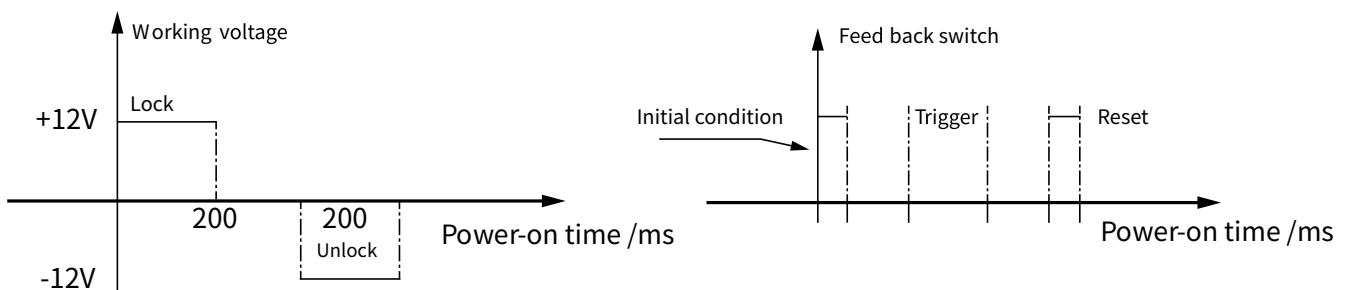
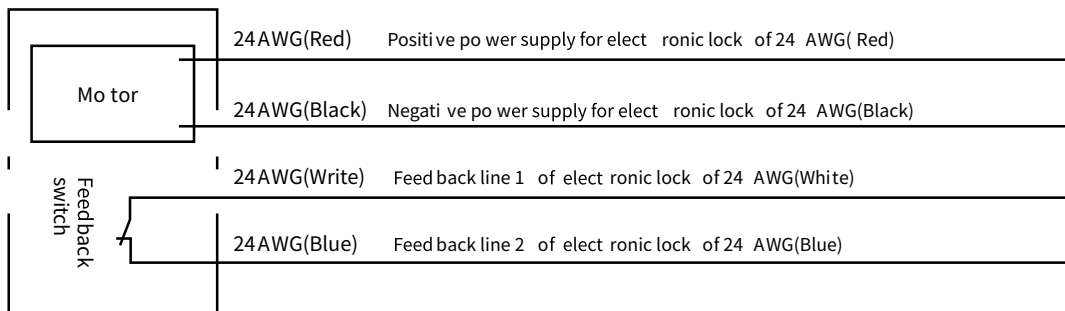
Impluse electronic Lock Technical Parameters

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 humidity	-40°C~+80°C
Electrical life	≥3,0000 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	≥3,0000 cycles

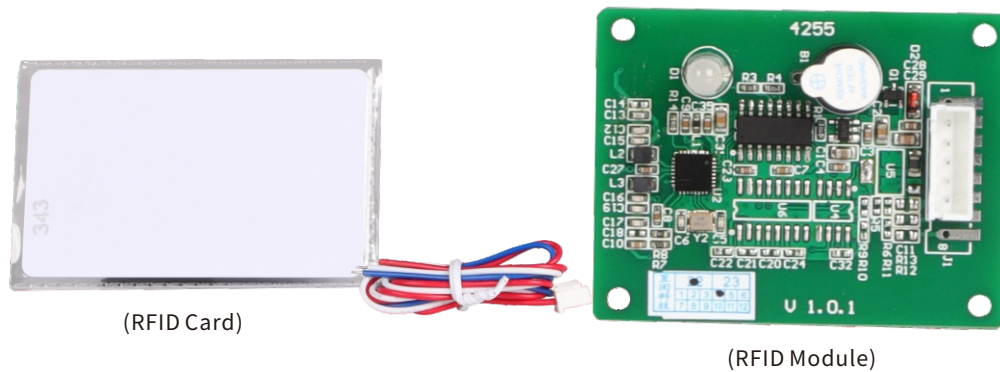
Function Description

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



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.

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.

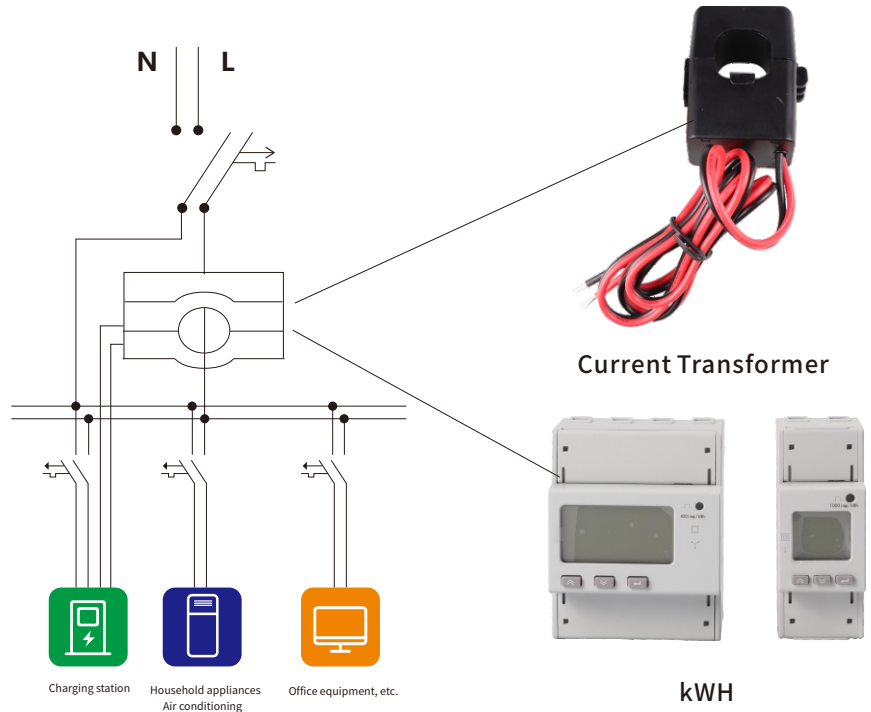
When it is detected that the current of the main circuit is less than the set current, the charging station will continue to increase the charging current until 32A or 63A.

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

DLB Function Application Legend

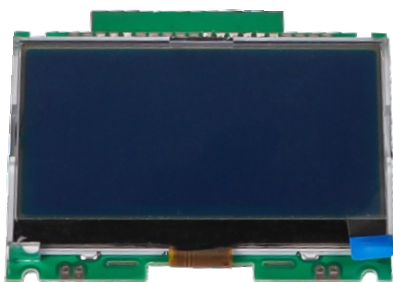


Current Transformer Access Function

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.

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.



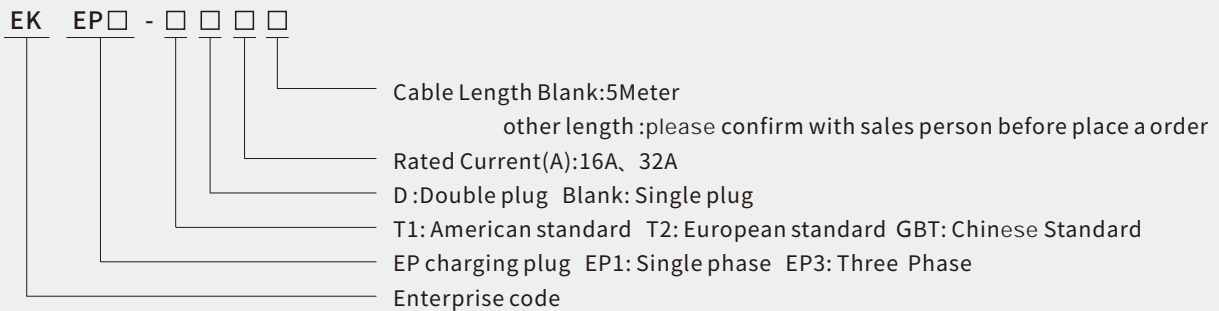
Display Content

<p>EKEC Series Charging Station</p> <p>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</p>
--

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



Naming Rule



Brief Description

Human appearance design, beautiful and fashionable, in line with the modern aesthetics and ergonomic design concept, easy to use.

The product conform to IEC62196-1, IEC62196-2 European standard and SAEJ1772-2010 American standard.

Protection degree: IP65

Product Selection

Model	Specification	Cable
EKEP1-T2	Single phase : 16A	3*2.5mm ² +2*0.5mm ²
	Single phase : 32A	3*6mm ² +2*0.5mm ²
EKEP3-T2	Three phase : 16A	5*2.5mm ² +2*0.5mm ²
	Three phase : 32A	5*6mm ² +2*0.5mm 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

Mechanical 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

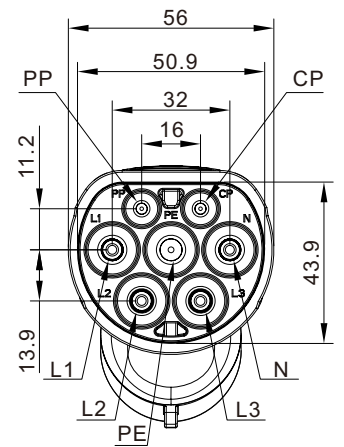
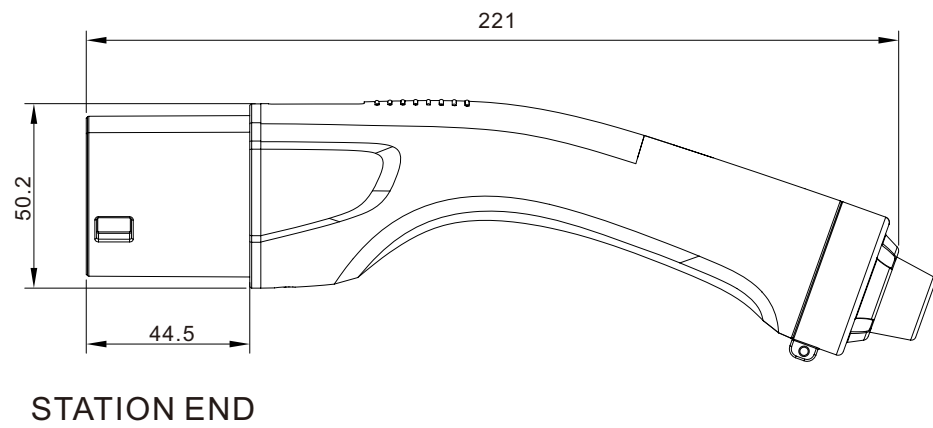
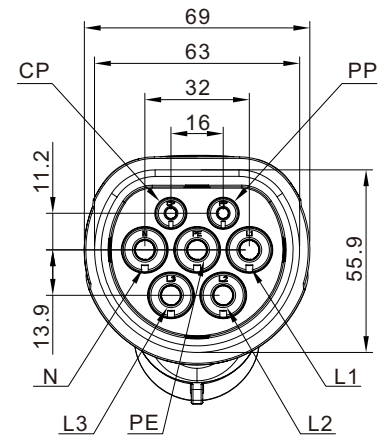
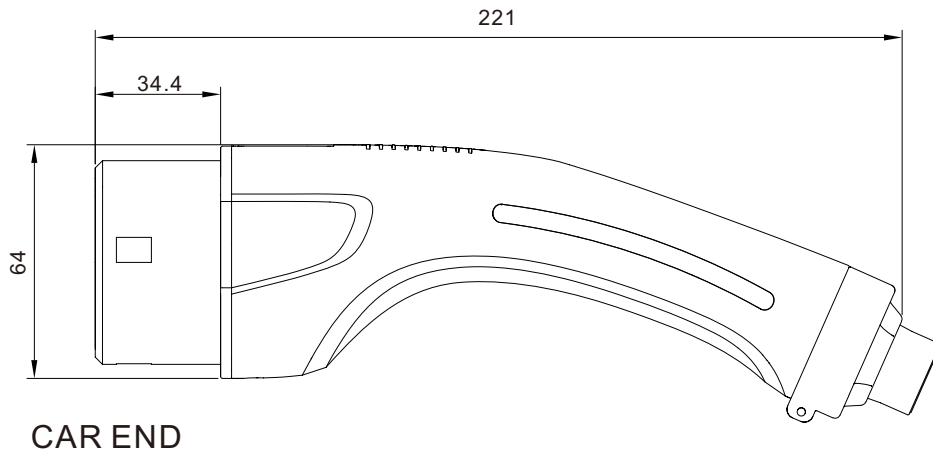
Conductor Material	Copper alloy + silver plating
Enclosure Material	Thermoplastic flame retardant plastic, flame retardant grade UL94V-0

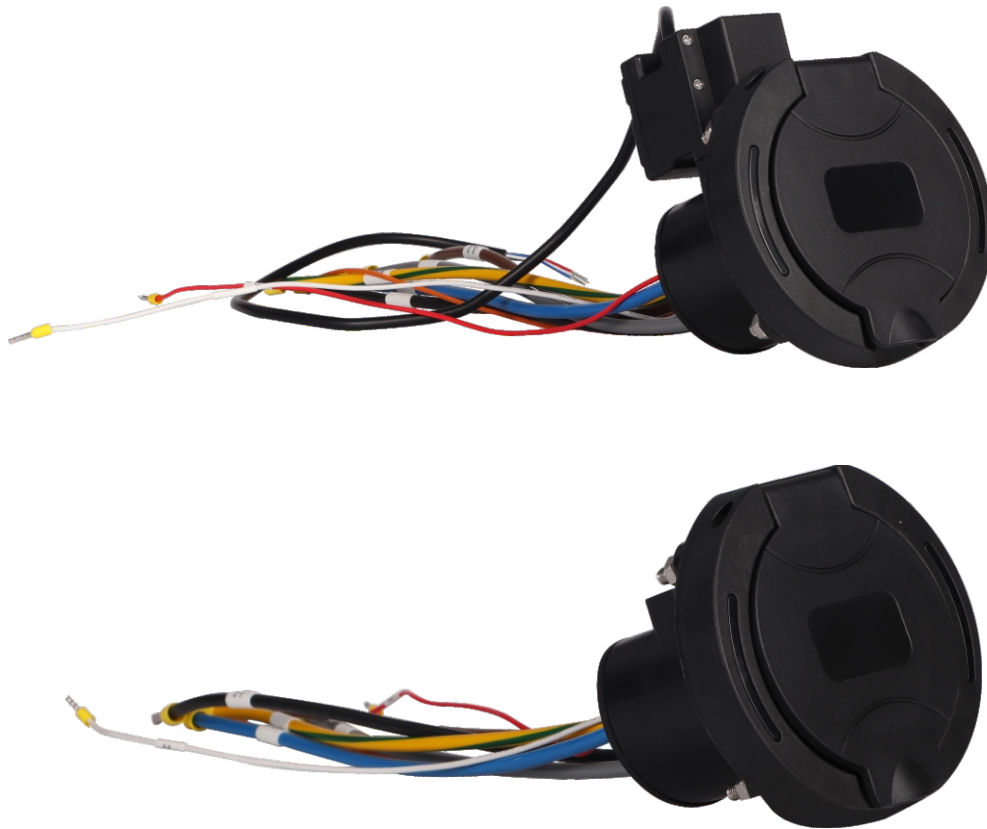
Ambient Condition

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

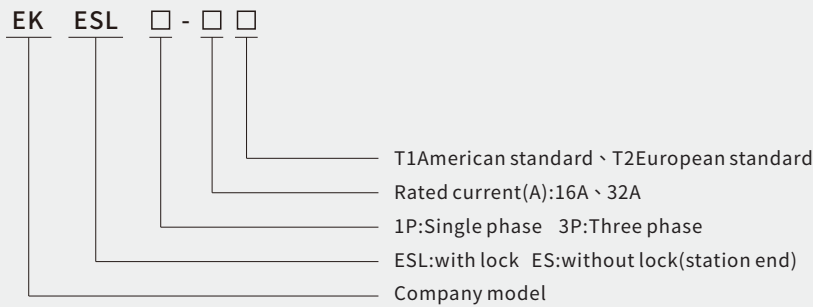
Product Dimension

UNIT : MM





Naming Rules



Brief Description

Human appearance design, beautiful and fashionable, in line with the modern aesthetics and economic design concept, easy to use.

The product conform to IEC62196-2 and SAE J1772 standard standard.

Protection degree: IP65

Mainly used in the charging mode 3 of the IEC61851 standard

Product Selection

Model	Specification	Cable
EKES-1-16-T2	Single phase : 16A/230V	3*2.5mm ² +2*0.5mm ²
EKES-1-32-T2	Single phase : 32A/230V	3*6mm ² +2*0.5mm ²
EKESL-1-16-T2	Single phase : 16A/230V	3*2.5mm ² +2*0.5mm ²
EKESL-1-32-T2	Single phase : 32A/230V	3*6mm ² +2*0.5mm ²
EKES-3-16-T2	Three phases : 16A/400V	5*2.5mm ² +2*0.5mm ²
EKES-3-32-T2	Three phases : 32A/400V	5*6mm ² +2*0.5mm ²
EKESL-3-16-T2	Three phases : 16A/400V	5*2.5mm ² +2*0.5mm ²
EKESL-3-32-T2	Three phases : 32A/400V	5*6mm ² +2*0.5mm ²

Main Parameter

Electrical Performance

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

Mechanical Performance

Mechanical Life	5,000 times or more
Insertion / Pulling Force During Connection	<100N(P), <75N(V)
Withstanding Impact	Tolerable to 2 ton car rolling or 1m height drop without damage

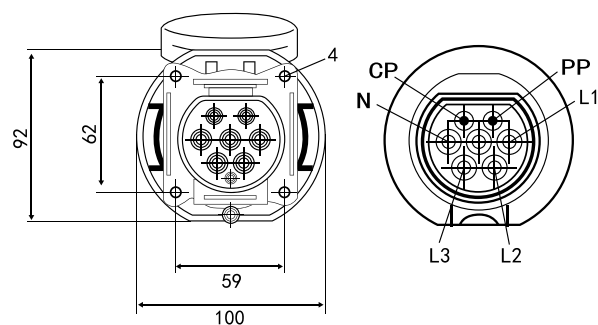
Major Material

Conductor Material	Copper alloy+ Ag plated
Enclosure Material	Thermoplastic flame retardant material, flame retardant grade UL94V-0

Ambient Condition

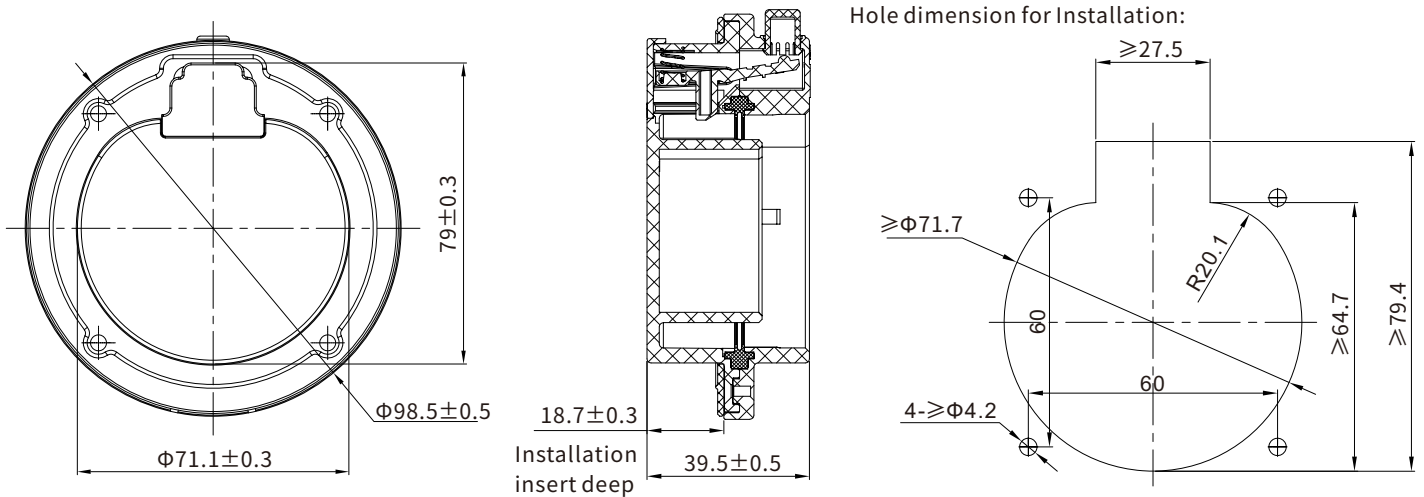
Ambient Temperature	-40°C-+50°C
Humidity	<85%

Product Dimension





Appearance And Installation Dimension



UNIT:MM


EKL1-63B 10kA Type B EV RCCB

Residual Current Circuit Breaker

Standard_ IEC61008-1
IEC62423



Technical Data


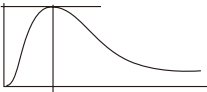
Electrical Features	Mode	Electromagnetic
	Type(wave form of the earth leakage sensed)	B
	Rated current I_n	25,40,63A
	Poles	2P(1P+N), 4P(3P+N)
	Rated voltage U_e	2P 240V~, 4P 415V~
	Insulation voltage U_i	500V
	Rated frequency	50/60Hz
	Rated residual operation current($I_{\Delta n}$)	30mA
	Rated residual making and breaking capacity ($I_{\Delta m}$)	500A($I_n \leq 40A$), 10In($I_n > 40A$)
	Short-circuit current $I_{nc} = I_{\Delta c}$	10,000A
	SCPD fuse	 10000
	Break time under $I_{\Delta n}$	$\leq 0.1s$
	Rated impulse withstand voltage(1.5/50) U_{imp}	4000V
	Dielectric test voltage at ind.Freq. for 1min	2.5kV
	Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles	
Installation	Contact position indicator	Yes
	Protection degree	IP20
	Ambient temperature(with daily average $\leq 35^\circ C$)	$-25^\circ C \sim +40^\circ C$
	Storage temperature	$-25^\circ C \sim +70^\circ C$
	Terminal connection type	Cable/Pin-type busbar/U-type busbar
	Terminal size top/bottom for cable	25mm ² 18-3AWG
	Terminal size top/bottom for busbar	25mm ² 18-3AWG
	Tightening torque	2.5Nm 22In-lbs
	Mounting	On DIN rail EN60715(35mm) by means of fast clip device
Connection	Power supply in both directions	

EKL1-63B 10kA Type B EV RCCB

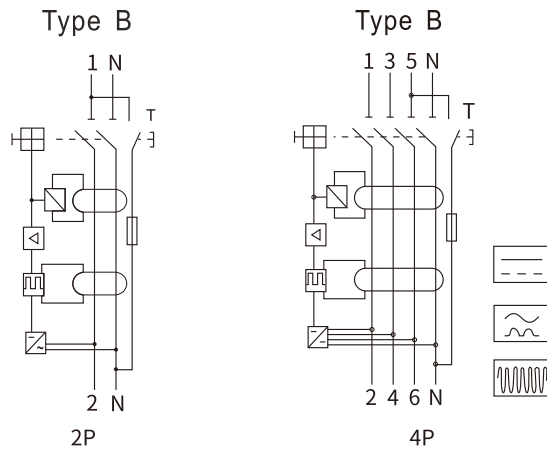
Residual Current Circuit Breaker

Standard_ IEC61008-1
IEC62423

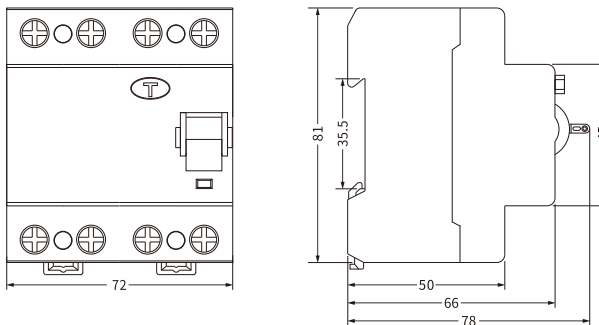
Tripping Current Range	Type	Tripping current I_{Δ}/A		
	A	AC	$0.5I_{\Delta n} < I_{\Delta} < I_{\Delta n}$	
A		Lagging Angle	$I_{\Delta n} > 0.01A$	$I_{\Delta n} \leq 0.01A$
		0°	$0.35I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.35I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$
		90°	$0.25I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.25I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$
135°	$0.11I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.11I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$		

Alternative Current Sensitive	Pulsating direct current sensitive	Surge current proof
<p>B class</p> <p>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.</p>	 <p>They react to AC and pulsating DC fault current which reach 0 or almost 0 within one time period of the mains frequency.</p>	 <p>RCCB' s surge capacity. Not tripping at standardized 8/20 us surge-current waves acc.to VDE 0432 Part 2 with surge current values of up to 250A.</p>

Circuit Diagram



Overall and Installation Dimension(mm)



EKL6-100B 10kA Type B EV RCCB


ETEK®

Residual Current Circuit Breaker

Standard_ IEC61008-1
IEC62423



Technical Data

Electrical Features	Mode	Electromagnetic
	Type(wave form of the earth leakage sensed)	B
	Rated current I_n	25,40,63,80,100A
	Poles	2P,4P
	Rated voltage U_e	2P 240V~, 4P 415V~
	Insulation voltage U_i	500V
	Rated frequency	50/60Hz
	Rated residual operation current($I_{\Delta n}$)	30mA
	Rated residual making and breaking capacity ($I_{\Delta m}$)	500A($I_n \leq 40A$), 10 I_n ($I_n > 40A$)
	Short-circuit current $I_{nc} = I_{\Delta c}$	10,000A
	SCPD fuse	 10000
	Break time under $I_{\Delta n}$	$\leq 0.1s$
	Rated impulse withstand voltage(1.5/50) U_{imp}	4000V
	Dielectric test voltage at ind.Freq. for 1min	2.5kV
	Electrical life	2,000 Cycles
	Mechanical life	4,000 Cycles
Installation	Contact position indicator	Yes
	Protection degree	IP20
	Ambient temperature(with daily average $\leq 35^\circ C$)	$-25^\circ C \sim +40^\circ C$
	Storage temperature	$-25^\circ C \sim +70^\circ C$
	Terminal connection type	Cable/Pin-type busbar/U-type busbar
	Terminal size top/bottom for cable	35mm ² 18-3AWG
	Terminal size top/bottom for busbar	35mm ² 18-3AWG
	Tightening torque	2.5Nm 22In-lbs
Mounting	On DIN rail EN60715(35mm) by means of fast clip device	
Connection	Power supply in both directions	


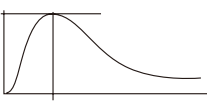
EKL6-100B 10kA Type B EV RCCB



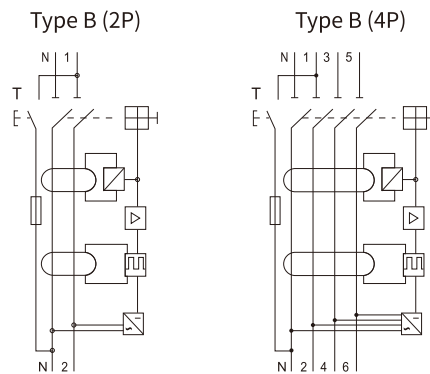
Residual Current Circuit Breaker

Standard_ IEC61008-1
IEC62423

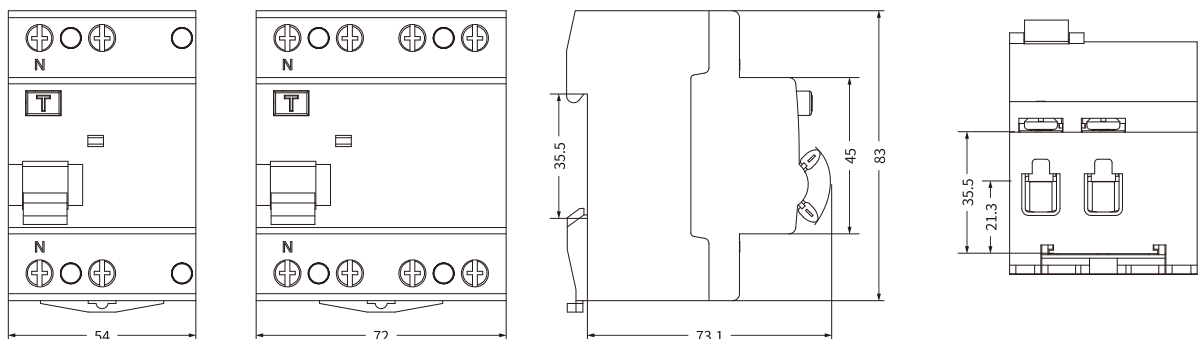
Tripping Current Range	Lagging Angle	$I_{\Delta n} > 0.01A$	$I_{\Delta n} \leq 0.01A$
	0°	$0.35I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.35I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$
	90°	$0.25I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.25I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$
	135°	$0.11I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.11I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$

Alternative Current Sensitive	Pulsating direct current sensitive	Surge current proof
<p>B class</p> <p>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.</p>	 <p>They react to AC and pulsating DC fault current which reach 0 or almost 0 within one time period of the mains frequency.</p>	 <p>RCCB' s surge capacity. Not tripping at standardized 8/20 us surge-current waves acc.to VDE 0432 Part 2 with surge current values of up to 250A.</p>

Circuit Diagram



Overall and Installation Dimension(mm)



EKL6-63A 10kA Type A EV RCCB


ETEK®

A Type RCCB 30mA+RDC-MD DC6mA

Standard_ IEC61008-1
IEC62955



Technical Data


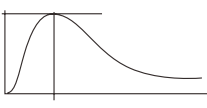
Electrical Features	Mode	Electromagnetic	
	Type(wave form of the earth leakage sensed)	A	
	Rated current I_n	25,40,63A	
	Poles	2P,4P	
	Rated voltage U_e	2P 240V~, 4P 415V~	
	Insulation voltage U_i	500V	
	Rated frequency	50/60Hz	
	Rated residual operation current($I_{\Delta n}$)	30mA	
	Rated residual operating current($I_{\Delta dc}$)	6mA	
	Rated residual making and breaking capacity ($I_{\Delta m}$)	500A($I_n \leq 40A$), 10In($I_n > 40A$)	
	Short-circuit current $I_{nc} = I_{\Delta c}$	10,000A	
	SCPD fuse	 10000	
	Break time under $I_{\Delta n}$	$\leq 0.1s$	
	Rated impulse withstand voltage(1.5/50) U_{imp}	4000V	
	Dielectric test voltage at ind.Freq. for 1min	2.5kV	
	Electrical life	2,000 Cycles	
	Mechanical life	4,000 Cycles	
	Installation	Contact position indicator	Yes
		Protection degree	IP20
Ambient temperature(with daily average $\leq 35^\circ C$)		$-25^\circ C \sim +40^\circ C$	
Storage temperature		$-25^\circ C \sim +70^\circ C$	
Terminal connection type		Cable/Pin-type busbar/U-type busbar	
Terminal size top/bottom for cable		35mm ² 18-3AWG	
Terminal size top/bottom for busbar		35mm ² 18-3AWG	
Tightening torque		2.5Nm 22In-lbs	
Mounting		On DIN rail EN60715(35mm) by means of fast clip device	
Connection	Power supply in both directions		

EKL6-63A 10kA Type A EV RCCB

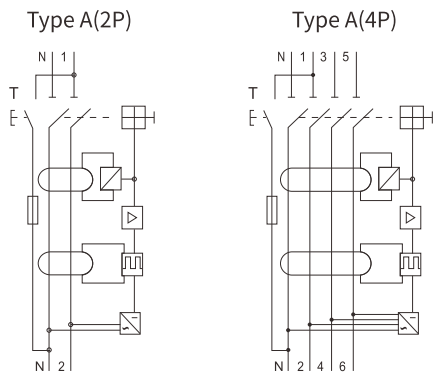
A Type RCCB 30mA+RDC-MD DC6mA

Standard_ IEC61008-1
IEC62955

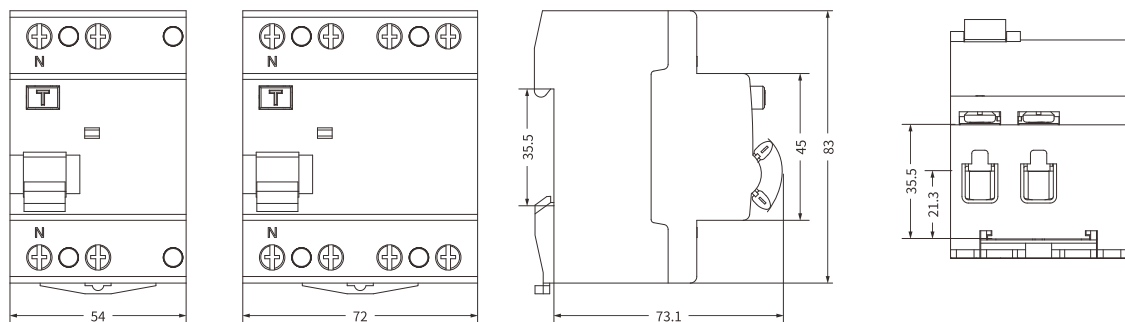
Tripping Current Range	Lagging Angle		
	0°	$I\Delta n > 0.01A$	$I\Delta n \leq 0.01A$
	90°	$0.35I\Delta n \leq I\Delta \leq 1.4I\Delta n$	$0.35I\Delta n \leq I\Delta \leq 2I\Delta n$
	135°	$0.25I\Delta n \leq I\Delta \leq 1.4I\Delta n$	$0.25I\Delta n \leq I\Delta \leq 2I\Delta n$

Alternative Current Sensitive	Pulsating direct current sensitive	Surge current proof
<p>B class</p> <p>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.</p>	 <p>They react to AC and pulsating DC fault current which reach 0 or almost 0 within one time period of the mains frequency.</p>	 <p>RCCB's surge capacity. Not tripping at standardized 8/20 us surge-current waves acc.to VDE 0432 Part 2 with surge current values of up to 250A.</p>

Circuit Diagram



Overall and Installation Dimension(mm)



EKL5-63B 10kA Type B EV RCBO

ETEK®

B TYPE RCCB with Overcurrent Protection

Standard_ IEC61009-1
IEC62423



Technical Data


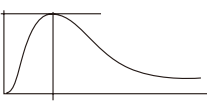
Electrical Features	Mode	Electronic
	Type	B
	Rated current I_n	16,20,25,32,40,50,63A
	Poles	2P(1P+N),4P(3P+N)
	Rated voltage U_e	2P 240V~
		4P 415V~
	Insulation voltage U_i	500V
	Rated frequency	50/60Hz
	Rated residual operating current($I_{\Delta n}$)	30mA
	Break time under $I_{\Delta n}$	$\leq 0.1s$ (S type $< 0.5s$)
	Rated breaking capacity	10,000A
	Energy limiting class	3
	Rated impulse withstand voltage(1.5/50) U_{imp}	4,000V
	Dielectric test voltage at ind.Freq. for 1min	2kV
	Pollution degree	2
Thermo-magnetic release characteristic	B,C	
Mechanical Features	Electrical life	4,000 Cycles
	Mechanical life	10,000 Cycles
	Contact position indicator	Yes
	Protection degree	IP20
	Reference temperature for setting of thermal element	30°C
	Ambient temperature (with daily average $\leq 35^\circ\text{C}$)	-25°C~+55°C
	Storage temperature	-25°C~+70°C
Installation	Terminal connection type	Cable/Pin-type busbar/U-type busbar
	Terminal size top/bottom for cable	25mm ² 18-3AWG
	Terminal size top/bottom for busbar	25mm ² 18-3AWG
	Tightening torque	2.5Nm 22In-lbs
	Mounting	On DIN rail EN60715(35mm) by means of fast clip device
	Connection	From top
Combination with accessories	Auxiliary contact	EKM1-OF
	Alarm contact	EKM1-FB
	Shunt release	EKM1-MX

EKL5-63B 10kA Type B EV RCBO

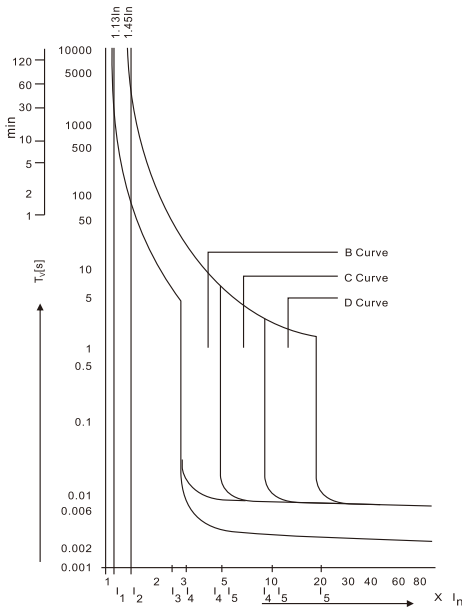
B TYPE RCCB with Overcurrent Protection

Standard_ IEC61009-1
IEC62423

Tripping Current Range	Lagging Angle	$I\Delta n > 0.01A$	$I\Delta n \leq 0.01A$
	0°	$0.35I\Delta n \leq I\Delta \leq 1.4I\Delta n$	$0.35I\Delta n \leq I\Delta \leq 2I\Delta n$
	90°	$0.25I\Delta n \leq I\Delta \leq 1.4I\Delta n$	$0.25I\Delta n \leq I\Delta \leq 2I\Delta n$
	135°	$0.11I\Delta n \leq I\Delta \leq 1.4I\Delta n$	$0.11I\Delta n \leq I\Delta \leq 2I\Delta n$

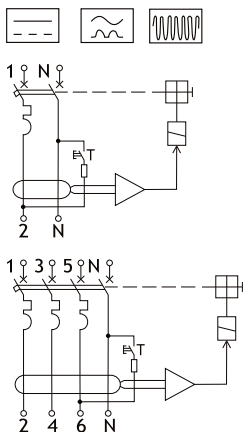
Detectable wave form	Pulsating direct current sensitive	Surge current proof
<p>B class</p> <p>Tripping is ensured for sinusoidal AC residual currents pulsed DC residual currents, alternating residual sinusoidal currents up to 1000Hz, pulsating direct residual currents and for smooth direct residual currents, whether applied suddenly or increasing slowly.</p>	 <p>They react to AC and pulsating DC fault current which reach 0 or almost 0 within one time period of the mains frequency.</p>	 <p>RCCB' s surge capacity. Not tripping at standardized 8/20 us surge-current waves acc.to VDE 0432 Part 2 with surge current values of up to 250A.</p>

Characteristics Curves

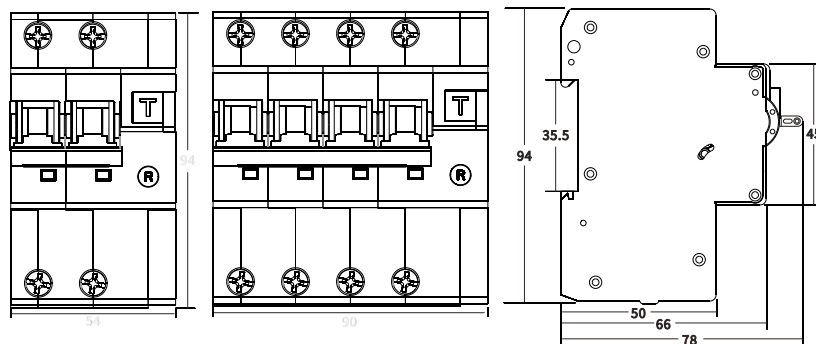


As per IEC60898	Thermal Tripping			Magnetic Tripping		
	No tripping current	Tripping current I_2	Time Limits t	Hold current I_4	Trip current I_5	Time Limits t
B Curve	$1.13 \times I_N$	$1.45 \times I_N$	$\geq 1h$ $< 1h$	$3 \times I_N$	$5 \times I_N$	$\geq 0.1s$ $< 0.1s$
C Curve	$1.13 \times I_N$	$1.45 \times I_N$	$\geq 1h$ $< 1h$	$5 \times I_N$	$10 \times I_N$	$\geq 0.1s$ $< 0.1s$
D Curve	$1.13 \times I_N$	$1.45 \times I_N$	$\geq 1h$ $< 1h$	$10 \times I_N$	$20 \times I_N$	$\geq 0.1s$ $< 0.1s$

Circuit Diagram



Overall and Installation Dimension(mm)



EKL5-63A 10kA Type A EV RCBO

A Type RCBO 30mA+RDC-MD DC6mA

Standard_ IEC61009-1
IEC62955



Technical Data


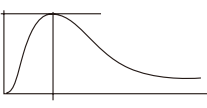
Electrical Features	Mode	Electronic
	Type	A
	Rated current I_n	16,20,25,32,40,50,63A
	Poles	2P(1P+N),4P(3P+N)
	Rated voltage U_e	2P 240V~
		4P 415V~
	Insulation voltage U_i	500V
	Rated frequency	50/60Hz
	Rated residual operating current($I_{\Delta n}$)	30mA
	Rated residual operating current($I_{\Delta dc}$)	6mA
	Break time under $I_{\Delta n}$	$\leq 0.1s$ (S type $< 0.5s$)
	Rated breaking capacity	10,000A
	Energy limiting class	3
	Rated impulse withstand voltage(1.5/50) U_{imp}	4,000V
	Dielectric test voltage at ind.Freq. for 1min	2kV
Pollution degree	2	
Thermo-magnetic release characteristic	B,C	
Mechanical Features	Electrical life	4,000 Cycles
	Mechanical life	10,000 Cycles
	Contact position indicator	Yes
	Protection degree	IP20
	Reference temperature for setting of thermal element	30°C
	Ambient temperature (with daily average $\leq 35^\circ C$)	-25°C~+40°C
	Storage temperature	-25°C~+70°C
Installation	Terminal connection type	Cable/Pin-type busbar/U-type busbar
	Terminal size top/bottom for cable	25mm ² 18-3AWG
	Terminal size top/bottom for busbar	25mm ² 18-3AWG
	Tightening torque	2.5Nm 22In-lbs
	Mounting	On DIN rail EN60715(35mm) by means of fast clip device
	Connection	From top
Combination with accessories	Auxiliary contact	EKM1-OF
	Alarm contact	EKM1-FB
	Shunt release	EKM1-MX

EKL5-63A 10kA Type A EV RCBO

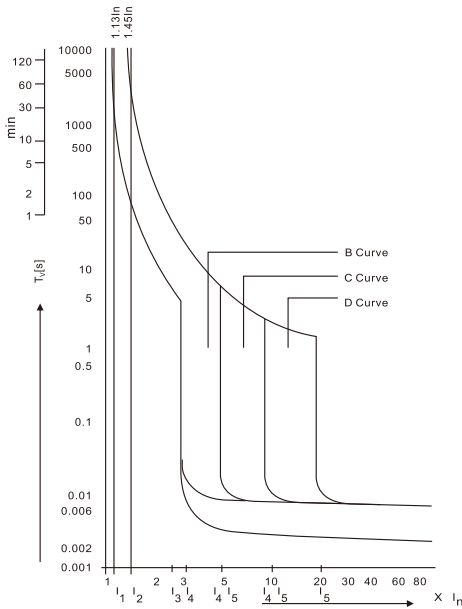
A Type RCBO 30mA+RDC-MD DC6mA

Standard_ IEC61009-1
IEC62955

Tripping Current Range	Lagging Angle	$I_{\Delta n} > 0.01A$	$I_{\Delta n} \leq 0.01A$
	0°	$0.35I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.35I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$
	90°	$0.25I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.25I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$
	135°	$0.11I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.11I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$

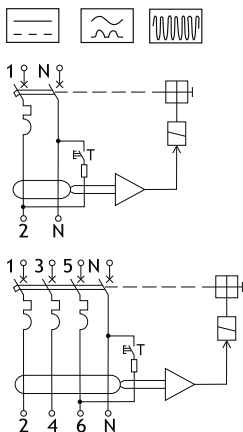
Detectable wave form	Pulsating direct current sensitive	Surge current proof
<p>B class</p> <p>Tripping is ensured for sinusoidal AC residual currents pulsed DC residual currents, alternating residual sinusoidal currents up to 1000Hz, pulsating direct residual currents and for smooth direct residual currents, whether applied suddenly or increasing slowly.</p>	 <p>They react to AC and pulsating DC fault current which reach 0 or almost 0 within one time period of the mains frequency.</p>	 <p>RCCB' s surge capacity. Not tripping at standardized 8/20 us surge-current waves acc.to VDE 0432 Part 2 with surge current values of up to 250A.</p>

Characteristics Curves

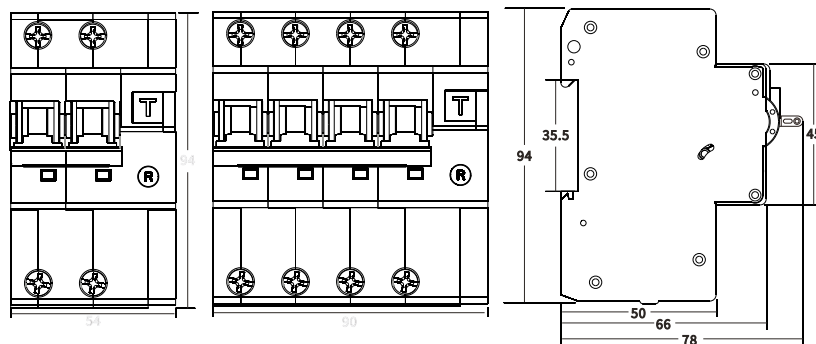


As per IEC60898	Thermal Tripping			Magnetic Tripping		
	No tripping current	Tripping current I_2	Time Limits t	Hold current I_4	Trip current I_5	Time Limits t
B Curve	$1.13 \times I_N$	$1.45 \times I_N$	$\geq 1h$ $< 1h$	$3 \times I_N$	$5 \times I_N$	$\geq 0.1s$ $< 0.1s$
C Curve	$1.13 \times I_N$	$1.45 \times I_N$	$\geq 1h$ $< 1h$	$5 \times I_N$	$10 \times I_N$	$\geq 0.1s$ $< 0.1s$
D Curve	$1.13 \times I_N$	$1.45 \times I_N$	$\geq 1h$ $< 1h$	$10 \times I_N$	$20 \times I_N$	$\geq 0.1s$ $< 0.1s$

Circuit Diagram



Overall and Installation Dimension(mm)



Automatic Type



2P/25A



4P/25A



2P/40, 63A



4P/40, 63A



Aux.

Manual Type



2P/25A



4P/25A



2P/40, 63A



4P/40, 63A

Technical Data

◆ Electrical Features


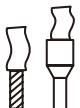
Voltage rating (Ue)	1P,2P	250V AC
	3P,4P	400V AC
Frequency	50/60Hz	
Endurance(O-C)	1,000,000	
Electrical Life	100,000	
Maximum Number of Switching Operation a Day	100	
Additional Characteristics		
Insulation Voltage(Ui)	500V AC	
Pollution Degree	2	
Rated Impulse With Stand Voltage(Uimp)	2.5kV(4kV@ 12/24/48VAC)	
Degree of protection(IEC 60529)	IP20 IP40	
Operating Temperature	-5°C~+60°C ⁽¹⁾	
Storage Temperature	-40°C~+70°C	
Tropicalization(IEC 60068-1)	Treatment 2(relative humidity 95% at 55°C)	

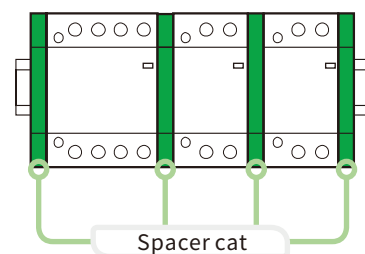
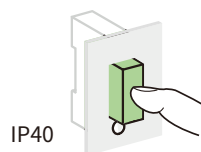
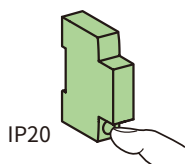
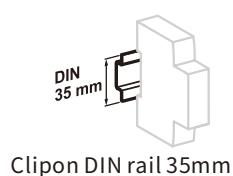
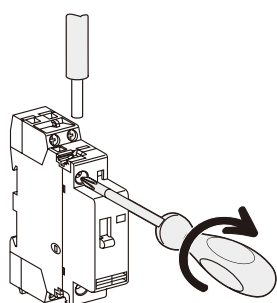
ELSV Compliance(Extra Low Safety Voltage)for 12/24/48VAC Versions

The Product Control Conforms To The SELV(safety extra low voltage) Requirements

(1)In the case of contactor mounting in a enclosure for which the interior temperature is in range between 50°Cand60°C,it is necessary to use a spacer,between each contactor.

Connection

Type	Rating(In)	Spacer cat	Circuit	Tightening Torque	Copper Cables	
					Rigid	Flexible or Ferrule
EKMF	PZ1:4MM	9mm	Control	0.8N.m		
					1.5~2.5mm ² 2×1.5mm ²	1.5~2.5mm ² 2×2.5mm ²
	PZ2:6MM	14mm	Power	3.5N.m	1.5~6mm ²	1~4mm ²
					6~25mm ² 6×3.5mm ²	6~16mm ² 6~35mm ²



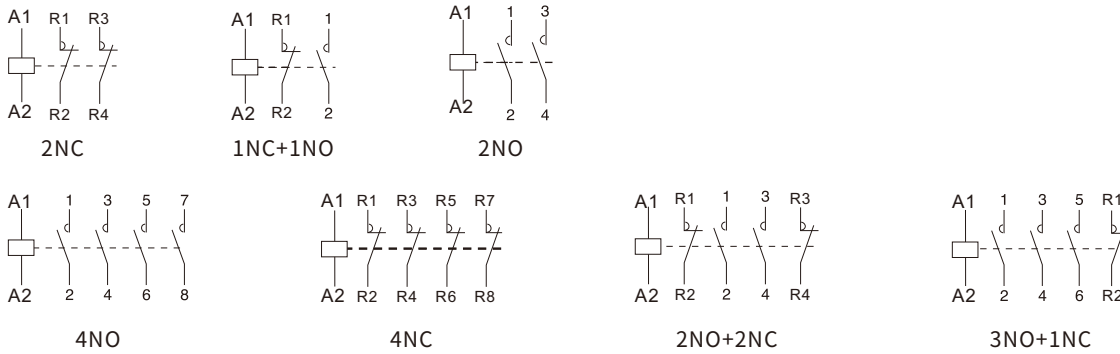
EKMF Contactors-50Hz

	Rating(In)		Control Voltage (VAC)(50/60Hz)	Consumption		Max.Power
	AC-7a	AC-7b		Holding	Inrush	
2P	16A	6A	220...240	2.7VA	9.2VA	1.2W
	20A	7A	220...240	2.7VA	9.2VA	1.2W
	25A	9A	220...240	3.8VA	15VA	1.2W
	40A	18A	220...240	4.6VA	34VA	1.6W
	63A	25A	220...240	4.6VA	34VA	1.6W
	100A	-	220...240	6.5VA	53VA	2.1W
4P	16A	6A	220...240	4.6VA	34VA	1.6W
	25A	9A	220...240	4.6VA	34VA	1.6W
	32A	12A	220...240	6.5VA	53VA	2.1W
	40A	18A	220...240	6.5VA	53VA	2.1W
	63A	25A	220...240	6.5VA	53VA	2.1W
	100A	-	220...240	13VA	103VA	4.2W

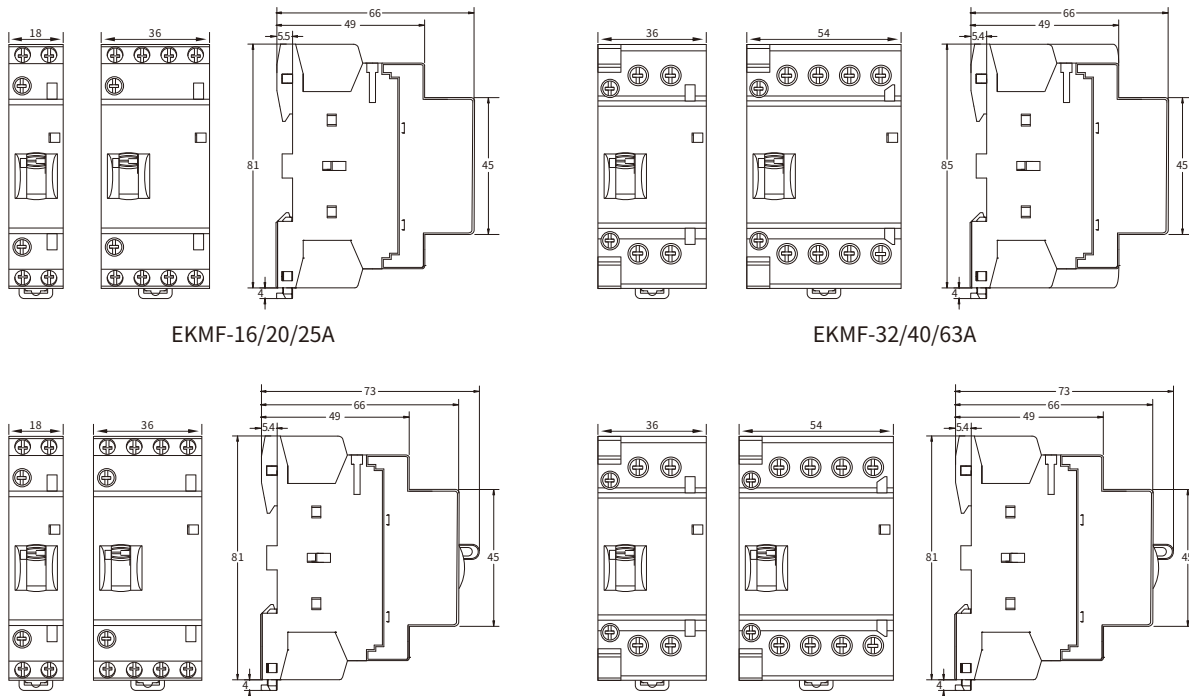
EKMF Manual Control Contactor-50Hz

	Rating(In)		Control Voltage (VAC)(50/60Hz)	Consumption		Max.Power
	AC-7a	AC-7b		Holding	Inrush	
2P	25A	9A	220...240	2.7VA	9.2VA	1.2W
	40A	18A	220...240	4.6VA	34VA	1.6W
	63A	25A	220...240	4.6VA	34VA	1.6W
4P	25A	9A	220...240	4.6VA	34VA	1.6W
	40A	18A	220...240	6.5VA	53VA	2.1W
	63A	25A	220...240	6.5VA	53VA	2.1W

Circuit Diagram



Overall and Installation Dimension(mm)



EKMF-16/20/25A

EKMF-32/40/63A

EKMF manual control contactor 16/25A

EKMF manual control contactor 40/63A

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