

VB2

Miniature Circuit Breaker





- Quick closing ensures reliable operation and extends the lifetime of circuit breakers
- The temperature-rise of the product itself is lower
- Rated impulse withstand voltage up to 6.0kV
- Tunnel type wiring structure and busbar type wiring structure, reliable and fast wiring
- Modular and modular structure, can be combined arbitrarily

Ambient conditions

Operating ambient temperature/storage temperature

- Operating environment temperature: $-40\text{ }^{\circ}\text{C}\sim+70\text{ }^{\circ}\text{C}$, with an average value of no more than $+35\text{ }^{\circ}\text{C}$ within 24 hours
- Storage temperature: $-40\text{ }^{\circ}\text{C}\sim+80\text{ }^{\circ}\text{C}$

Altitude conditions

- Altitude of installation site $\leq 2000\text{m}$ (Over 2000 meters need capacity reduction for using)

Damp heat resistance

- Category 2 (at a temperature of $55\text{ }^{\circ}\text{C}$ and a relative humidity of 95%)

Pollution level

- Level 2

Protection level

- Product protection level: IP20

Installation Category

- Class II (load) and Class III (distribution and control)

Installation method

- Installed on $\text{TH}35\text{mm} \times 7.5$ (EN50022) Standard Guide

Installation Direction

- Vertical installation of the product, with an inclination of $\leq \pm 5^{\circ}$ between the installation surface and the vertical surface
- Horizontal installation

Environmental requirements

- The product meets RoHS standards

Technical parameters

Series		VB2-63
		
Rated Operational Voltage (U_e)	AC 230/400V, DC 48/60V (1P/2P)	
Rated Current	1A, 2A, 3A, 4A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 35A, 40A, 50A, 63A	
Tripping Characteristic	B Curve $3I_n \sim 5I_n$, C Curve $5I_n \sim 10I_n$, D Curve $10I_n \sim 14I_n$	
Number of Poles	1P, 2P, 3P, 4P	
Rated Insulation Voltage (U_i)	690 V	
Rated Impulse Withstand Voltage (U_{imp})	6.0 kV	
Rated Short-Circuit Capacity (I_{cn})	10.0kA (Type B/C, $I_n=1-63A$), 6.0kA (Type D, $I_n=1-63A$)	
Running Short-Circuit Capacity (I_{cs})	10.0kA (Type B/C, $I_n=1-40A$), 7.5kA (Type B/C, $I_n=50A, 63A$), 6.0kA (Type D, $I_n=1-63A$)	
Rated Frequency	50/60 Hz	
Operating performance	Mechanical Endurance	15000 Cycle
	Electrical Endurance	10000 Cycle
Standard	IEC 60898-1	
Connection	Tunnel type, Bus-bar	
Connecting Capacity	1.0 mm ² ...25 mm ²	
Tightening Torque	2.5 N·m	

VB2-63 Main Characteristics

VOZWEI

VB2	-	63		C		63	/	1
1		2		3		4		5

SN	Name	Specification, type code
1	Design code	VB2: Design code
2	Frame rating	63: 63A
3	Tripping characteristic	B: $3I_n \sim 5I_n$ C: $5I_n \sim 10I_n$ D: $10I_n \sim 14I_n$
4	Rated current	1A, 2A, 3A, 4A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 35A, 40A, 50A, 63A
5	Number of poles	1P, 2P, 3P, 4P

Temperature and Breaking Capacity Coefficient

Ambient °C	-40 °C	-30 °C	-20 °C	-10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C	70 °C
Coefficient	133.97%	125.18%	119.90%	116.95%	113.05%	109.52%	105.62%	100%	95.24%	91.33%	88.38%	83.62%

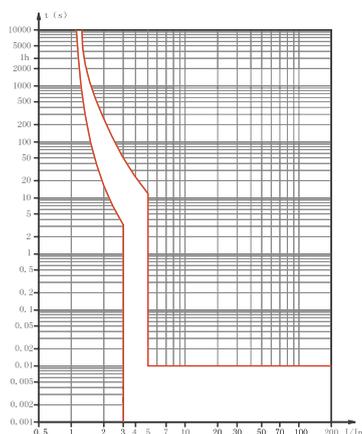
Breaking Capacity Coefficient and High Altitude Derating Tables

Altitude	Rated current	Rated voltage	Rated frequency voltage tolerance	Breaking Capacity	Breaking Capacity and Electrical life
2 km	$1.00I_n$	U_e	1.00	1.00	1.00
3 km	$0.96I_n$	U_e	0.92	0.88	0.88
4 km	$0.92I_n$	U_e	0.83	0.82	0.82
5 km	$0.87I_n$	U_e	0.77	0.70	0.70

VB2-63 Characteristic Curve

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B curve



Protection against loads with small short circuit currents (e.g., non-inductive or micro-inductive circuits)

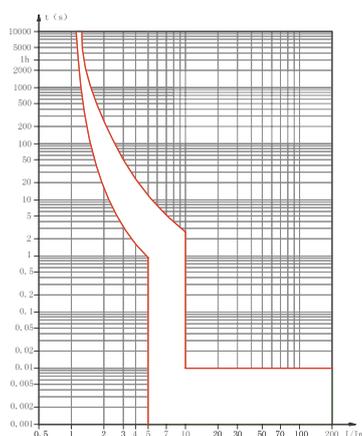
Trip characteristics:

The instantaneous trip range is $3I_n \sim 5I_n$

Base temperature:

+30°C

C curve



Protection of conventional loads and distribution circuits

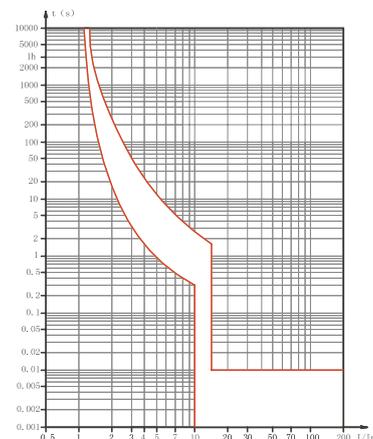
Trip characteristics:

The instantaneous trip range is $5I_n \sim 10I_n$

Base temperature:

+30°C

D curve



Protection of impulse loads with large starting current (e.g., motors, transformers, etc.)

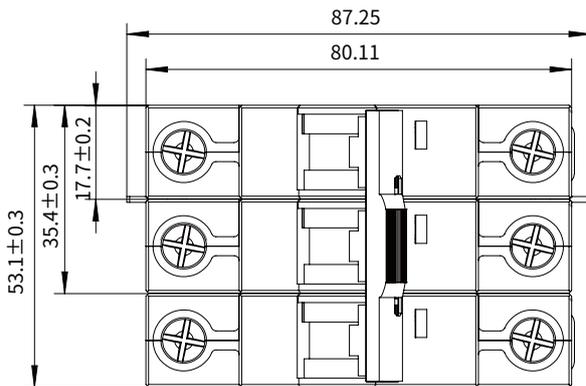
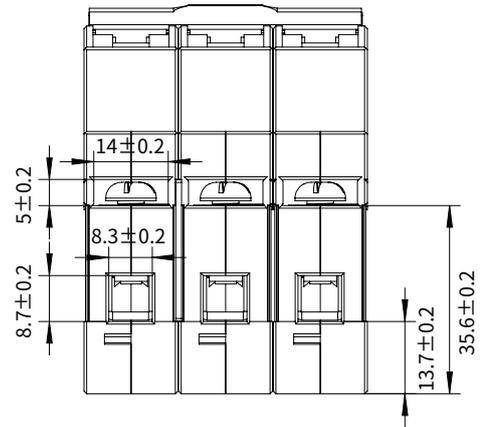
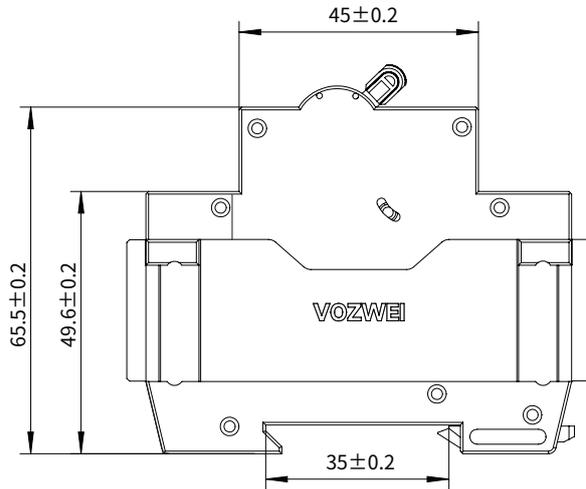
Trip characteristics:

The instantaneous trip range is $10I_n \sim 14I_n$

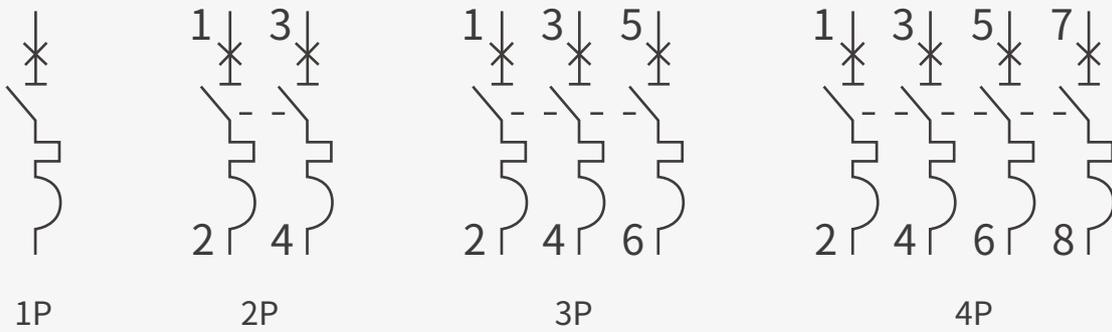
Base temperature:

+30°C

Overall and Mounting Dimensioned



Wiring Diagram



Technical parameters

Series		VB2T-63
		
Rated Operational Voltage (U_e)	AC 230/400V (1P), AC 400/415V (2P, 3P, 4P), DC 60/80V (1P), DC 80/125V (2P)	
Rated Current	1A, 2A, 3A, 4A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 35A, 40A, 50A, 63A	
Tripping Characteristic	B Curve $4I_n \pm 20\%$, C Curve $8I_n \pm 20\%$, D Curve $12I_n \pm 20\%$, K Curve $10I_n \pm 20\%$, Z Curve $2.5I_n \pm 20\%$	
Number of Poles	1P, 2P, 3P, 4P	
Rated Insulation Voltage (U_i)	690 V	
Rated Impulse Withstand Voltage (U_{imp})	6.0 kV	
Rated Short-Circuit Capacity (I_{cu})	10.0kA	
Running Short-Circuit Capacity (I_{cs})	10.0kA	
Rated Frequency	50/60 Hz	
Operating performance	Mechanical Endurance	15000 Cycle
	Electrical Endurance	10000 Cycle
Standard	IEC 60947-2	
Connection	Tunnel type, Bus-bar	
Connecting Capacity	1.0 mm ² ...25 mm ²	
Tightening Torque	2.5 N·m	

VB2T-63 Main Characteristics

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VB2T	–	63		C		63	/	1
1		2		3		4		5

SN	Name	Specification, type code
1	Design code	VB2T: Design code
2	Frame rating	63: 63A
3	Tripping characteristic	B, C, D, K, Z
4	Rated current	1A, 2A, 3A, 4A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 35A, 40A, 50A, 63A
5	Number of poles	1P, 2P, 3P, 4P

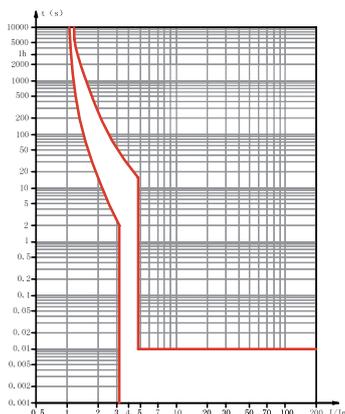
Temperature and Breaking Capacity Coefficient

Ambient °C	-40 °C	-30 °C	-20 °C	-10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C	70 °C
Coefficient	133.97%	125.18%	119.90%	116.95%	113.05%	109.52%	105.62%	100%	95.24%	91.33%	88.38%	83.62%

Breaking Capacity Coefficient and High Altitude Derating Tables

Altitude	Rated current	Rated voltage	Rated frequency voltage tolerance	Breaking Capacity	Breaking Capacity and Electrical life
2 km	1.00I _n	U _e	1.00	1.00	1.00
3 km	0.96I _n	U _e	0.92	0.88	0.88
4 km	0.92I _n	U _e	0.83	0.82	0.82
5 km	0.87I _n	U _e	0.77	0.70	0.70

B curve



Protection against loads with small short circuit currents (e.g., non-inductive or micro-inductive circuits)

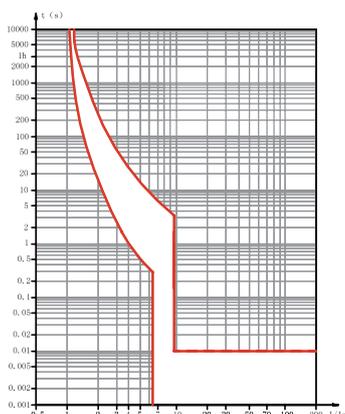
Trip characteristics:

The instantaneous trip range is $4I_n \pm 20\%$

Base temperature:

+30°C

C curve



Protection of conventional loads and distribution circuits

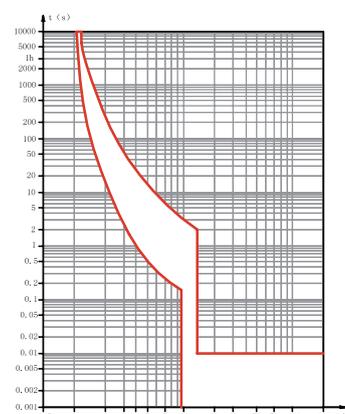
Trip characteristics:

The instantaneous trip range is $8I_n \pm 20\%$

Base temperature:

+30°C

D curve



Protection of impulse loads with large starting current (e.g., motors, transformers, etc.)

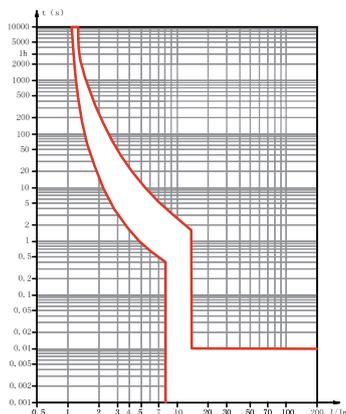
Trip characteristics:

The instantaneous trip range is $12I_n \pm 20\%$

Base temperature:

+30°C

K curve



Protection of impulse loads with large starting current

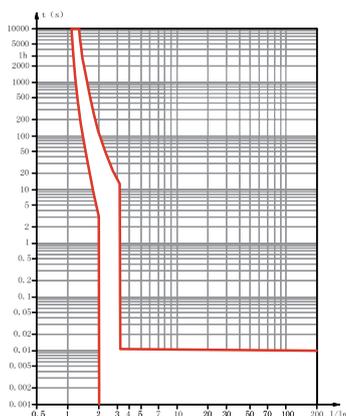
Trip characteristics:

The instantaneous trip range is $10I_n \pm 20\%$

Base temperature:

+30°C

Z curve



Protecting loads or distribution circuits that require more sensitive action

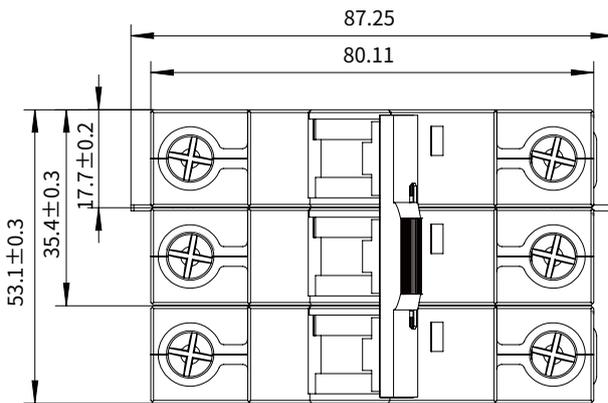
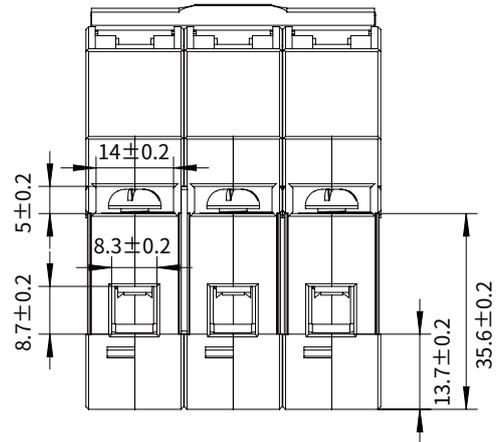
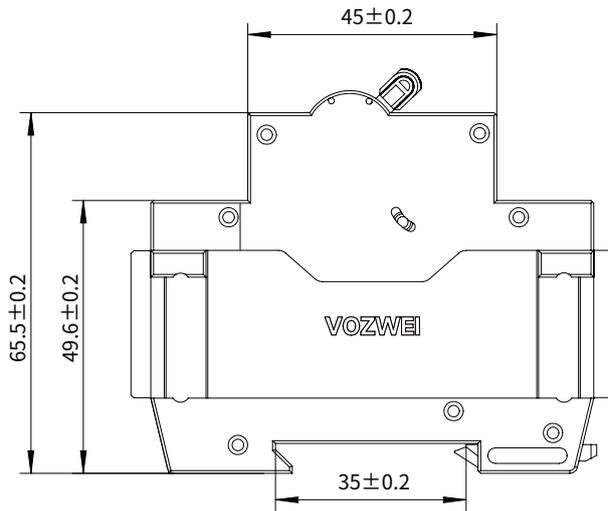
Trip characteristics:

The instantaneous trip range is $2.5I_n \pm 20\%$

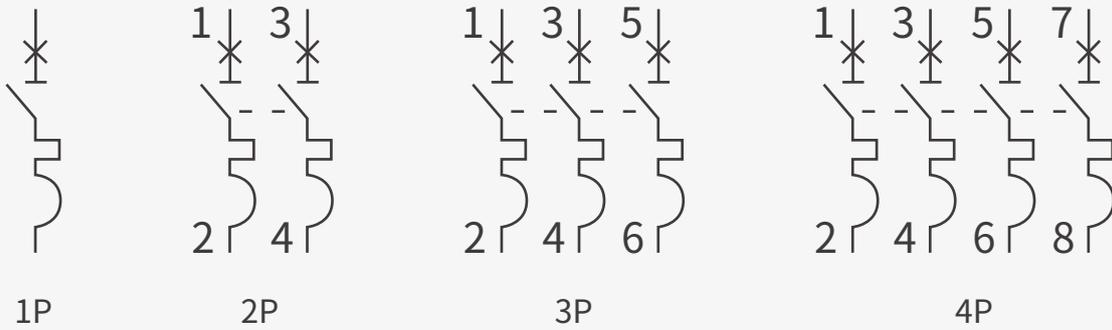
Base temperature:

+30°C

Overall and Mounting Dimensioned



Wiring Diagram



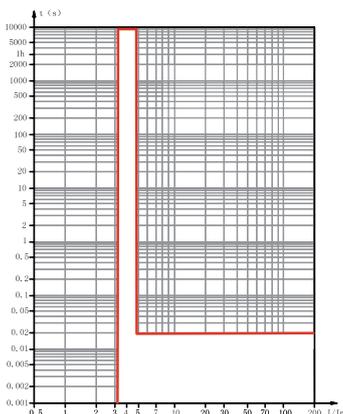
Technical parameters

Series	VB2TS-63 (Magnetic protection only)	
		
Rated Operational Voltage (U_e)	AC 230/400V (1P), AC 400/415V (2P, 3P, 4P), DC 60/80V (1P), DC 80/125V (2P)	
Rated Current	1A, 2A, 3A, 4A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 35A, 40A, 50A, 63A	
Tripping Characteristic	B Curve $4I_n \pm 20\%$, C Curve $8I_n \pm 20\%$, D Curve $12I_n \pm 20\%$	
Number of Poles	1P, 2P, 3P, 4P	
Rated Insulation Voltage (U_i)	690 V	
Rated Impulse Withstand Voltage (U_{imp})	6.0 kV	
Rated Short-Circuit Capacity (I_{cu})	10.0kA	
Running Short-Circuit Capacity (I_{cs})	10.0kA	
Rated Frequency	50/60 Hz	
Operating performance	Mechanical Endurance	15000 Cycle
	Electrical Endurance	10000 Cycle
Standard	IEC 60947-2	
Connection	Tunnel type, Bus-bar	
Connecting Capacity	$1.0 \text{ mm}^2 \dots 25 \text{ mm}^2$	
Tightening Torque	$2.5 \text{ N} \cdot \text{m}$	

VB2T	S	-	63	C	63	/	1
1	2		3	4	5		6

SN	Name	Specification, type code
1	Design code	VB2T: Design code
2	Function code	S: Magnetic protection only
3	Frame rating	63: 63A
4	Tripping characteristic	B, C, D
5	Rated current	1A, 2A, 3A, 4A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 35A, 40A, 50A, 63A
6	Number of poles	1P, 2P, 3P, 4P

B curve



Protection against loads with small short circuit currents (e.g., non-inductive or micro-inductive circuits)

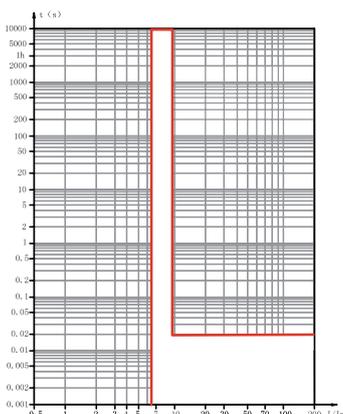
Trip characteristics:

The instantaneous trip range is $4I_n \pm 20\%$

Base temperature:

+30°C

C curve



Protection of conventional loads and distribution circuits

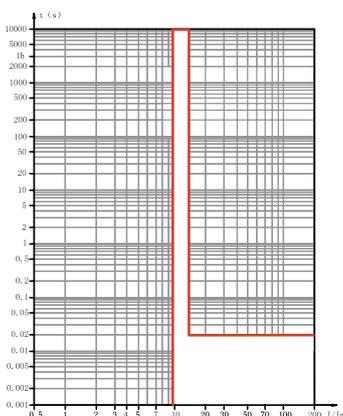
Trip characteristics:

The instantaneous trip range is $8I_n \pm 20\%$

Base temperature:

+30°C

D curve



Protection of impulse loads with large starting current (e.g., motors, transformers, etc.)

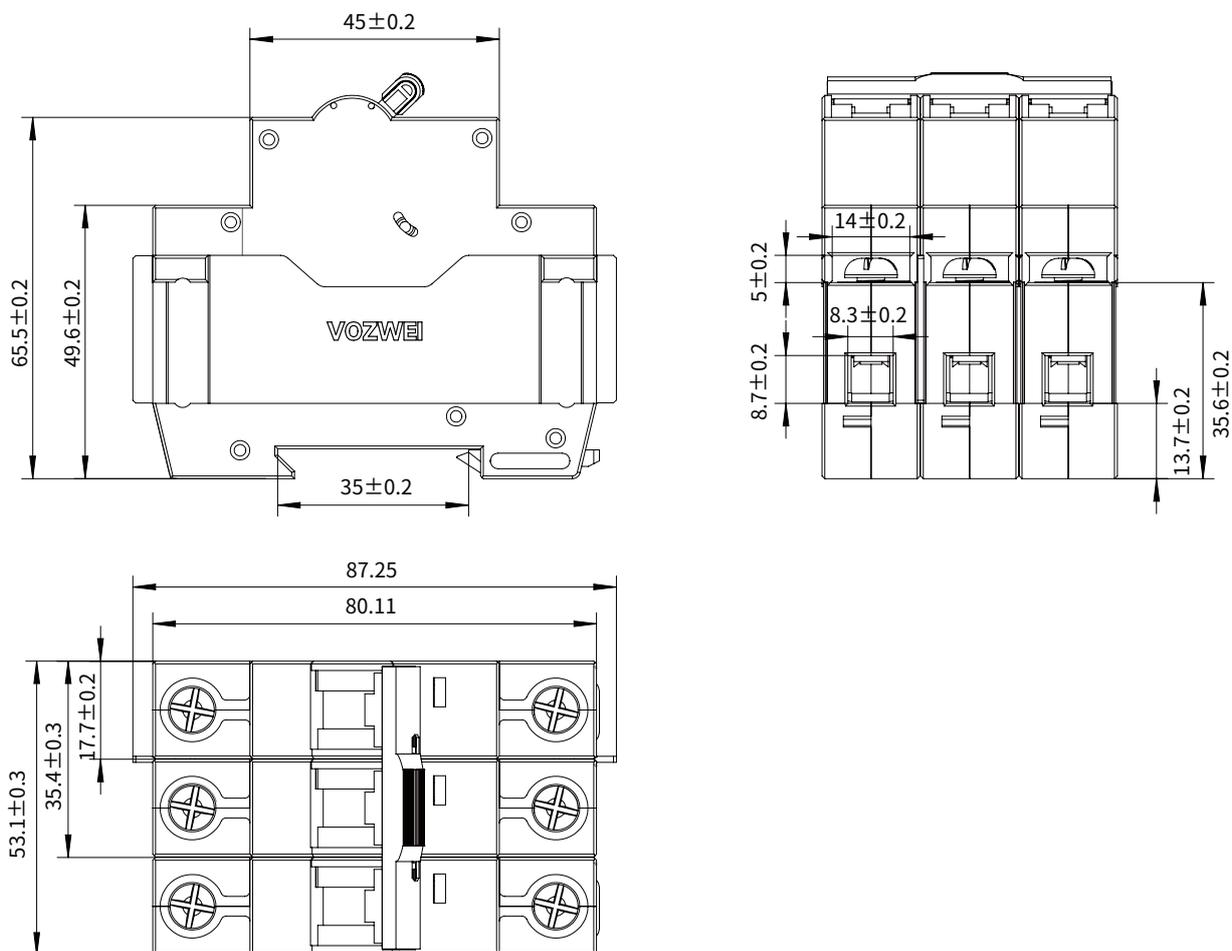
Trip characteristics:

The instantaneous trip range is $12I_n \pm 20\%$

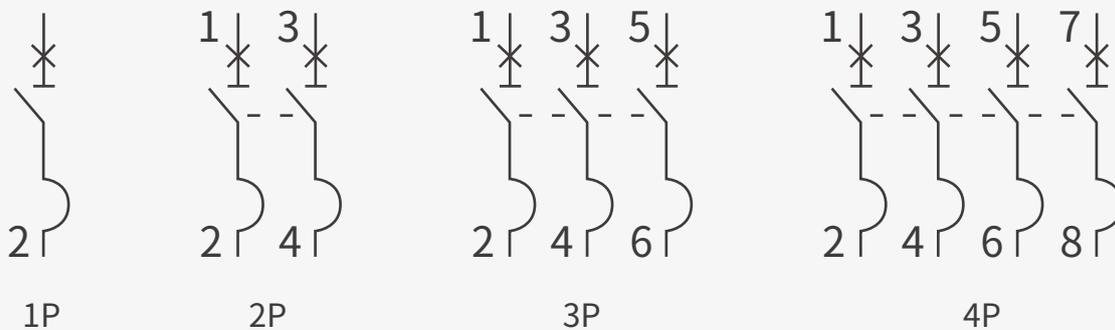
Base temperature:

+30°C

Overall and Mounting Dimensioned



Wiring Diagram



Technical parameters

Series	VB2Z-63
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Rated Operational Voltage (U_e)	DC 125/220/250V (1P), DC 250/440/500/690/800V (2P), DC 750/800V (3P), DC 800/1000V (4P)	
Rated Current	1A, 2A, 3A, 4A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 35A, 40A, 50A, 63A	
Tripping Characteristic	B Curve $6I_n \pm 20\%$, C Curve $12I_n \pm 20\%$	
Number of Poles	1P, 2P, 3P, 4P	
Rated Insulation Voltage (U_i)	1000 V	
Rated Impulse Withstand Voltage (U_{imp})	6.0 kV	
Rated Short-Circuit Capacity (I_{cu})	DC 125/220/250V (1P), DC 250/440/500V (2P):10kA DC 690/800V (2P):6kA DC 750/800V (3P), DC 800/1000V (4P):5kA	
Running Short-Circuit Capacity (I_{cs})	DC 125/220/250V (1P):7.5kA DC 250/440/500V (2P):6kA DC 690V (2P):4.5kA DC 800V (2P):3kA DC 750/800V (3P):5kA DC 800/1000V (4P):5kA	
Operating performance	Mechanical Endurance	15000 Cycle
	Electrical Endurance	10000 Cycle
Standard	IEC 60947-2	
Connection	Tunnel type, Bus-bar	
Connecting Capacity	1.0 mm ² ...25 mm ²	
Tightening Torque	2.5 N·m	

VB2Z-63 Main Characteristics

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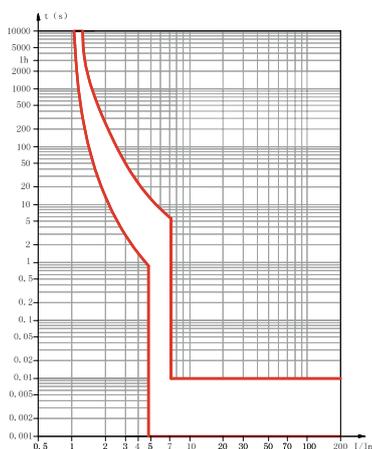
VB2	Z	–	63	C	63	/	1
1	2		3	4	5		6

SN	Name	Specification, type code
1	Design code	VB2: Design code
2	Function code	Z: DC type
3	Frame rating	63: 63A
4	Tripping characteristic	B, C
5	Rated current	1A, 2A, 3A, 4A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 35A, 40A, 50A, 63A
6	Number of poles	1P, 2P, 3P, 4P

Temperature and Breaking Capacity Coefficient

Ambient °C	-40 °C	-30 °C	-20 °C	-10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C	70 °C
Coefficient	131.59%	127.14%	123.10%	118.81%	114.40%	109.76%	105.07%	100%	94.44%	88.77%	82.63%	76.20%

B curve



Protection against loads with small short circuit currents (e.g., non-inductive or micro-inductive circuits)

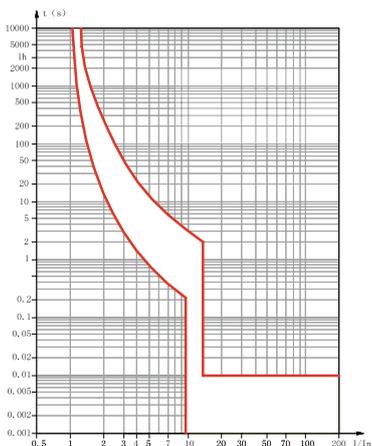
Trip characteristics:

The instantaneous trip range is $6(1 \pm 20\%) I_n$

Base temperature:

+30°C

C curve



Protection of conventional loads and distribution circuits

Trip characteristics:

The instantaneous trip range is $12(1 \pm 20\%) I_n$

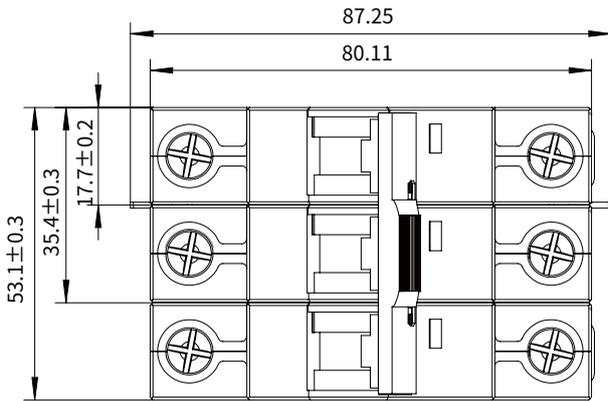
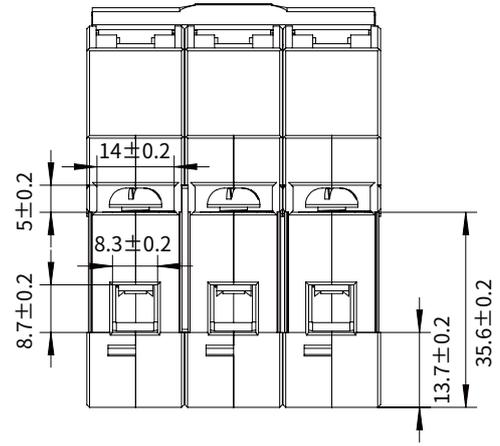
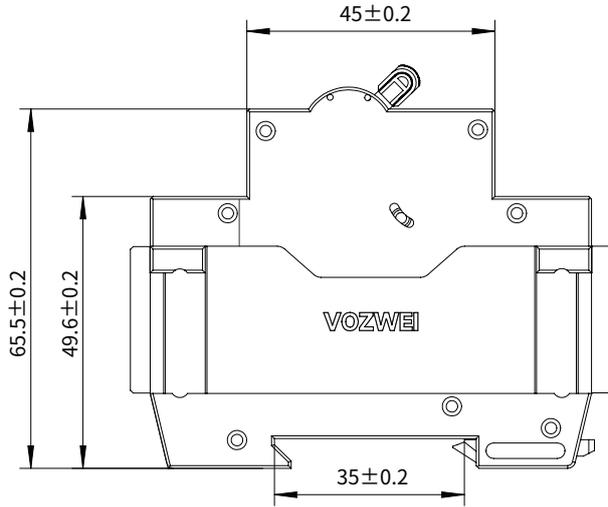
Base temperature:

+30°C

VB2Z-63 Size and Connection

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Overall and Mounting Dimensioned



Wiring Diagram

