DELIXI
ELECTRIC
德力西电气

DZ47sZ-63 NAVIGATOR Series

DC Moulded Case Circuit Breaker

User Manual

Please carefully read this User Manual before installing and operating the product, and keep this manual properly for future reference

Safety Notice

Make sure to read this manual carefully before installation, operation, maintenance and inspection, and correctly install and use this product according to the manual.

⚠ Danger:

- Do not operate the breaker with wet hands;
- Never touch the conductive parts in use;
- Make sure that the product is de-energized during maintenance and care;
- Do not test the product by means of short circuit;

⚠ Attention:

- The installation, repair and maintenance shall be implemented by qualified personnel;
- When installing, it must be connected in strict accordance with the wiring method in Figure 5 and the "+" and "-" polarity marked on the product, and the connection cannot be reversed;
- All features of the product have been set when delivery, do not disassemble or modulate the product at your own discretion;
- Before use, make sure that the working voltage, rated current, frequency and features of the product meet the working requirements;
- To prevent interphase short circuit, the bare wire or copper busbar at the terminal shall be insulated;
- Stop using and contact the supplier immediately in case of any damage or abnormal sound during unpacking;
- Make proper disposal of industrial wastes for end-of-life products. Thank you for your cooperation.

About DZ47sZ-63 DC Moulded Case Circuit Breaker

● Panel Introduction

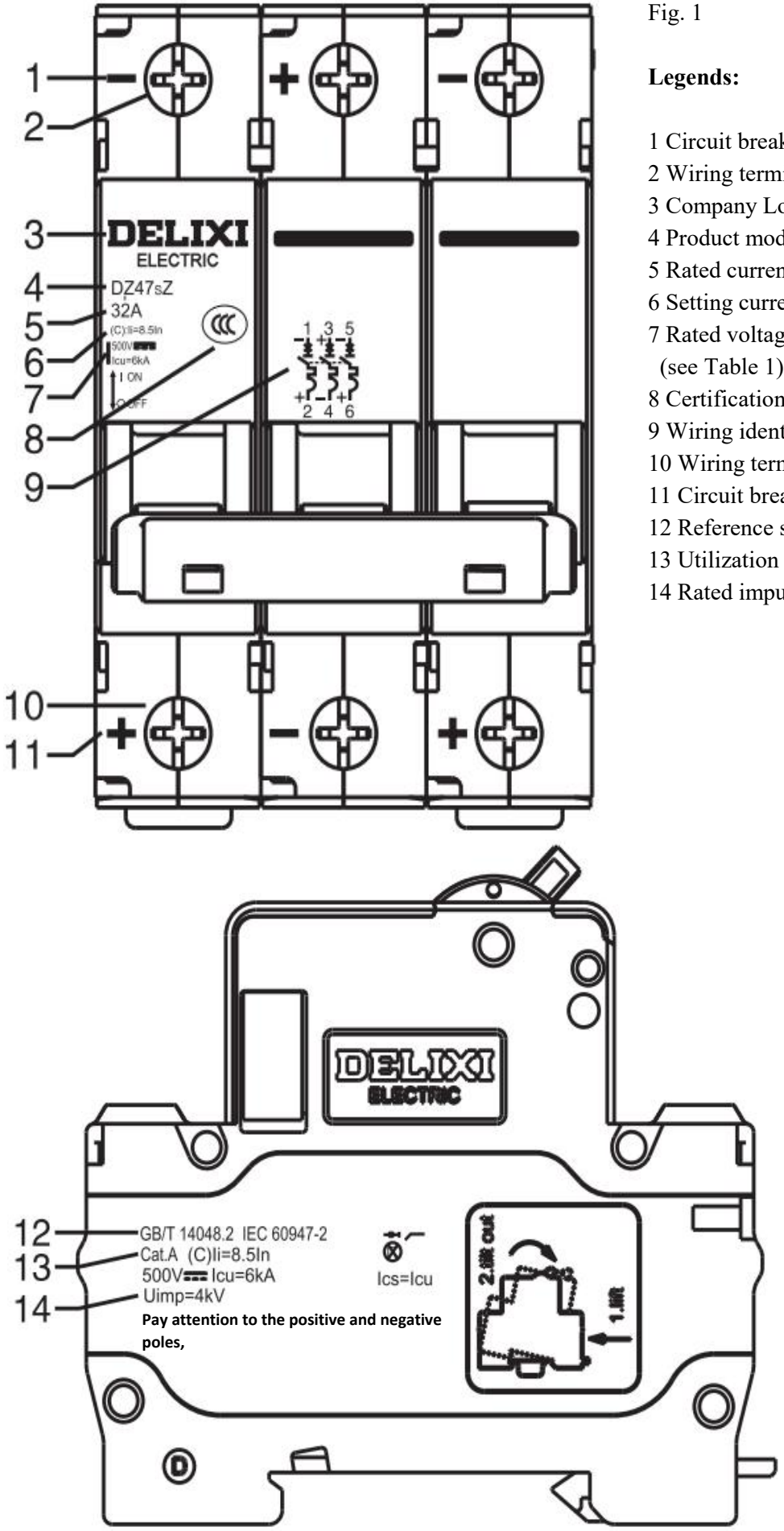


Fig. 1

Legends:

1 Circuit breaker negative pole
2 Wiring terminal
3 Company Logo
4 Product model (DZ47sZ-63)
5 Rated current (see Table 1)
6 Setting current (see Table 1)
7 Rated voltage and breaking capacity (see Table 1)
8 Certification mark
9 Wiring identification
10 Wiring terminal
11 Circuit breaker positive pole
12 Reference standard
13 Utilization category
14 Rated impulse withstand voltage

Conditions of Normal Use Installation and Transportation

Conditions of normal use and installation

(1) The ambient temperature ranges between -20℃ and +60℃ with average value in 24h not exceeding +35℃;
(2) Altitude: ≤2000m;
(3) The relative humidity should not exceed 50% at a maximum temperature of +40℃; the relative humidity is allowed to increase while under lower temperature, for instance 90% for temperature +20%, but should take condensation into consideration when temperature is changed.
(4) The external magnetic field near the installation site of the residual current circuit breaker shall not exceed 5 times the geomagnetic field in any direction;
(5) It shall be installed in medium free of explosion risk and gas or dust that may cause metal corrosion or damage to insulation;
(6) It shall be installed in places where there is no shock and vibration, or rain and snow either;
(7) Pollution class: 2;
(8) Installation category: II & III;
(9) It shall be installed in distribution box, distribution cabinet or box;
(10) **When wiring, the power end must be connected to the positive pole of the circuit breaker, the load end must be connected to the negative pole of the circuit breaker, reverse wiring is not allowed;**

Conditions of normal storage and transportation

(1) Temperature range: -40℃ - +70℃;
(2) Relative humidity: ≤95%; **(At 25℃)**
(3) The product shall be handled with care during transportation without upside down. Avoid violent collision.

Main Specifications and Technical Parameters

Main technical parameters are listed in Table 1

Table 1 Main technical parameters

Setting current	Rated current In A	Pole	Rated voltage Ue V	Rated breaking capacity Icn A
(B) Ii=5.5In	6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63	1	250V	6
		2, 3	500V	
(C) Ii=8.5In	1, 2, 3, 4, 5, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63	1	250V	
		2, 3	500V	

The protection characteristics of the overcurrent release are listed in Table 2

Table 2 Protection characteristics of the overcurrent release

Type of overcurrent instantaneous release	Rated current In A	Test current A	Start state	Test time	Expected result	Remarks	Reference temperature
(B) Ii=5.5In (C) Ii=8.5In	≤63	1.05In	Cold state	t≤1h	Not-trip	--	$+30^{+5}_{0}$℃
(B) Ii=5.5In (C) Ii=8.5In		1.30In	Followed by test	t＜1h	Trip	The current rises to the specified value within 5s	
(B) Ii=5.5In		5.5In×80%	Cold state	t≤0.2s	Not-trip	Turn on the auxiliary switch to supply power	
(C) Ii=8.5In		8.5In×80%					
(B) Ii=5.5In		5.5In×120%		t＜0.2s	Trip		
(C) Ii=8.5In		8.5In×120%					

Protection characteristics curve of circuit breaker are illustrated in Fig. 2, 3

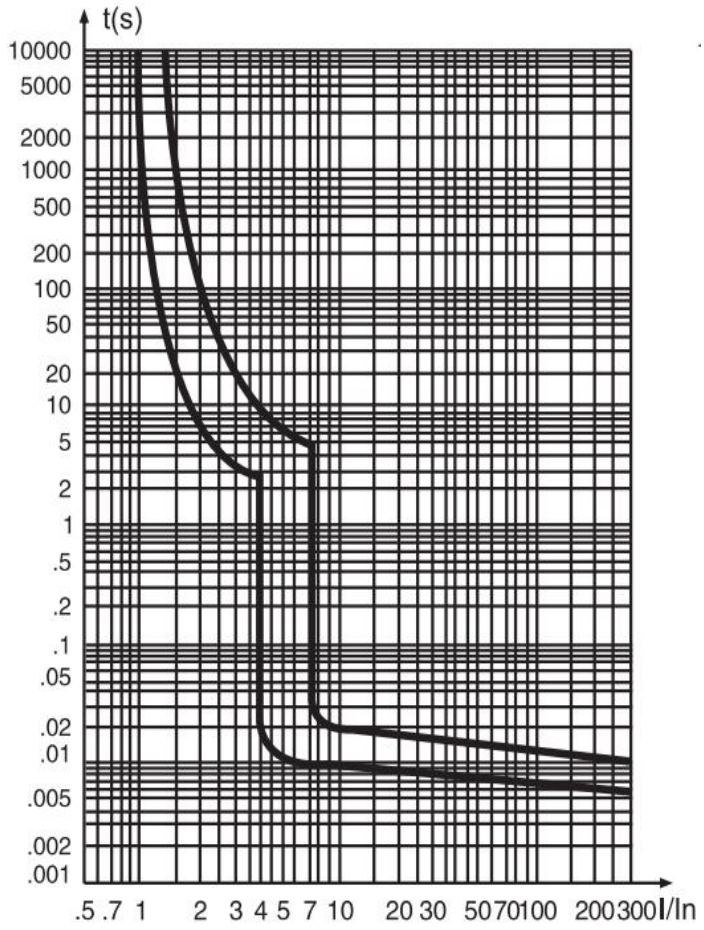


Fig. 2
C type thermal/electromagnetic
trip characteristics curve

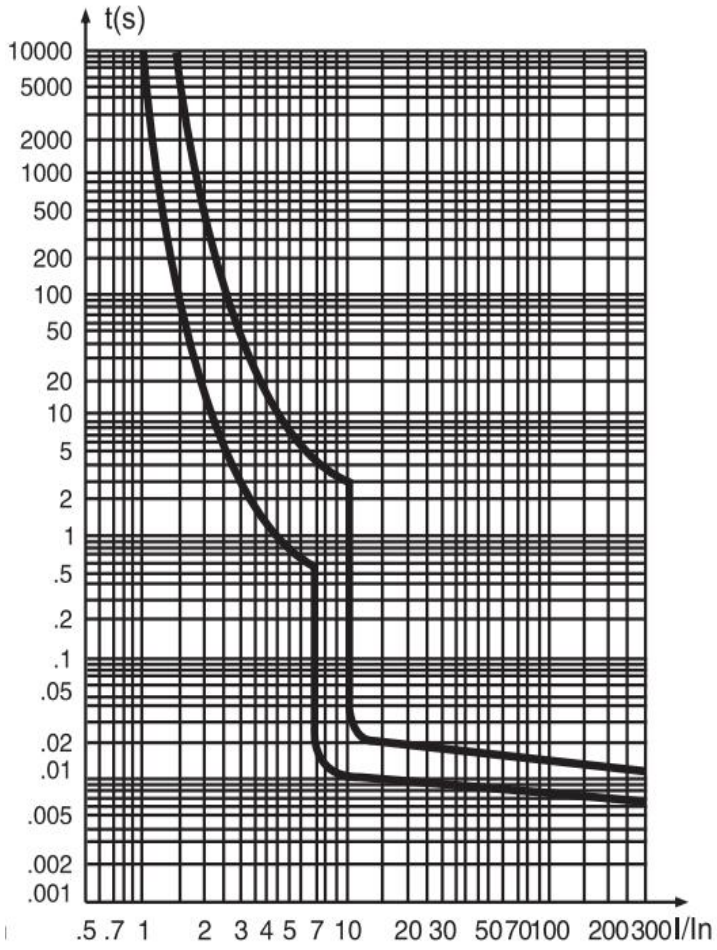


Fig. 3
C type thermal/electromagnetic
trip characteristics curve

Outline and Installation Dimensions

The circuit breaker is installed on the guide rail. Unit: mm

The outline and installation dimensions are shown in Fig. 4.

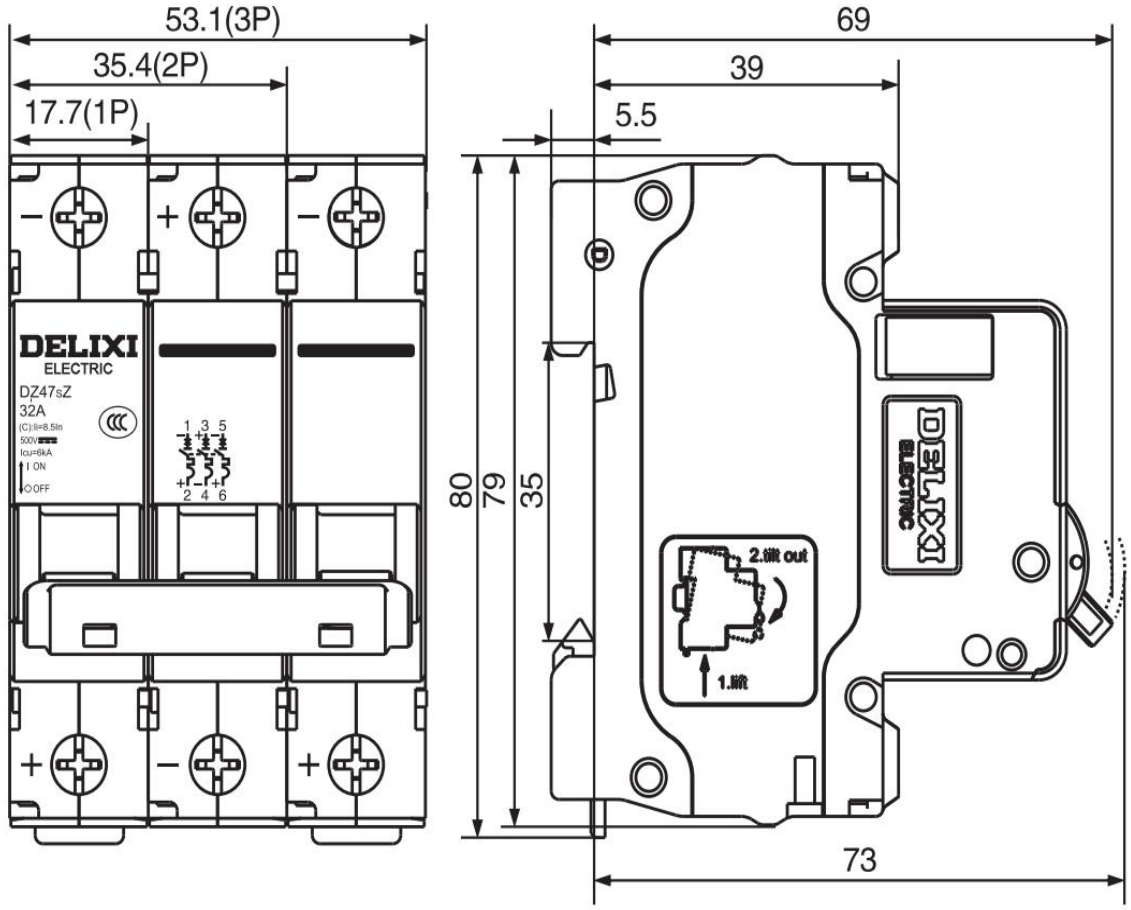


Fig. 4

● Installation and Operation

(1)Check whether the technical parameters of the product meet the use requirements;

(2)Before use, users shall check the insulation resistance respectively between the two poles (except for single pole), the pole and the shell, the pole and the mounting rail, the incoming and the outgoing line end with a 500V megohmmeter. Do not use the product if the insulation resistance is below 5MΩand contact the supplier timely for exchange.

(3)Close and open the breaker for several times to check whether the operation mechanism is reliable or clamping stagnation exists in the mechanism;

(4) The reference temperature for the breaker of this series is +30 +5℃, If multiple circuit breakers are installed in the sealed box at the same time, the temperature of the box will rise accordingly, and the operating current will be 0.8In;

(5) The sectional area of connecting conductor shall fit the rated current of the circuit breaker. See table 3;

Table 3 Rated current and sectional area of the connecting wire

Rated current A	1, 2, 3, 4, 5, 6	10, 13	16, 20	25	32	40, 50	63
Sectional area of wire mm2	1	1.5	2.5	4	6	10	16
Wiring torque N•m	1	1	1	1	1	1	1

(6)The breaker of this series adopts DIN rail mounting method, for which TH35-7.5 steel DIN rail shall apply.

(7)When the ambient temperature changes, the rated current shall be corrected accordingly.

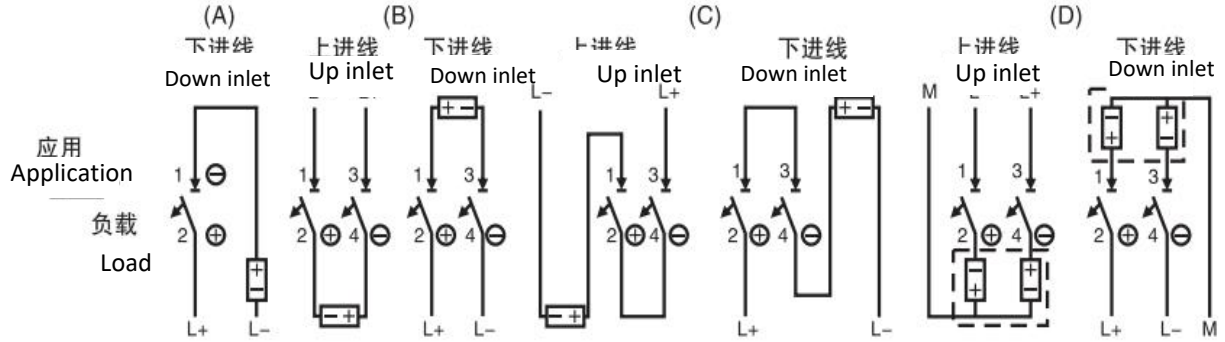
For temperature correction coefficient, see table 4.

Table 4 Rated current and temperature correction coefficient table

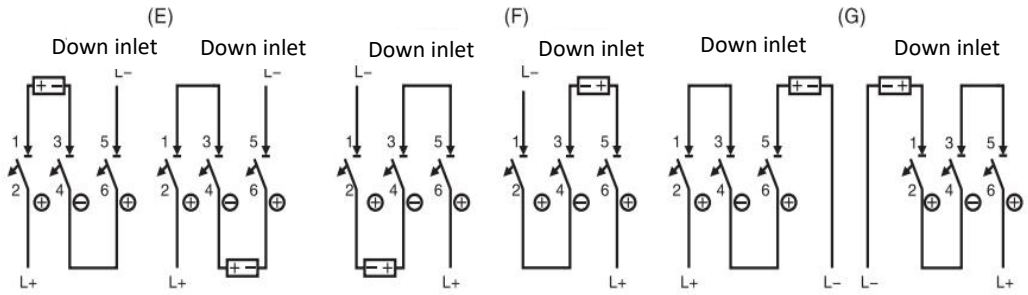
Temperature (℃) / Rated current (A)	-20	-10	0	10	20	30	40	50	60
1	1.22	1.18	1.15	1.10	1.05	1.00	0.94	0.90	0.84
2	2.43	2.31	2.25	2.17	2.06	2.00	1.93	1.85	1.63
3	3.68	3.57	3.43	3.29	3.18	3.00	2.82	2.63	2.57
4	4.89	4.75	4.67	4.48	4.24	4.00	3.98	3.52	3.25
5	6.21	5.98	5.83	5.77	5.42	5.00	4.85	4.57	4.19
6	7.33	7.05	6.84	6.62	6.30	6.00	5.64	5.42	5.06
8	9.78	9.44	9.15	8.51	7.98	8.00	7.10	6.92	6.75
10	12.25	11.87	11.64	11.15	10.62	10.00	9.30	8.96	8.48
13	15.78	15.34	14.83	14.22	13.75	13.00	12.10	11.75	10.93
16	19.49	18.72	18.06	17.98	16.96	16.00	15.04	14.42	13.47
20	24.35	23.68	22.82	22.47	21.20	20.00	18.80	17.85	16.78
25	30.52	29.61	28.78	28.09	26.50	25.00	23.25	22.52	21.02
32	38.96	37.68	36.62	35.96	33.92	32.00	30.08	28.81	26.84
40	48.85	47.13	46.32	45.80	42.80	40.00	36.80	36.21	33.50
50	61.58	59.52	57.35	55.04	52.59	50.00	46.00	44.25	42.36
63	76.86	74.25	71.18	69.13	67.41	63.00	58.59	56.83	52.93

● **When installing the circuit breaker, please install it according to the wiring method in Figure 5;**

Rated voltage	1P	2P	2P	2P
Un	⎓250V	⎓500V	⎓500V	⎓500V
Unmax UL+/L−	⎓250V	⎓500V	⎓500V	⎓500V
Unmax UL/⏚	⎓250V	⎓500V	⎓500V	⎓500V



Rated voltage	3P
Un	⎓500V
Unmax UL+/L−	⎓500V
Unmax UL/⏚	⎓500V



Remarks:

(1)L+ positive terminal of power supply, L- negative terminal of power supply

(2) + circuit breaker positive pole, - circuit breaker negative pole

(3) DC power supply is usually "L-" grounded, positive and negative power system neutral pole "M" grounded

Figure 5 Wiring code

Unpacking Inspection

After unpacking, please check whether the product is intact, whether the exposed metal is rusty, and whether the product is defected due to poor transport or storage. If found the above phenomenon, please stop the product, and contact the supplier timely for solution.

Company Commitment

Under the condition that users follow the use and storage conditions and the product are well sealed, within 36 months from the production date, our company will provide repair and replacement service free of charge for any damage or abnormal operation due to poor manufacture quality. A paid repair will be provided if the warranty period expires. For any damage due to one of the following situations, a paid repair will be given even if within the warranty period:

(1) Improper operation, maintenance, or storage;
(2) Modified and improper repair without permission;
(3) Damage due to falling off or found during installation after purchase;
(4) Force majeure such as earthquakes, fires, lightning strikes, abnormal voltages, and secondary disasters; If you have any question, please contact the dealer or our company's customer service department.

Order Notice

Please specify the following items when ordering:

1) Name, model and specification of circuit breaker;
2) Rated current and No. of poles of circuit breaker;
3) Qty.

Example 1: To order DZ47sZ-63 1 Pole, C type, rated current 20A, 1000 units.
Please specify: To order DZ47sZ-63/1P, C20, 1000 units.

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Certificate

DELIXI ELECTRIC LTD

Name: DC Moulded Case Circuit Breaker

Model: DZ47sZ-63

This product passes the inspection and is allowed to be shipped.

Standard: GB/T 14048.2

Inspector: Check 06

Production date: See label on inner box

www.cn-delixi.com

The first edition of this manual was issued on May., 2018.