

DC NO-POLARITY BREAKER

EDB1 series DC No-Polarity Miniature Circuit Breaker

Leading Manufacturer Protects Solar Power Safety

Rev1.0 2022/02/11



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 8							
Code	Name		Description				
1	ASwisch 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				

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	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			
Tripping Characteristics		B/C			
Tripping Type		Thermal Magnetic			
Rated Ultimate Short-Circuit Breaking Capacity	Icu	10kA			
Rated Service Short-Circuit Interrupting Capacity	Ics	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: 92mm			
		Depth: 74mm			
Weight		125.3g	250.55g	375.9g	501.1g

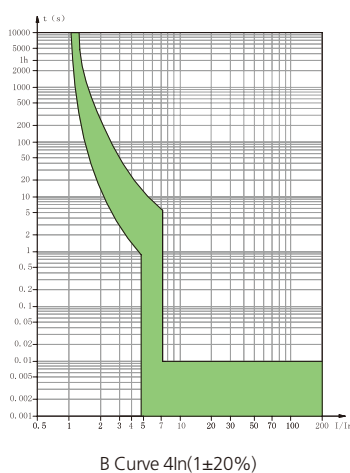
DC NO-POLARITY BREAKER

EDB1-63 series DC No-Polarity Miniature Circuit Breaker

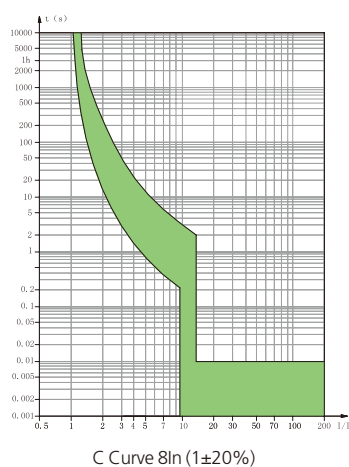
Contacts Configurations

Pole	1P	2P
Contacts Configurations		

Tripping Characteristics



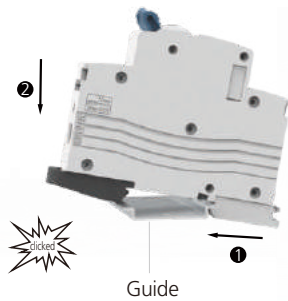
- $I_n t = 1.05 I_n : t \leq 1h$
- $I t = 1.3 I_n : t < 1h$
- $2.55 I_n : t = 1-60s (I_n \leq 32A)$
 $t = 1-120s (I_n > 32A)$
- Suitable for pure resistive load and microinductive circuit
- Available to rated current of 10A ~ 63A(63A Frame)
- Instantaneous tripping range: $4I_n \pm 20\%$



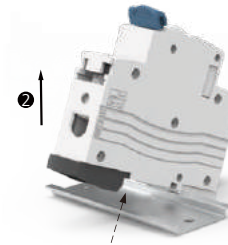
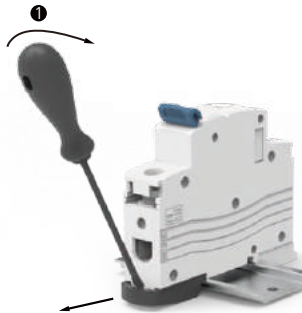
- $I_n t = 1.05 I_n : t \leq 1h$
- $I t = 1.3 I_n : t < 1h$
- $2.55 I_n : t = 1-60s (I_n \leq 32A)$
 $t = 1-120s (I_n > 32A)$
- Suitable for general load and power distribution circuit
- Available to rated current of 10A ~ 63A(63A Frame)
- Instantaneous tripping range: $8I_n \pm 20\%$

EDB1-63 series DC No-Polarity Miniature Circuit Breaker

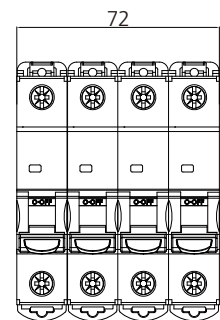
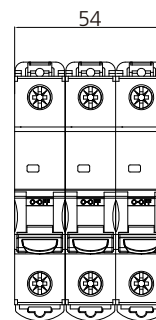
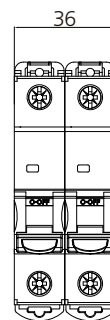
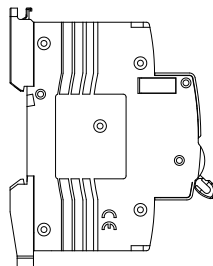
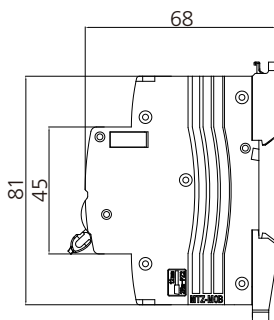
Installation



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	ASwch 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	63:63A 80:80A 100:100A 125:125A 250:250A
8	Poles	1:1P 2:2P 2H

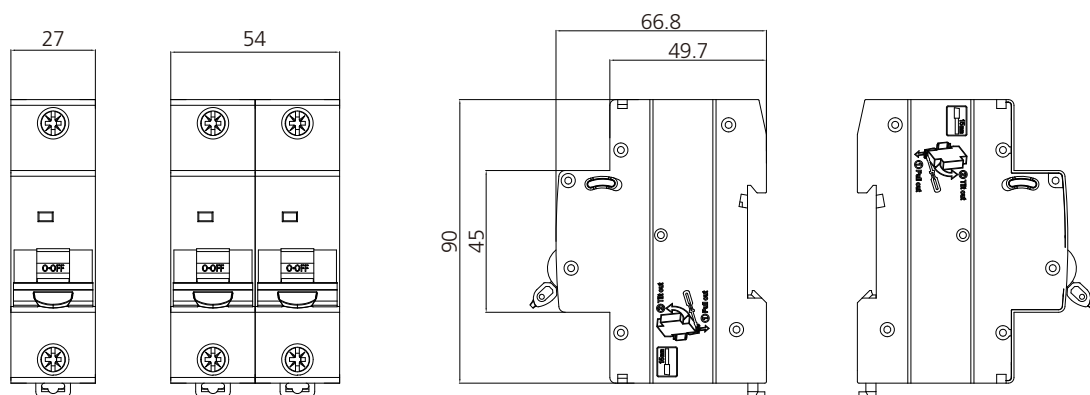
EDB1-125 series DC No-Polarity Miniature Circuit Breaker

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		10A, 16A, 20A, 25A, 32A, 40A, 50A		250A
125A Frame		63A, 80A, 100A, 125A		
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	10kA		
Rated Service Short-Circuit Interrupting Capacity	Ics	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		2.5~25mm²		
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

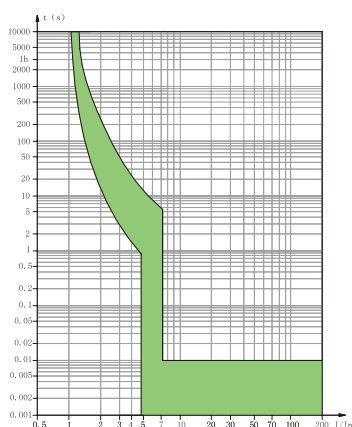


DC NO-POLARITY BREAKER

EDB1-125 series DC Miniature Circuit Breaker

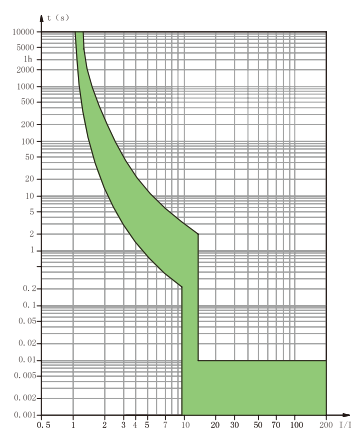
Contacts Configurations

Pole	1P	2P	2H
Contacts Configurations			



B Curve $4I_n(1\pm 20\%)$

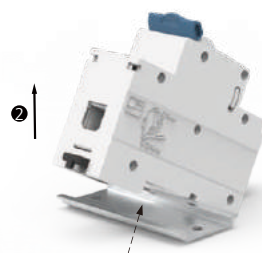
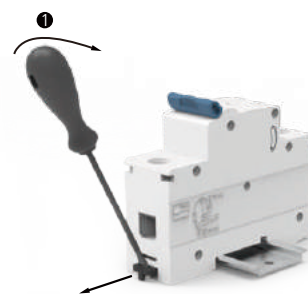
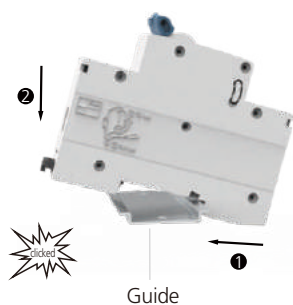
- $I_{nt}=1.05I_n; t \leq 1h$
- $I_t=1.3I_n; t < 1h$
- $2.55I_n; t=1-60s(I_n \leq 32A)$
 $t=1-120s(I_n > 32A)$
- Suitable for pure resistive load and microinductive circuit
- Available to rated current of 10A ~ 63A (63A Frame), 80A ~ 125A (125A Frame)
- Instantaneous tripping range: $4I_n \pm 20\%$



C Curve $8I_n(1\pm 20\%)$

- $I_{nt}=1.05I_n; t \leq 1h$
- $I_t=1.3I_n; t < 1h$
- $2.55I_n; t=1-60s(I_n \leq 32A)$
 $t=1-120s(I_n > 32A)$
- 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



Shunt Release MX Alarm contact

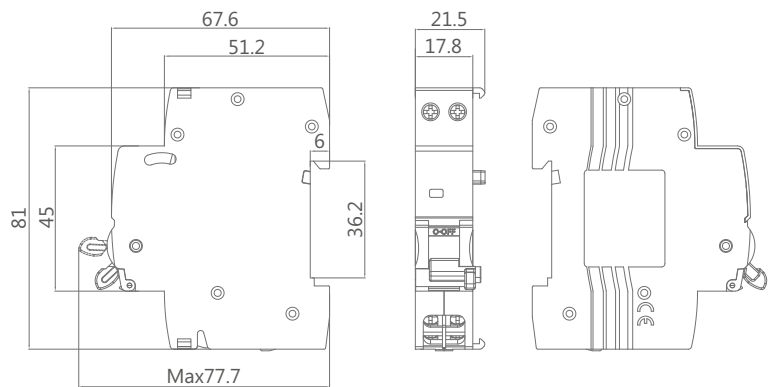
CE



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	
Mechanical features	Dielectric Test Voltage at ind.Freq.for 1min	2kV	
	Insulation voltage Ui	500V	
	Pollution degree	2	
	Electrical life	4000	
	Mechanical life	4000	
	Protection degree	Ip20	
Installation	Ambient temperature (with daily average ≤35℃)	-30℃~70℃	
	Storage temperature	-40℃~85℃	
	Terminal connection type	Cable	
	Terminal size top/ bottom for cable	2.5mm ² / 18-14AWG	
	Tightening torque	0.8N·m	

DC NO-POLARITY BREAKER

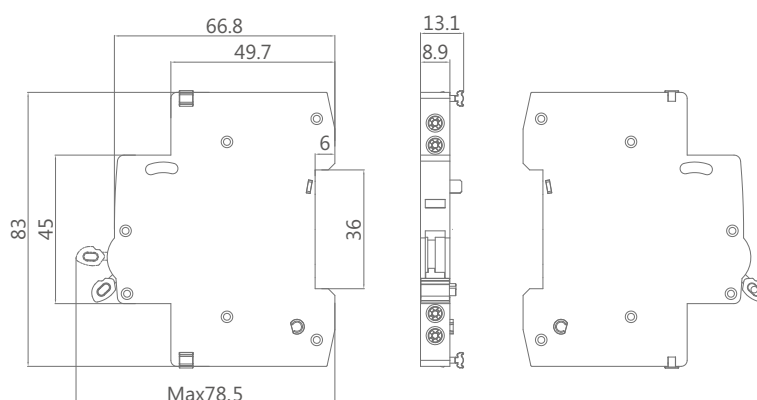
OF Auxiliary Contact



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	IN/O+IN/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 life	4000	
Installation	Protection degree	IP20	
	Ambient temperature (with daily average ≤35°C)	-30°C~70°C	
	Storage temperature	-40°C~85°C	
	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

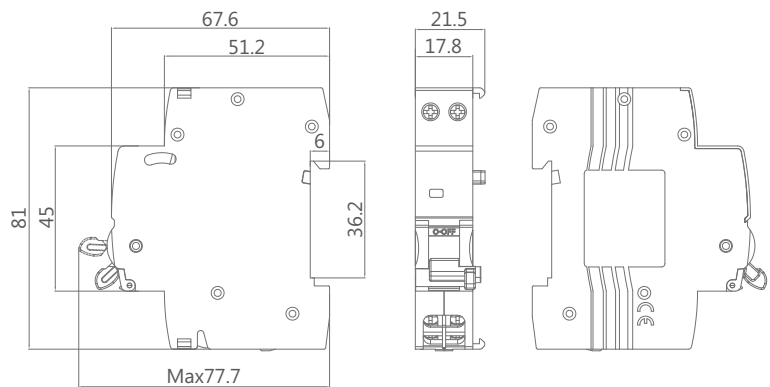
CE



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 life	4000	
Installation	Protection degree	IP20	
	Ambient temperature (with daily average ≤ 35°C)	-30°C ~ 70°C	
	Storage temperature	-40°C ~ 85°C	
	Terminal connection type	Cable	
	Terminal size top/ bottom for cable	2.5mm ² / 18-14AWG	
	Tightening torque	0.8N·m	