

DELIXI
ELECTRIC

DZ47MA

Plastic case type circuit breaker



Meet the standard: : **GB/T 14048.2**

Please read the instructions carefully before installing and using the product
And keep properly, reserve

1 Main uses and scope of application

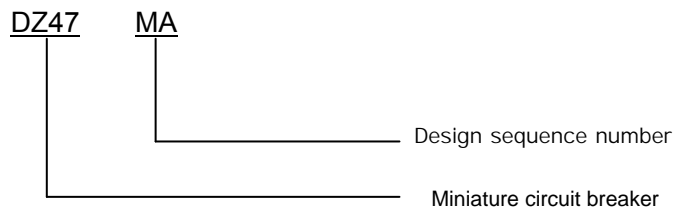
DZ47MA series single magnetic plastic shell circuit breaker is mainly used in AC 50Hz/60Hz, rated working voltage 230V (1P) 400V (2P-4P), rated working current 1A ~ 63A circuit. This series circuit breaker is equipped with short circuit protection trip device, no overload protection trip device, only provides short circuit protection.

Product features model and meaning

2.1 Product characteristics

- a) Short circuit protection;
- b) With isolation function;
- c) The product is allowed to enter the line up and down.

2.2



3. Normal working conditions and installation conditions

- a) The upper limit of ambient air temperature shall not exceed +60 ° C, the lower Designsequencenumber limit shall not be lower than -20 ° C, and the average temperature shall not exceed +35 ° C within 24 hours;
- b) The elevation of the installation site does not exceed 2000m;
- c) When the temperature is +40 , the relative humidity of the air does not exceed 50%; Allow a relatively large relative humidity at a lower temperature, such as at +20 ° C, the relative humidity does not exceed 90 %, and special protective measures should be taken for condensation occasionally caused by temperature changes;
- d) The external magnetic field near the installation site of the circuit breaker should not exceed 5 times the geomagnetic field in any direction;
- e) Installed in a medium without explosion risk, and the medium is free of gas and dust enough to corrode metal and destroy insulation;
- f) Installed in a place without significant shock vibration and no rain or snow attack; g) Pollution level: Level 3;
- h) Installation category: Class II, Class III;
- i) Should be installed in the distribution box, distribution cabinet or box;
- j) The product allows reverse wiring.

4. Normal storage and transport conditions

- a) The lower limit of temperature shall not be lower than -40℃, and the upper limit shall not exceed +70℃;
- b) The relative humidity (25℃) does not exceed 95%;
- c) The product should be handled gently during transportation, should not be put upside down, should try to avoid violent collision.

5.Structure characteristics and working principle

5.1 Overall structure and working principle

The basic structure of DZ47MA single magnetic plastic shell type circuit breaker is mainly composed of: operating mechanism, short circuit protection release device, contact system, arc extinguishing system, terminal, spring buckle and plastic shell. This series of circuit breakers only provide short circuit protection, not overload protection. When the load current of the circuit breaker protected by the line is less than or equal to the rated current, the electromagnetic suction generated by the current flowing through the coil is less than the spring reaction force, then the iron core does not move in situ, the circuit breaker works normally. When the circuit breaker is protected by the line to produce a short circuit current, the electromagnetic suction generated by the current flowing through the coil is greater than the spring reaction force, the iron core is instantly activated, the circuit breaker can be opened in a very short time, cut off the fault circuit. The working principle diagram is shown in Figure 1.

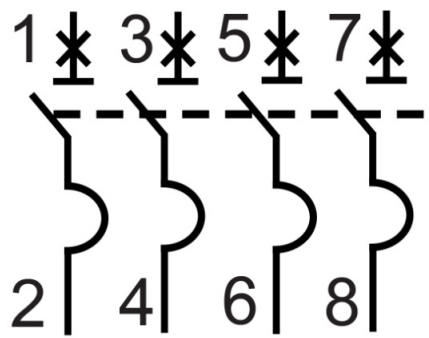


Figure 1 Working principle diagram

6 Technical Features

6.1 Main technical parameters

The main technical parameters are shown in Table 1.

Table 1 Main technical parameters

Setting current	Rated current In A	Poles	Rated Voltage Ue V	Rated breaking capacity Icu A
(C) $I_i=8I_n$	1、2、3、4、6、10、16、 20、25、32、40、50、63	1	230	6000 ($I_{cs}=I_{cu}$)
		2、3、4	400	
(D) $I_i=12I_n$	1、2、3、4、6、10、16、 20、25、32、40、50、63	1	230	
		2、3、4	400	

6.2 Main technical performance

- a) The over-current protection characteristics of circuit breakers are shown in Table 2

Table 2 Overcurrent protection characteristics of circuit breakers

Release type	Test current A	Initial state	Test time	Expected result	Appended
C	$8I_n \times 80\%$	Cold state	$t \leq 0.2\text{ s}$	Non-trip	Turn on the auxiliary switch to power on
D	$12I_n \times 80\%$				
C	$8I_n \times 120\%$	Cold state	$t < 0.2\text{ s}$	Trip	Turn on the auxiliary switch to power on
D	$12I_n \times 120\%$				

Below the rated instantaneous short-circuit current setting, the circuit breaker cannot provide overcurrent protection for itself or the circuit, and this protection should be provided separately.

b) Other technical parameters

- 1, Mechanical life: 20000 times;
- 2, Electrical life: 10000 times;
- 3, Rated impulse withstand voltage (U_{imp}) : 4kV;

7 Outline and mounting dimensions

Outline and installation dimensions are shown in Figure 3

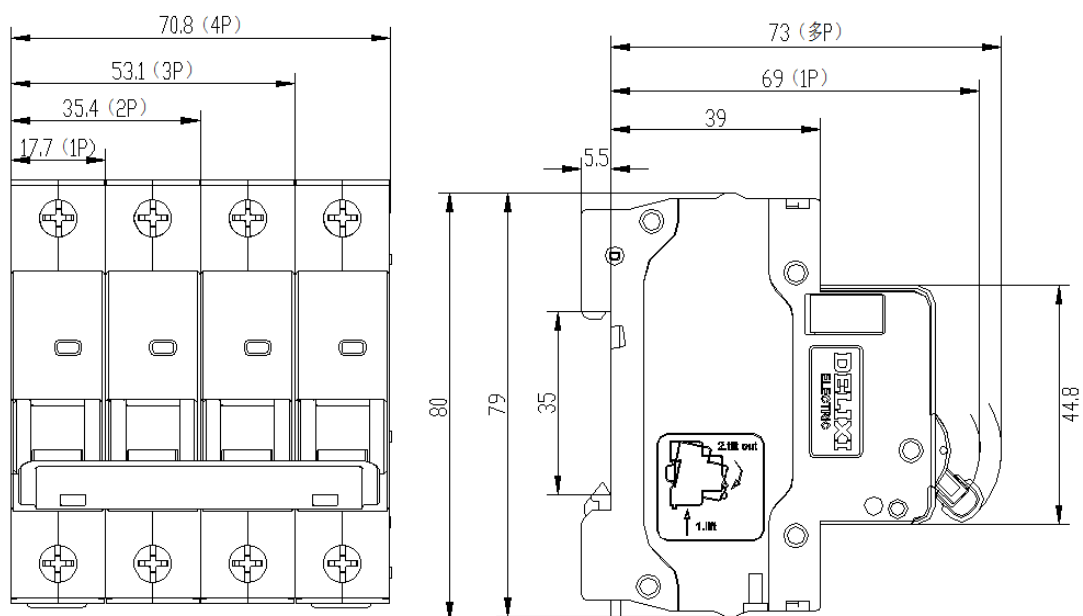


Figure 3 Outline and mounting dimensions

8 Installation and use (maintenance)

Before the circuit breaker is installed:

- a) Check whether the technical parameters on the pad printing mark meet the requirements of use;
- b) Before use, the user should use a 500V megohm meter to check the insulation resistance between the circuit breaker pole and pole (except for a single pole), pole and housing, pole and mounting rail, and between the inlet and outlet terminals, which should be no less than 5M Ω . If the insulation resistance is less than 5M Ω , the product cannot be used, and the supplier should be contacted to replace it in time;
- c) The circuit breaker is closed and divided into several times to check whether the circuit breaker operating mechanism is stuck and whether the mechanism is reliable;
- d) The cross-sectional area of the connecting conductor should be compatible with the rated current of the circuit breaker, as shown in Table 3;

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

Rated current value A	1、2、3、4、6	10	16、20	25	32	40、50	63
Traverse area mm ²	1	1.5	2.5	4	6	10	16
Cable tightening torque N·m	Both the power and load ends are 2.0						

- e) This series of circuit breakers is a guide rail installation mode, suitable for TH35-7.5 steel installation rail; Maintenance and maintenance:

- a) Maintenance and maintenance must be operated by professionally qualified personnel;
- c) Maintain and maintain once a year under normal operating conditions, as shown in Table 5.

- b) Must ensure that the product is not charged;

Table 5 Maintenance and maintenance

Item	Content
Appearance	No dust, no condensation, if necessary to clean No damage Shell, connection terminal color does not change
Terminal connection	Tighten according to torque in Table 3, and do not loosen
Handle closing/opening operation	Operation should be flexible

9 Matters needing attention

- a) Do not operate the circuit breaker with wet hands
- b) In use, do not touch the conductive part;
- c) Maintenance and maintenance, must ensure that the product is not live;
- d) It is strictly prohibited to test the product by short circuit;
- e) Installation, maintenance and maintenance should be operated by professionally qualified personnel;
- f) The characteristics of the product have been set at the factory, and can not be disassembled or adjusted at will in use;

- g) Before use, please confirm whether the rated voltage, rated current, frequency and characteristics of the product meet the working requirements;
- h) In order to prevent short circuit between phases, the exposed wire or copper bus should be insulated
- i) If the product is damaged or abnormal when unpacking, stop using it immediately and contact the supplier
- j) When the product is scrapped, please do a good job of product waste treatment, thank you for your cooperation

10 Unpacking inspection

After opening the box, the user must check whether the product is intact, whether the exposed metal parts are rusty, whether the product is defective due to poor transportation and storage, if the above phenomenon occurs, the product can not be used, please contact the supplier in time to solve the problem.

11 Corporate commitment