RDB5-63 Series Miniature Circuit Breaker

Product Overview

RDB5-63 high breaking miniature circuit breaker (hereinafter referred to as circuit breaker) is mainly used in protective distribution lines with AC 50Hz (or 60Hz), rated working voltage up to 400V, rated current up to 63A and rated short circuit breaking capacity not exceeding 6000A. It is used for infrequent connection, breaking and switching of lines and has overload and short circuit protection functions. At the same time, it has powerful auxiliary function modules, such as auxiliary contact, contact with alarm indication, shunt release, undervoltage release, remote release control and other modules.

The product conforms to GB/T 10963.1 standard.

Selection Guide

RDB5	63	2P	C	63	OF
Product code	Shell frame grade	Poles	Tripping type	Rated current	Electrical accessories
Minature Circuit Breaker	63	1P 2P 3P 4P 1P+N 3P+N	C D	1A 2A 3A 4A 6A 10A 16A 20A 25A 32A 40A 50A 63A	Auxiliary contact: OF Alarm contact: SD Shunt release: MX Under-voltage release: Q Overvoltage release: G Over-voltage and under-voltage release: GQ

Normal working conditions and installation conditions

☐ Operating ambient temperature: the ambient air temperature is - 35 ℃~70 ℃, and the average value of 24h shall not exceed+35 ℃;

☐ Relative humidity of air: not more than 50% when the ambient air temperature is+40 ℃; It can have higher relative humidity at lower temperature; For example, the average maximum relative humidity of the wettest month is 95%, and the average minimum temperature of the month is+20 ℃

Treatment measures shall be taken for occasional condensation caused by temperature change;

☐ Altitude: not more than 2000m;

☐ Pollution level: Level 2;

☐ Main circuit installation category: II III;

☐ The circuit breaker shall be installed in a place without explosion hazard, conductive dust, corrosion of metal and damage of insulation;

☐ Use TH35-7.5 mounting rail for installation;

☐ The product shall be stored in the ventilated warehouse, with the lower limit of temperature not less than - 5 ℃ and the upper limit not more than+40 ℃; The relative humidity (+25 ℃) shall not exceed 95%;

☐ The products shall be protected from rain and snow erosion, sun exposure, humidity and pollution during transportation and storage. During storage, the height from the ground shall be more than 150 mm, and it shall be handled with care, not inverted, to avoid severe collision.

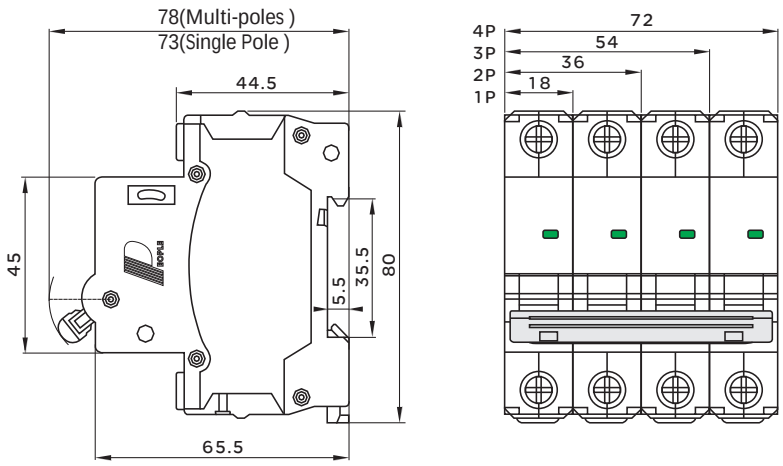
Main Technical Parameters

Rated current of shell frame grade In (A)	63
Rated current In (A)	1、2、3、4、6、10、16、20、25、32、40、50、63
Function	Short circuit protection, overload protection, isolation and control
Number of poles	1P、2P、3P、4P、1P+N、3P+N
Rated frequency (Hz)	50
Rated insulation voltage Ui (V)	AC500
Rated impulse withstand voltage Uimp (V)	4000
Rated working voltage Ue (V)	230/400
Flashover distance (mm)	⩽50
Operating short-circuit capacity Ics (A)	6000
Instantaneous tripping characteristics	C、D
Mechanical life	20000
Electrical life	10000

Tripping Characteristics

Experiment	Tripping type	Test current	Start state	Tripping or non-tripping time limit	Expected results	Remarks
a	B、C、D	1.13In	Cold State	t≤1h(for In⩽63A) t⩽2h(for In>63A)	No tripping	
b	B、C、D	1.45In	Immediately test after	t<1h(for In⩽63A) t<2h(for In>63A)	Tripping	The current increases steadily within 5s
c	B、C、D	2.55In	Immediately test after	1s<t<60s(for In⩽32A) 1s<t<120s(for In>32A)	Tripping	
d	B C D	3In 5In 10In	Cold State	t⩽0.1s	No tripping	Turn on the current by closing the auxiliary switch
e	B C D	5In 10In 15In	Cold State	t<0.1s	Tripping	Turn on the current by closing the auxiliary switch

Outline and installation dimensions



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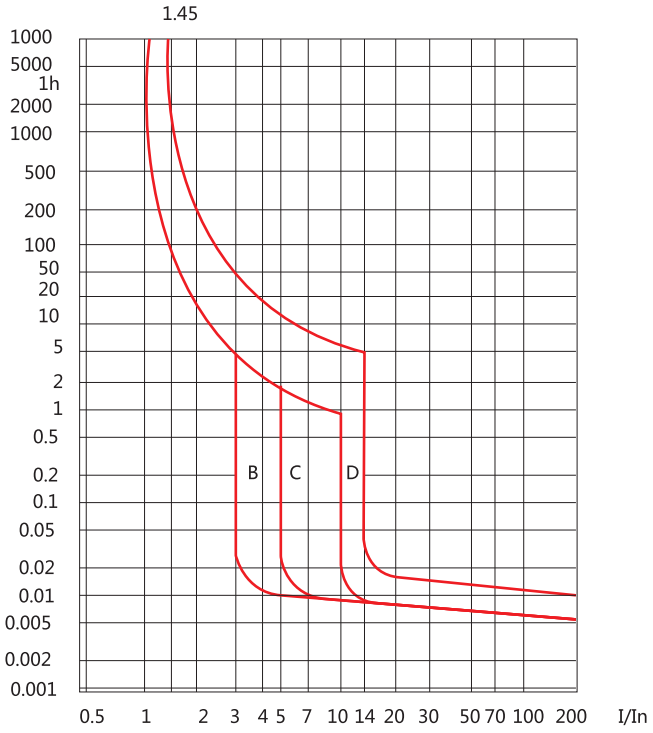
Trip curve



Conducting wire

The sectional area of the connected copper conductor is shown in the following table (reference):

Sectional area of copper conductor Sm (m^2)	Rated current value In (A)
1	In≤6
1.5	6<In≤13
2.5	13<In≤20
4	20<In≤25
6	25<In≤32
10	32<In≤50
16	50<In≤63
25	63<In≤80
35	80<In≤100
50	100<In≤125