

## TGB2D-80R Series, 6KA Photovoltaic & Building Dedicated Miniature Circuit Breaker



### 1 Overview

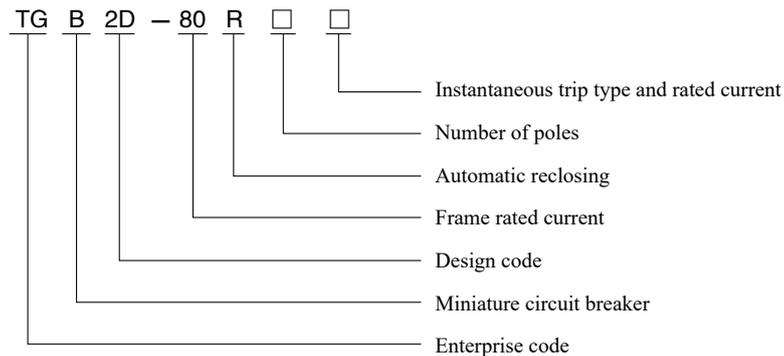
TGB2D-80R photovoltaic grid-connected special circuit breaker is suitable for distributed photovoltaic grid-connected station to detect and judge the voltage on the photovoltaic distribution line. It will delay open automatically in the event of overvoltage, undervoltage or voltage loss on the photovoltaic distribution line, and will be closed automatically when the voltage restores to the normal state.

TGB2D-80R self-resetting overvoltage and undervoltage protector (referred to as building special circuit breaker) is suitable for low-voltage distribution system in household and similar applications. It can open automatically in the event of the overvoltage or undervoltage caused by the line failure, and can detect the line voltage automatically; it can be closed automatically when the line voltage restores to the normal state.

Photovoltaic special circuit breaker meets the standards: IEC60898-1, GB/T10963.1, Q/GDW1972-2013

Building special circuit breaker meets the standards: IEC60898-1

### 2 Type Designation



### 3 Technical Parameters

#### 3.1 Main Technical Parameters

Model	TGB2D-80R Series, 6KA Photovoltaic & Building Dedicated Miniature Circuit Breaker
Rated current	10, 16, 20, 25, 32, 40, 50, 63, 80A
Number of poles	2P/4P
Rated operating voltage	AC230V/2P AC400V/4P
Rated insulation voltage	500V
Rated impulse withstand voltage	6kV
Rated short circuit breaking capacity	6kA
Rated run breaking capacity	6kA
Trip type	C
Mechanical life	10000 times
Electrical life	6000 times
Ambient temperature	-25°C ~ +65°C
Altitude	Not exceed 2000m
Installation category	Class II and Class III
Pollution degree	2
Protection grade	IP20

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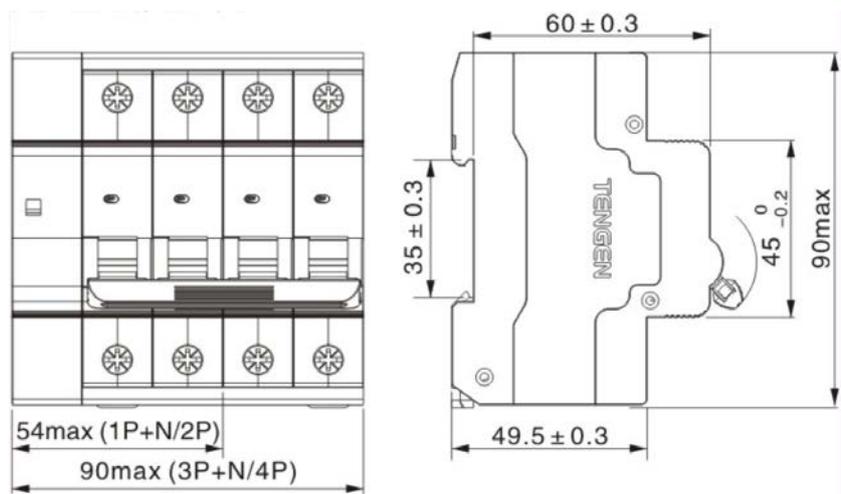
### 3.2 Recommended Nominal Sectional Area of Copper Wire

Rated current (A)	10 ~ 20	25	32	40 ~ 50	63	80
Sectional area of wire (mm <sup>2</sup> )	2.5	4	6	10	16	25

### 3.3 Circuit Breaker Judges Power Voltage and Controls the Operation State

No.	Power voltage		Initial state	State after operation		Power voltage state continuous holding time
	Circuit breaker for photovoltaic	Circuit breaker for buildings		Auto mode	Manual mode	
1	$180V \leq U \leq 270V$	$185V \leq U \leq 255V$	OFF	ON	OFF	0-10s
2	$160V \leq U \leq 290V$	$165V \leq U \leq 275V$	ON	ON	ON	Keep the initial state
3	$U < 160V$	$U < 165V$	ON	OFF	OFF	0-10s
4	$U < 180V$	$U < 185V$	OFF	OFF	OFF	Keep the initial state
5	$U > 290V$	$U > 275V$	ON	OFF	OFF	0-10s
6	$U > 270V$	$U > 255V$	OFF	OFF	OFF	Keep the initial state
7	U<45V (Power outage and voltage loss)	U<45V (Power outage and voltage loss)	ON	OFF	ON	0-10s
8	Phase loss (only for three phases and four wires)	Phase loss (only for three phases and four wires)	ON	OFF	OFF	Keep the initial state
9	Phase loss (only for three phases and four wires)	Phase loss (only for three phases and four wires)	ON	OFF	OFF	0-10s

## 4 Outline and Installation Dimensions



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### 5 Ordering Notice

Please specify the following items when ordering:

- 5.1 Product name, such as TGB2D-80R photovoltaic special circuit breaker;
- 5.2 Number of poles, such as 4P;
- 5.3 Product instantaneous trip type, such as Type C;
- 5.4 Product rated current, such as 80A;
- 5.5 Product Qty., such as 100 units;
- 5.6 Order example: TGB2D-80R photovoltaic special 4P C80 100 units.