HUANYU ELECTRIC

EXB8-125DC Photovoltaic Miniature Circuit Breaker (DC MCB)



Model and Meaning

EXB8 - 125 DC / □ □ / □

- Number of Poles: 1: 1P 2: 2P
- Rated Operating Current Ie:63A, 80A, 100A, 125A
- Trip Type: B / C
- Current Type: DC (Direct Current)
- Frame Current: 125A
- Model number

Product Application

This circuit breaker provides short-circuit protection, overload protection, control and isolation functions.It is especially suitable for photovoltaic, energy storage systems and battery protection.

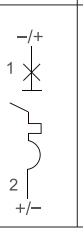
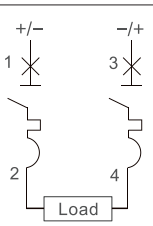
Product Advantages

- Equipped with overload and short-circuit protection functions
- Maximum operational short-circuit breaking capacity up to 4.5 kA
- Non-polarized design, supports forward and reverse current protection
- Rated voltage up to 1000V, designed for photovoltaic, energy storage and other DC applications
- Complies with EN/IEC 60947-2 standard

Product Advantages

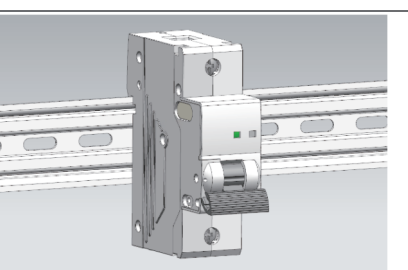
Number of Poles		1P	2P
Rated Operational Voltage Ue		500V DC	1000V DC
Frame Rating		125A	
Rated Current In		63A,80A,100A,125A	
Rated Insulation Voltage Ui		1600V	
Rated Impulse Withstand Voltage Uimp		6kV	
Trip Characteristic		B/C	
Trip Type		Thermal-magnetic	
Ultimate Breaking Capacity Icu		4.5kA	
Service Breaking Capacity Ics		4.5kA	
Electrical Life	Actual average value	Rated current:125A, more than 1000 times	
	Standard specified value	Rated current:125A, 200 times	
Mechanical Life	Actual average value	>10000 times	
	Standard specified value	10000 times	
Overvoltage Category		III	
Pollution Degree		3	
Protection Class		IP40; Terminal part IP20	
Damp Heat Resistance		Class 2	
Relative Humidity		≤ 95 %	
Vibration Resistance		In accordance withIEC60068-2-6	
Mechanical Shock Resistance		In accordance withIEC60068-2-27	
Wiring Capacity		2.5~50mm2	
Wiring Torque		3.5 N.m	
Ambient Operating Temperature		-30℃ ~70℃	
Storage Temperature		-40℃~85℃	
Mounting Type		DIN35	
Altitude		≤2000m	

Wiring Diagram

Pole	1P	2P
Wiring Method		

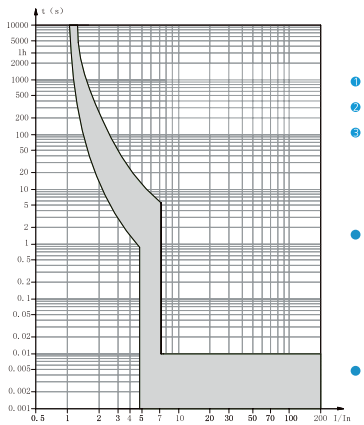
Installation

This product adopts DIN rail mounting, for installation on a 35mm standard DIN rail.



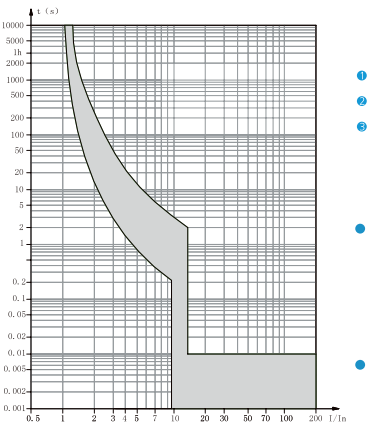
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Trip Characteristic



B Curve 4In(1±20%)

- ❶ Int=1.05In:t≤1h
- ❷ It=1.3In:t < 1h
- ❸ 2,55In:t=1-60s(In≤32A) t=1-120s(In > 32A)
- Suitable for purely resistive loads and inductive load circuits
- Instantaneous tripping range: 4In ±20%



C Curve 8In (1±20%)

- ❶ Int=1.05In:t≤1h
- ❷ It=1.3In:t < 1h
- ❸ 2,55In:t=1-60s(In≤32A) t=1-120s(In > 32A)
- Suitable for general loads and distribution circuits
- Instantaneous tripping range: 8In ±20%

Derating Factor

Temperature Derating Factor Table																				
Temperature	-30℃	-25℃	-20℃	-15℃	-10℃	-5℃	0℃	5℃	10℃	15℃	20℃	30℃	35℃	40℃	45℃	50℃	55℃	60℃	65℃	70℃
Rated Operating Current Factor	1.242	1.223	1.204	1.182	1.161	1.143	1.127	1.103	1.079	1.063	1.047	1	0.984	0.968	0.952	0.922	0.904	0.891	0.872	0.844

Temperature Derating Factor Table				
Altitude (m)	2000	3000	4000	5000
Rated Operating Current Factor	1	0.96	0.91	0.86
Rated Operating Voltage Factor	1	1	1	1
Rated Power-frequency Withstand Voltage Factor	1	0.9	0.82	0.71
Rated Impulse Withstand Voltage Factor	1	0.9	0.82	0.71
Rated Ultimate Short-circuit Breaking Capacity & Electrical Life Factor	1	0.82	0.7	0.6

Wiring

Wire Harness Specification Selection			
Current Rating (A)	Copper Wire Gauge (AWG)	Conductor Cross-sectional Area (mm²)	Wiring Torque (N·m)
80A	4	25	3.0~4.0
100A	2	35	
125A	1	50	

Overall Dimensions

Tolerance: ±0.5 mm

