

Table 3 Rated current and cross-sectional area of connecting wires

Rated current I _n	1, 2, 4, 6	10	16, 20	25	32	40, 50	63
Conductor cross-sectional area mm ²	1	1.5	2.5	4	6	10	16
The shortest length of connecting wire m	1	1	1	1	1	1	2

(6) This series of circuit breakers are rail-mounted, suitable for TH35-7.5 steel mounting rails;
(7) When the ambient temperature changes, its rated current value will be corrected accordingly. See Table 4 for temperature correction coefficients.

Table 4 Rated current temperature correction coefficient table

Temperature (°C) Current rating (A)	-30	-20	-10	0	10	20	30	40	50	60	70
1	1.26	1.22	1.18	1.14	1.09	1.05	1	0.95	0.90	0.84	0.78
2	2.49	2.42	2.34	2.26	2.18	2.08	2	1.92	1.84	1.74	1.59
4	5.18	5.00	4.82	4.63	4.43	4.22	4	3.77	3.52	3.26	2.97
6	7.59	7.35	7.10	6.84	6.57	6.29	6	5.69	5.37	5.02	4.65
10	13.63	13.09	12.54	11.95	11.34	10.69	10	9.26	8.45	7.56	6.55
16	20.44	19.77	19.07	18.35	17.60	16.82	16	15.13	14.22	13.23	12.17
20	25.30	24.49	23.66	22.80	21.91	20.98	20	18.97	17.89	16.73	15.49
25	31.74	30.72	29.67	28.57	27.43	26.24	25	23.69	22.30	20.82	19.23
32	40.48	39.19	37.86	36.49	35.05	33.56	32	30.36	28.62	26.77	24.79
40	50.89	49.24	47.54	45.77	43.93	42.01	40	37.88	35.64	33.24	30.66
50	64.00	61.89	59.70	57.43	55.06	52.59	50	47.27	44.36	41.26	37.90
63	82.09	79.22	76.26	73.17	69.94	66.56	63	59.22	55.19	50.84	46.08

Open box to check

After opening the box, the user must check whether the products intact, whether the exposed metal parts are rusted, whether the product is defective due to improper transportation and storage, if the above phenomenon occurs, the product cannot be used, please contact the supplier in time to solve it.

Company commitment

If the product is damaged or cannot be used normally due to manufacturing quality problems within 36 months from the product production date on the premise that the user abides by the use and storage conditions and the product seal is intact, the company is responsible for free repair or replacement beyond the warranty period
Yes, it needs to be repaired for a fee. However, if the damage is caused by the following circumstances, paid repairs will be made even within the warranty period:
(1) Due to improper use, maintenance and storage;
(2) Self-modification and improper maintenance;
(3) After purchase, it is damaged due to falling and installation;
(4) Force majeure such as earthquake, fire, lightning strike, abnormal voltage and secondary disasters.

Order

Users need to explain when ordering:

- a) The name, model and specification of the circuit breaker;
- b) Rated current and number of poles of the circuit breaker;
- c) Quantity.

Example: Order CDB9H-63 three-pole circuit breaker, type C, rated current 20A, quantity 1000 units.

It should be written as: CDB9H-63/3P, C20, 1000 units

DELIXI ELECTRIC Certificate of qualification DELIXI ELECTRIC LTD	Name: Miniature Circuit Breaker Model: CDB9
	This product has passed the inspection and is approved to delivery. Standard: GB/T 10963.1
	Inspector: 06
	Date of production: See box label

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QUALITY SERVICE

NEW ERA

CDB9 Miniature circuit breaker instruction manual

INSTRUCTIONS

Safety notice

Before installation, operation, maintenance and inspection, please be sure to read this manual carefully, and install and use this product accurately, according to the contents in the manual.

⚠ Danger:

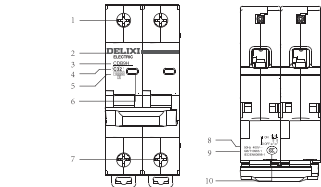
- It is strictly forbidden to operate the circuit breaker with wet hands;
- During use, it is strictly forbidden to touch the conductive parts;
- During maintenance and maintenance, it must be ensured that the product is not live;
- It is strictly forbidden to use short-circuit method to test the product;

⚠ Notice

- When installing, maintaining and maintaining, it should be operated by professionally qualified personnel: the characteristics of the product have been set at the factory, and cannot be disassembled or adjusted at will during use;
- Before use, please confirm whether the working voltage, rated current, frequency and characteristics of the product meet the working requirements;
- Tighten the wiring screws, and tighten the wires with a torque of not less than 2.0Nm so that the wires cannot be loosened or pulled out, and the exposed copper wire ends cannot be exposed outside the terminals; in order to prevent phase-to-phase short circuits, the exposed wires or copper busbars at the terminals should be insulated;
- If the product is damaged or makes abnormal noise when unpacking, stop using it immediately and contact the supplier;
- When the product is scrapped, please do a good job in industrial waste disposal, thank you for your cooperation

Get to know CDB9 series miniature circuit breakers

Panel introduction



Description:
1 Terminal 2 Company trademark
3 Product model (CDB9H, CDB9N) 4 Tripping curve and rated current (see Table 1)
5 Point capacity and current limiting level (see Table 1)
6 Contact indication 7 Terminal
8 Frequency and Rated voltage 9 reference standard 10 certification mark

Installation and transportation conditions Normal use, normal use, installation conditions

- The upper limit of ambient air temperature does not exceed +70C, the lower limit does not exceed -30C and the average temperature within 24 hours does not exceed +35C
- The altitude of the installation site does not exceed 2000m;
- When the highest temperature is +70C, the relative humidity of the air does not exceed 50%; a relatively high relative humidity is allowed at a lower temperature, for example, the relative humidity is 90% at +20C, and taking into account the occurrence of temperature changes condensation on the product;
- The external magnetic field near the installation place of the circuit breaker should not exceed 5 times of the earth's magnetic field in any direction;
- Installed in a non-explosive medium, and there is no gas and dust in the medium that can corrode metals and damage insulation;
- Installed in a place where there is no significant shock vibration and no rain or snow;
- Pollution level: Level 2;
- Installation category: Type I, Type III;
- It should be installed in a distribution box, distribution cabinet or box;

● Normal storage and transport conditions

- The lower limit of temperature should not be lower than -40C, and the upper limit should not exceed +85C!
- The relative humidity (at 25C) does not exceed 95%;
- The product should be handled with care during transportation, and should not be placed upside down, and violent collisions should be avoided as much as possible.

Main technical performance parameters

- The main technical parameters of the circuit breaker are shown in Table 1

Table 1 main technical parameters

Trip type	Rated current I _n A	Poles	Rated voltage U _c V	Rated breaking capacity I _{cn} A
B type	1, 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63	1	230/400	400
		2, 3, 4	400	
C type	1, 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63	1	230/400	CDB9H: 10000A CDB9N: 6000A
		2, 3, 4	400	
D type	1, 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63	1	230/400	
		2, 3, 4	400	

The overcurrent protection characteristics of the circuit breaker are shown in Table 2

Table 2 Overcurrent Protection Characteristics of Circuit Breakers

Trip unit type	Rated current I _n A	Test current I _a	Initial state	Start time	Expected outcome	Appendix	Base temperature
B, C, D	≤63	1.13I _n	Cold state	t≤1h	No trip	—	+30 ^{±5} °C
B, C, D	≤63	1.45I _n	Lightness test	t<1h	Trip	The current rises to the specified value within 5s	
B, C, D	≤32	2.55I _n	Cold state	1s≤t≤60s	Trip	—	
B, C, D	>32		Cold state	1s≤t≤120s	Trip	—	
B		3I _n	Cold state	t≤0.1s	No trip	Close the auxiliary switch to turn on the power	
C	≤63	3I _n	Cold state	t≤0.1s	No trip	Close the auxiliary switch to turn on the power	
D		10I _n	Cold state	t≤0.1s	No trip	Close the auxiliary switch to turn on the power	
B		5I _n	Cold state	t<0.1s	Trip	—	
C	≤63	5I _n	Cold state	t<0.1s	Trip	—	
D		14I _n	Cold state	t<0.1s	Trip	—	

The protection characteristic curves of the circuit breaker are shown in Figure 1, Figure 2, and Figure 3 respectively.

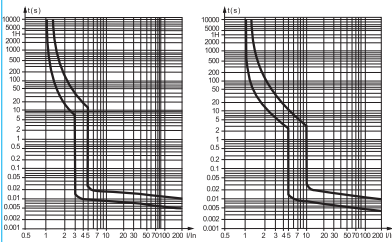


Figure 1B type thermal/electromagnetic tripping characteristic curve

Figure 2 C type thermal/electromagnetic tripping characteristic curve

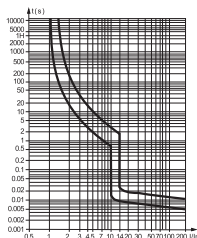


Figure 3 D-type thermal/electromagnetic tripping characteristic curve

Outline and Installation Dimensions The circuit breaker is mounted on a guide rail, and the appearance and installation dimensions are shown in Figure 4.

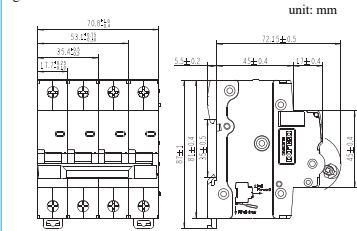


Figure 4. Outline and installation dimensions

● Installation, Use and Maintenance

Before installing the circuit breaker:

- Check whether the technical parameters on the pad printing mark meet the requirements for use; (2) Before use, the user should use a 500V megohmmeter to check the circuit breaker's poles and poles (except for single poles), poles and shells, poles and mounting rails , The insulation resistance between the incoming line terminal and the outgoing line terminal should not be less than 5 megohms. If the insulation resistance is less than 5 megohms, the product cannot be used. You should contact the supplier and replace it in time; (3) Close the circuit breaker. Check the operating mechanism of the circuit breaker several times for jamming and whether the mechanism is reliable;
- The base temperature of this series of circuit breakers is 30^{±5}°C. If multiple circuit breakers are placed in a sealed box at the same time, the temperature of the box will rise accordingly, and the operating current will be 0.8I_n;
- The cross-sectional area of the connecting conductor should be compatible with the rated current of the circuit breaker, see Table 3