



DC No-Polarity Breaker

EDB1 Series DC No-Polarity Miniature Circuit Breaker

Leading Manufacturer Protects Solar Power Safety

Rev1.0 2022/12/06



DC NO-POLARITY ISOLATED SWITCH

EDB1-63 series DC isolated switch



Product Application

EDB1-63 Series PV DC Isolator switches are mainly be used in PV solar power system, which are applied for DC solar combiner box. controller etc. The Max voltage up to 1000V DC, current up to 63A.

Product Benefits

- Functions: Unfrequent operation and Isolation
- Rated Current:Up to 63A
- Rated Voltage:1000VDC
- Comply with:IEC60947-3 GB/T 14048.3

Select Code



Code	Name	Description
1	brand	E
2	DC	D
3	Miniature Circuit Breaker	B
4	Frame Current	63A
5	Rated current	10:10A 32:32A 16:16A 40:40A 20:20A 50:50A 25:25A 63:63A
6	Poles	1:1P 2:2P 3:3P 4:4P

Appearance Introduction



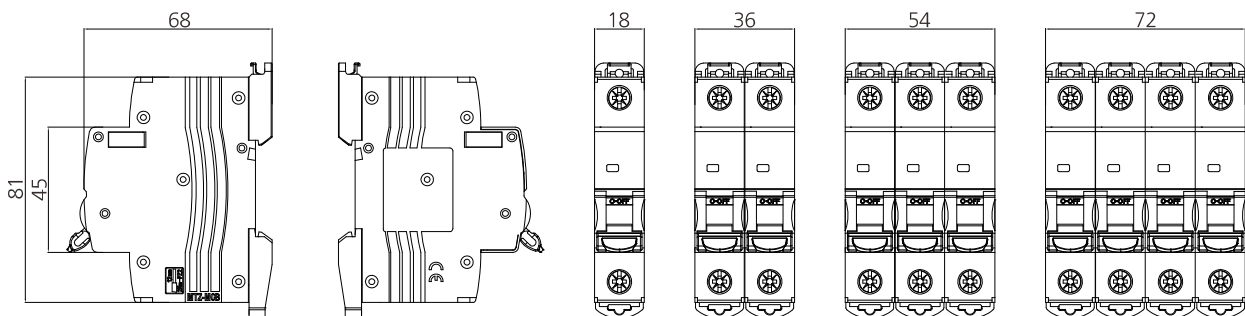
EDB1-63 series DC isolated switch

According to EN60947-3, AS/NZS 60947.3

Technical Data		1P	2P	3P	4P
Pole					
Rated Working Voltage	Ue	250V DC	500V DC	750V DC	1000V DC
Frame Current		63A			
Rated Current	In	10A,16A, 20A, 25A, 32A,40A, 50A, 63A			
Rated Insulation Voltage	Ui	1000V			
Rated Impulse Withstand Voltage	Uimp	6kV			
Electrical Life	Actual	2000 Cycles			
	Standard	1500 Cycles			
Mechanical Life	Actual	20000 Cycles			
	Standard	8500 Cycles			
Overvoltage Category		III			
Pollution Degree		3			
Ingress Protection		IP40; Wiring port IP20			
Resistance to humidity and heat		Class 2			
Relative Humidity		≤ 95 %			
Vibration		acc. to IEC60068-2-6			
Shocks		acc. to IEC60068-2-27			
Terminal capacity		2.5-25mm ²			
Fastening Torque of Terminals		2.5 N·m			
Ambient Temperature		-30°C~70°C			
Storage Temperature		-40°C~85°C			
Installation Method		DIN			
Elevation		≤2000m			
Dimension		Width:18mm/Pole			
		High: 92mm			
		Depth: 74mm			

Contacts Configurations				
Pole	1P	2P	3P	4P
Contacts Configurations				

Dimensions



DC NO-POLARITY BREAKER

EDB1-63 series DC No-Polarity Miniature Circuit Breaker



Product Application

The circuit breaker has the functions of short circuit protection, overload protection, control, isolation and so on. It is suitable for terminal power distribution, civil construction, energy control, communication, and infrastructure construction fields.

Product Benefits

- Overload and the short circuit protection function
- Rated short circuit breaking capacity up to 10 kA
- Non-polarity and Polarity both available
- Rated Current In up to 63A
- Rated Voltage up to 1000V
- Designed for PV, energy storage and other DC applications
- AS/NZS 60947.2 and IEC 60947-2 standard



Select Code

E	D	B	1	-	63	□ / □	□ / □	□
1	2	3			4	5	6	7

Code	Name	Description
1	ONCCY brand	E
2	DC	D
3	Miniature Circuit Breaker	B
4	Frame Current	63A
5	Breaking Capacity	Nil: 6kA H: 10kA
6	Tripping curve	B C
7	Rated current	10:10A 32:32A 16:16A 40:40A 20:20A 50:50A 25:25A 63:63A
8	Poles	1:1P 2:2P 3:3P 4:4P
9	Rated Working Voltage	Nil: Normal Voltage H: High Voltage

EDB1-63 series DC No-Polarity Miniature Circuit Breaker

Appearance Introduction



Technical Data

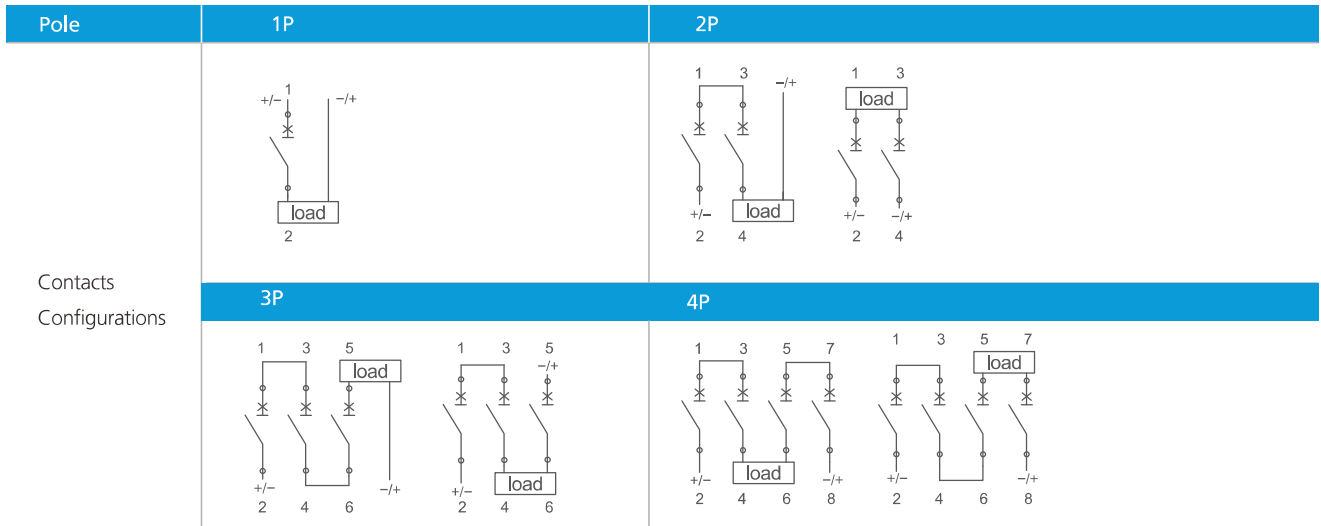
According to EN60947-2, AS/NZS 60947.2

Pole		1P	2P	3P	4P
Rated Working Voltage	Normal Voltage U _e	250V DC	500V DC	750V DC	1000V DC
	High Voltage U _e	300V DC	600V DC	900V DC	1200V DC
Frame Current		63A			
Rated Current	I _n	10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A			
Rated Insulation Voltage	U _i	1200V			
Rated Impulse Withstand Voltage	U _{imp}	6kV			
Tripping Characteristics		B/C			
Tripping Type		Thermal Magnetic			
Rated Ultimate Short-Circuit Breaking Capacity	I _{cu}	6/10kA			
Rated Service Short-Circuit Interrupting Capacity	I _{cs}	6/7.5 kA			
Electrical Life	Actual	2000 Cycles			
	Standard	1500 Cycles			
Mechanical Life	Actual	20000 Cycles			
	Standard	8500 Cycles			
Overvoltage Category		III			
Pollution Degree		3			
Ingress Protection		IP40; Wiring port IP20			
Resistance to humidity and heat		Class 2			
Relative Humidity		≤ 95 %			
Vibration		acc. to IEC60068-2-6			
Shocks		acc. to IEC60068-2-27			
Terminal capacity		2.5-25mm ²			
Fastening Torque of Terminals		2.5 N·m			
Ambient Temperature		-30°C~70°C			
Storage Temperature		-40°C~85°C			
Installation Method		DIN			
Elevation		≤2000m			
Dimension		Width: 18mm/Pole			
		High: 68mm			
		Depth: 81mm			
Weight		125.3g	250.55g	375.9g	501.1g

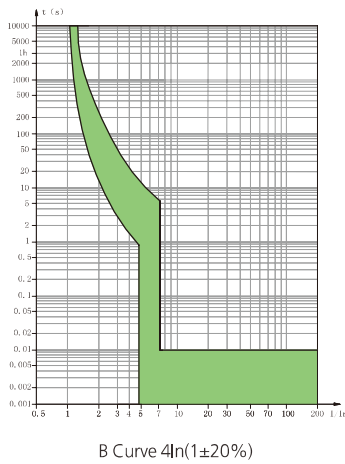
DC NO-POLARITY BREAKER

EDB1-63 series DC No-Polarity Miniature Circuit Breaker

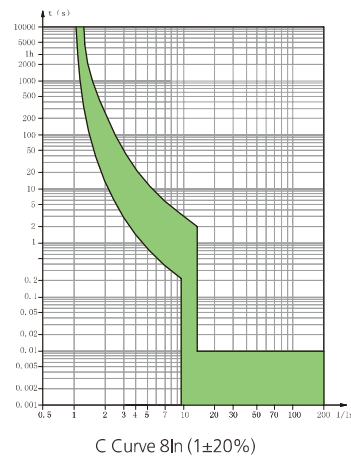
Contacts Configurations



Tripping Characteristics



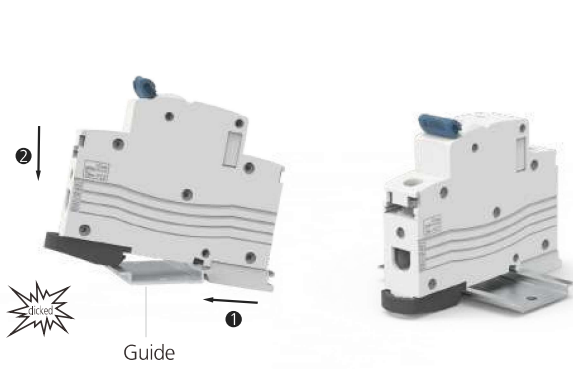
- $I_n t = 1.05 I_n : t \leq 1h$
- $I t = 1.3 I_n : t < 1h$
- $2.55 I_n : t = 1-60s (I_n \leq 32A)$
 $t = 1-120s (I_n > 32A)$
- Suitable for pure resistive load and microinductive circuit
- Available to rated current of 10A ~ 63A(63A Frame)
- Instantaneous tripping range: $4I_n \pm 20\%$



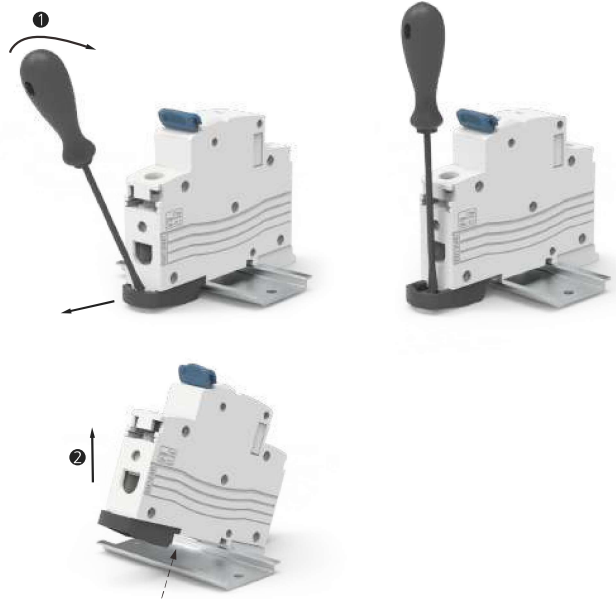
- $I_n t = 1.05 I_n : t \leq 1h$
- $I t = 1.3 I_n : t < 1h$
- $2.55 I_n : t = 1-60s (I_n \leq 32A)$
 $t = 1-120s (I_n > 32A)$
- Suitable for general load and power distribution circuit
- Available to rated current of 10A ~ 63A(63A Frame)
- Instantaneous tripping range: $8I_n \pm 20\%$

EDB1-63 series DC No-Polarity Miniature Circuit Breaker

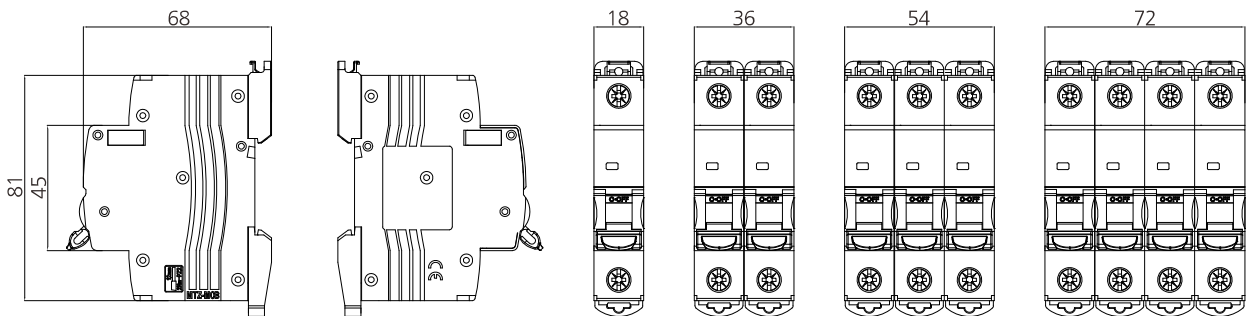
Installation



Disassemble



Dimensions



DC NO-POLARITY BREAKER

EDB1-125 series DC No-Polarity Miniature Circuit Breaker



Product Application

The circuit breaker has the functions of short circuit protection, overload protection, control, isolation and so on. It is especially suitable for the energy storage system and battery protection.

Product Benefits

- Overload and the short circuit protection function
- Rated short circuit breaking capacity up to 10 kA
- Non-polarity and Polarity both available
- Rated Current In up to 250A
- Rated Voltage up to 200V
- Designed for PV, energy storage and other DC applications
- AS/NZS 60947.2 and IEC 60947-2 standard



Select Code

E
D
B
1 - 125
□ / □
□ / □

1
2
3
4
5
6
7
8

Code	Name	Description
1	brand	E
2	DC	D
3	Miniature Circuit Breaker	B
4	Frame Current	125A
5	Breaking Capacity	Nil:6kA H:10kA
6	Tripping curve	B C
7	Rated current	6:6A 10:10A 16:16A 20:20A 25:25A 32:32A 40:40A 50:50A 63:63A 80:80A 100:100A 125:125A 250:250A
8	Poles	1:1P 2:2P 2H

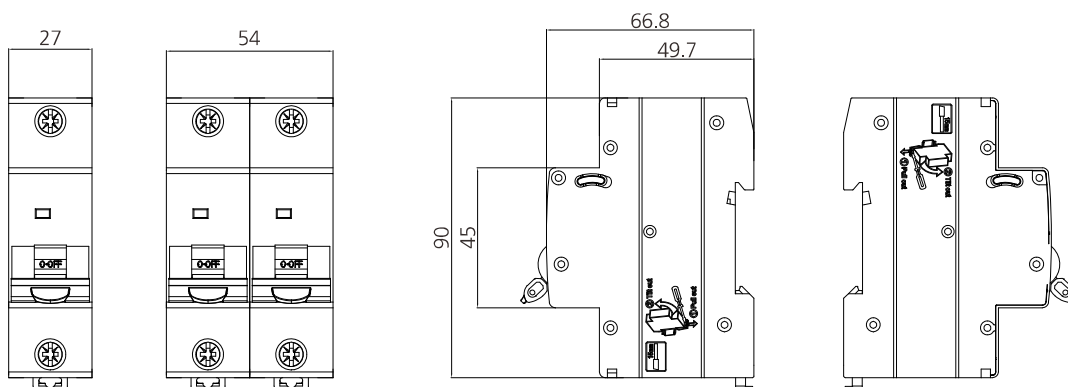
EDB1-125 series DC No-Polarity Miniature Circuit Breaker

Technical Data

According to AS/NZS 60947.2, IEC 60947-2

Pole		1P	2P	2H
Rated Working Voltage	Ue	100V	100V / 200V	100V
Frame Current		125A		
Rated CurrentIn		6A, 10A, 16A,20A, 25A, 32A, 40A,50A, 63A (63 Frame)		250A
125A Frame		80A, 100A, 125A (125 Frame)		
Rated Insulation Voltage	Ui	500V		
Rated Impulse Withstand Voltage	Uimp	6kV		
Tripping Characteristics		B/C		
Tripping Type		Thermal Magnetic		
Rated Ultimate Short-Circuit Breaking Capacity	Icu	6/10kA		
Rated Service Short-Circuit Interrupting Capacity	Ics	6/7.5kA		
Electrical Life	Actual	2000 Cycles		
	Standard	1000 Cycles		
Mechanical Life	Actual	20000 Cycles		
	Standard	7000 Cycles		
Overvoltage Category		III		
Pollution Degree		3		
Ingress Protection		IP40; Wiring port IP20		
Resistance to humidity and heat		Class 2		
Relative Humidity		≤95 %		
Vibration		acc. to IEC60068-2-6		
Shocks		acc. to IEC60068-2-27		
Terminal capacity		2.5~25mm ²		
Tightening Torque of Terminals		2.0~2.5 N·m		
Ambient Temperature		-30°C ~70°C		
Storage Temperature		-40°C ~85°C		
Installation Method		DIN		
Elevation		≤2000m		
Weight		158.2g	316.4g	

Dimensions

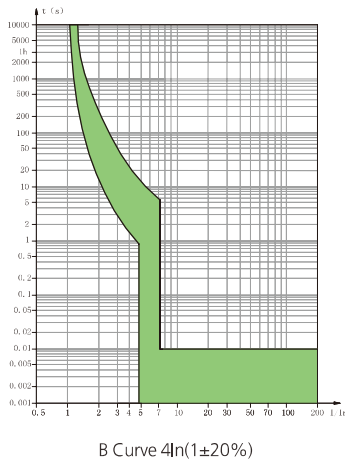


DC NO-POLARITY BREAKER

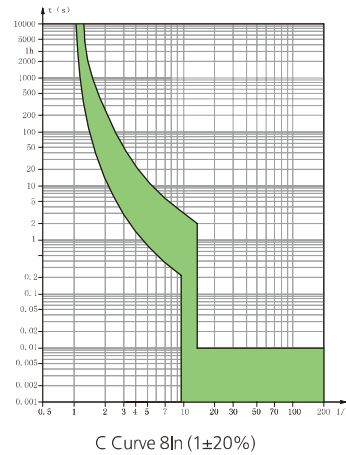
EDB1-125 series DC Miniature Circuit Breaker

Contacts Configurations

Pole	1P	2P	2H
Contacts Configurations			



- $I_{nt} = 1.05I_n; t \leq 1h$
- $I_t = 1.3I_n; t < 1h$
- $2.55I_n; t = 1-60s (I_n \leq 32A)$
 $t = 1-120s (I_n > 32A)$
- Suitable for pure resistive load and microinductive circuit
- Available to rated current of 10A ~ 63A (63A Frame), 80A ~ 125A (125A Frame)
- Instantaneous tripping range: $4I_n \pm 20\%$



- $I_{nt} = 1.05I_n; t \leq 1h$
- $I_t = 1.3I_n; t < 1h$
- $2.55I_n; t = 1-60s (I_n \leq 32A)$
 $t = 1-120s (I_n > 32A)$
- Suitable for general load and power distribution circuit
- Available to rated current of 10A ~ 63A (63A Frame), 80A ~ 125A (125A Frame)
- Instantaneous tripping range: $8I_n \pm 20\%$

Installation



Disassemble



Shunt Release MX Alarm contact

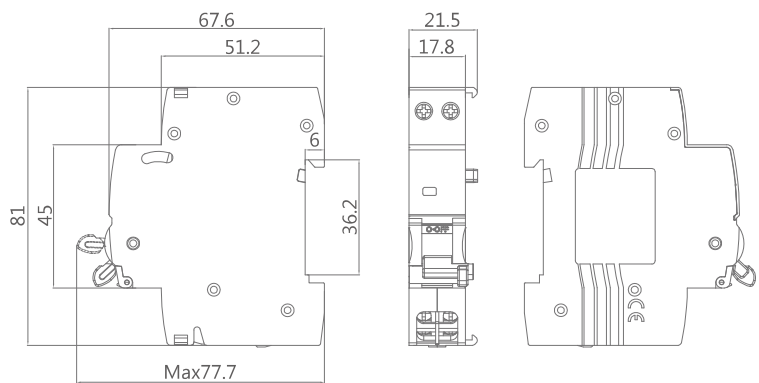
CE



General

- 1.1 Remote starting of the device when The voltage is applied.
- 1.2 To be mounted on the left side of the MCBs/RCBOs due to the special pin.

Dimension



Technical Data

	Standard	IEC/EN 60947-5-1
Electrical features	Rated value	AC230/400 50/60Hz AC/DC24
		UN (V) In (A)
		AC400 50/60Hz 3
		AC230 50/60Hz 6
		DC130 1
		DC48 2
		DC24 6
	Rated impulse withstand voltage(1.2/50)Uimp	4000V
	Dielectric Test Voltage at ind.Freq.for 1min	2kV
	Insulation voltage Ui	500V
	Pollution degree	2
Mechanical features	Electrical life	4000
	Mechanical life	4000
	Protection degree	Ip20
	Ambient temperature (with daily average ≤35°C)	-30°C~70°C
	Storage temperature	-40°C~85°C
Installation	Terminal connection type	Cable
	Terminal size top/ bottom for cable	2.5mm ² / 18-14AWG
	Tightening torque	0.8N·m

DC NO-POLARITY BREAKER

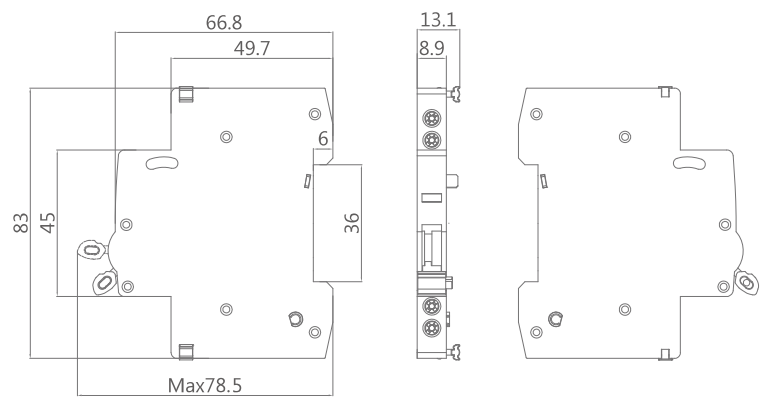
OF Auxiliary Contact



General

- 1.1 Indicate the position of the device's contacts.
- 1.2 To be mounted on the left side of the MCBs/RCBOs due to the special pin.

Dimension



Technical Data

	Standard	IEC/EN 60947-5-1	
Electrical features	Rated value	AC230/400 50/60Hz AC/DC24	
		UN (V)	In (A)
		AC400 50/60Hz	3
		AC230 50/60Hz	6
		DC130	1
		DC48	2
		DC24	6
	Configurations	1N/O+1N/C	
Mechanical features	Rated impulse withstand voltage(1.2/50)Uimp	4000V	
	Dielectric Test Voltage at ind.Freq.for 1min	2kV	
	Insulation voltage Ui	500V	
	Pollution degree	2	
	Electrical life	6050	
Mechanical features	Mechanical life	4000	
	Protection degree	IP20	
	Ambient temperature (with daily average $\leq 35^{\circ}\text{C}$)	$-30^{\circ}\text{C} \sim 70^{\circ}\text{C}$	
	Storage temperature	$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$	
	Installation	Terminal connection type	Cable
Terminal size top/ bottom for cable		2.5mm^2 / 18-14AWG	
Tightening torque		0.5N·m	

MX-OF Shunt release DC24V+Auxiliary contact

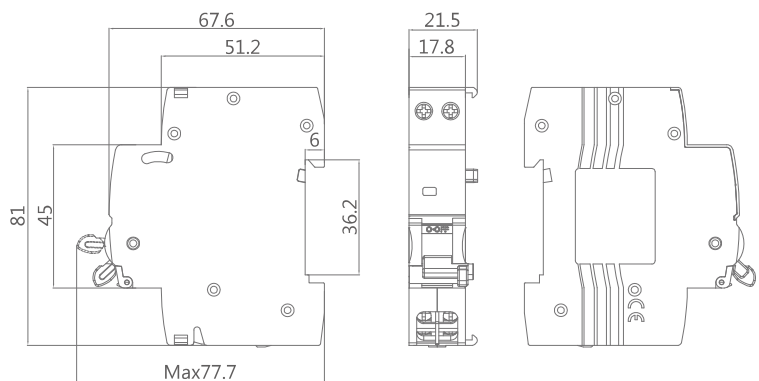
CE



General

- 1.1 Remote starting of the device when The voltage is applied.
- 1.2 Indicate the position of the device's contacts.
- 1.3 To be mounted on the left side of the MCBs/RCBOs due to the special pin.

Dimension



Technical Data

	Standard	IEC/EN 60947-5-1	
Electrical features	Rated value	AC230/400 50/60Hz AC/DC24	
		UN (V)	In (A)
		AC400 50/60Hz	3
		AC230 50/60Hz	6
		DC130	1
		DC48	2
		DC24	6
	Configurations	1N/O + 1N/C	
Mechanical features	Rated impulse withstand voltage(1.2/50)Uimp	4000V	
	Dielectric Test Voltage at ind.Freq.for 1min	2kV	
	Insulation voltage Ui	500V	
	Pollution degree	2	
	Electrical life	6050	
Mechanical features	Mechanical life	4000	
	Protection degree	IP20	
	Ambient temperature (with daily average ≤35°C)	-30°C~70°C	
	Storage temperature	-40°C~85°C	
	Installation	Terminal connection type	Cable
Terminal size top/ bottom for cable		2.5mm ² / 18-14AWG	
Tightening torque		0.8N·m	