DELIXI
ELECTRIC

CDM6i
Molded Case Circuit Breaker

User Manual

Safety Notice

⚠ Danger

- Do not operate the breaker and touch the energized parts (conductors and ports) with wet hands during use; otherwise it may cause electric shock and burning danger;
- Cut off the higher power and ensure that the incoming terminals are electrically neutral before product maintenance and service; otherwise it may cause serious consequences and endanger personal safety;

⚠ Caution

- The installation, maintenance and service shall be implemented by qualified persons;
- Characteristics of the product have been set when delivery and cannot be adjusted at will during use;
- Confirm whether the working voltage, rated current, frequency and characteristics of the product meet the working requirements before use;
- To prevent interphase short circuit, the bare wire or copper busbar at the terminal shall be insulated;
- To test the insulation resistance or power frequency withstand voltage, it is required to disconnect the electronic components between the current loop to prevent damage to the product performance;
- Use the matching accessories we provided as the optional accessories to ensure quality. We are not responsible for all adverse consequences generated from the use of the accessories not provided by us;
- Energize the rated voltage of the undervoltage release before switching on the product with an undervoltage release;
- Stop using and contact the supplier immediately in case of any damage or abnormal sound during unpacking;
- Make industrial waste treatment for product scrap. Thank you for your cooperation.

⚠ Product Test

Insulation test

The breaker has been subject to the insulation test stipulated in the standard before delivery The retest, if required before installation, shall follow the steps below:

(1)Tool:1000V DC megger(500V DC meg ger for 63 frame)

(2) Between the breaker contacts, between the phases and between the phase and the shell (the shellis covered by tinsel)

(3) The undervoltage release connected to the main circuit is between the incoming line and the breaker shell

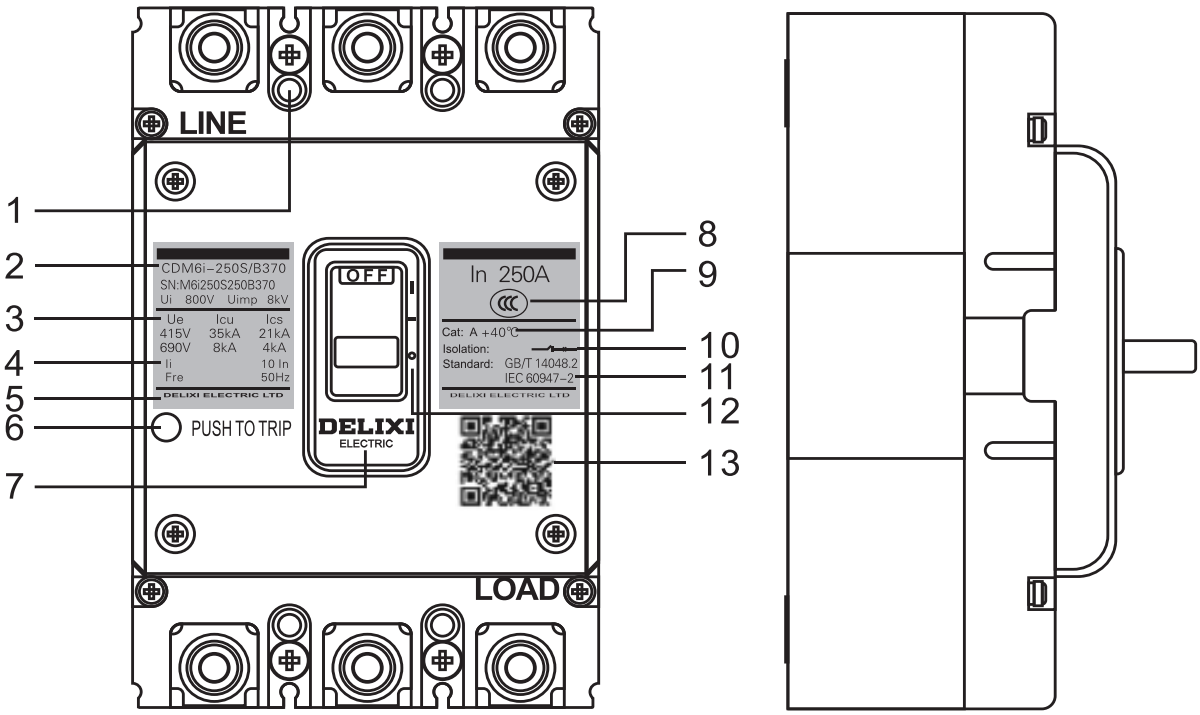
(4)The insulation resistance shall be no less than 20MQ.Note: The user may conduct a substitution test by means of a power freguency withstandvoltage tester in case of the absence of a megger. Refer to the insulation test methods for themeasuring parts and apply the voltage at 2000V/5s.

Please note the information with ⚠

About CDM6i

Packing list

	Ordered product	Flash barrier	Binding screw	Mounting screw	Instuction	Certificate
No.	1	4 with three poles	6 with three poles; 12(1250)	4 with three poles	1	1
		6 with four poles	8with four poles; 16(1250)	4 with four poles		



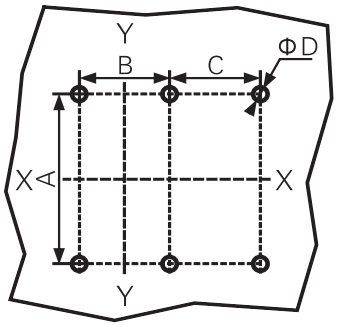
1	Mounting hole	6	Test button	11	Conplied standard
2	Product name	7	Brand trademark	12	Closing,tripping and opening
3	Technical parameters	8	Certificatio	13	QR Code
4	Breaking capacity	9	Category		
5	Brand name	10	Breaker with isolating function		

Product usage environment and conditions

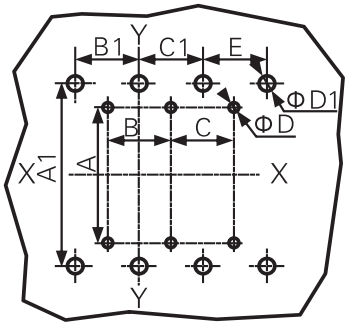
- This product has a protection level of IP20
- Pollution class: 3
- Rated working voltage 415/690VThe elevation of the installation site shall not exceed 2000m. If it exceeds 2000m, please reduce the capacity and use it
- Allowable ambient temperature -25 ℃~+70 ℃;
- Relative humidity (at an ambient temperature of 25 ℃) ≤ 95%, and the average temperature within 24 hours does not exceed 35 ℃ (note: please contact the manufacturer when using within the range of -40 ℃~-5 ℃,+40 ℃~+70 ℃)

CDM6i Installation

Fixed front mounting hole drawing(mm)



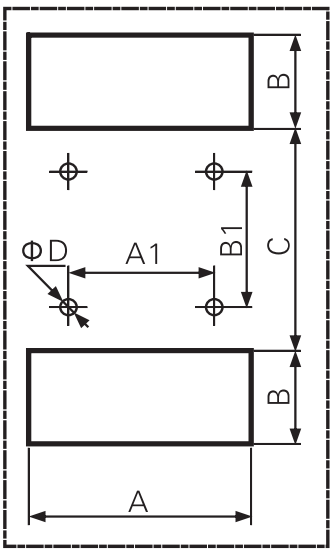
Fixed rear mounting hole drawing(mm)



Note:X-X and Y-Y is the center of the three-poles breaker

Frame	Poles	A	B	C	ΦD	A1	B1	C1	E	ΦD1
63 100L 125L	3	111	25	--	4.5	116	25	25	--	12
	4	111	25	25	4.5	116	25	25	25	12
100M/S	3	129	30	--	5.0	132	30	30	--	15
	4	129	30	30	5.0	132	30	30	30	15
160 250	3	126	35	--	5.5	145	35	35	--	15
	4	126	35	35	5.5	145	35	35	35	15
400 630	3	215	44	--	6.5	225	48	48	--	32
	4	215	44	--	6.5	225	48	48	48	32
800	3	243	70	--	7.5	243	70	70	--	40
	4	243	70	70	7.5	243	70	70	70	40
1250	3	243	70		6.5	243	70	70		40
	4	243	70	70	6.5	243	70	70	70	40

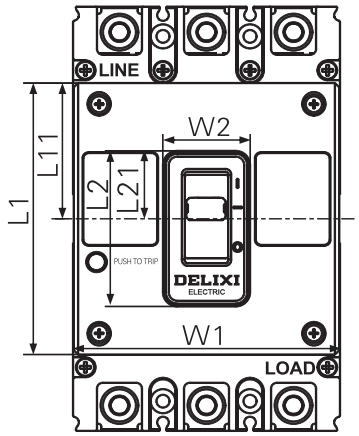
Plug-in front/back panel mounting hole figure(mm)



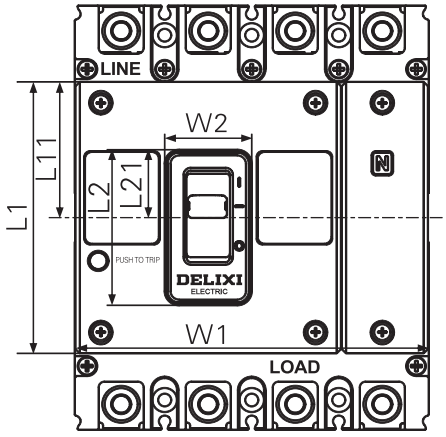
Note: CDM6i-630 plug-in and withdrawable can be reduced to 500A for use.

Model		Poles	A	A1	B	B1	C	D
Plug-in front panel mounting hole figure (mm)	CDM6i-63/ 100L/125L	3	/	25	/	96	/	4
		4						
	CDM6i-100M/S	3	/	30	/	110	/	5
		4						
	CDM6i-160/250	3	/	35	/	150	/	5
		4						
Plug-in back panel mounting hole figure (mm)	CDM6i-63/ 100L/125L	3	79	50	30	60	90	5.5
		4	104	75				
	CDM6i-100M/S	3	94	60	40	65	90	5.5
		4	124	90				
	CDM6i-160/250	3	110	70	45	74	100	6.5
		4	145	105				
	CDM6i-400/630	3	157	88	60	145	170	8.5
		4	205	132				
	CDM6i-800	3	212	140	62	143	185	11
		4	282	210				

CDM6i-63A~1250A fixed and plug-in circuit breaker panel opening size (mm)



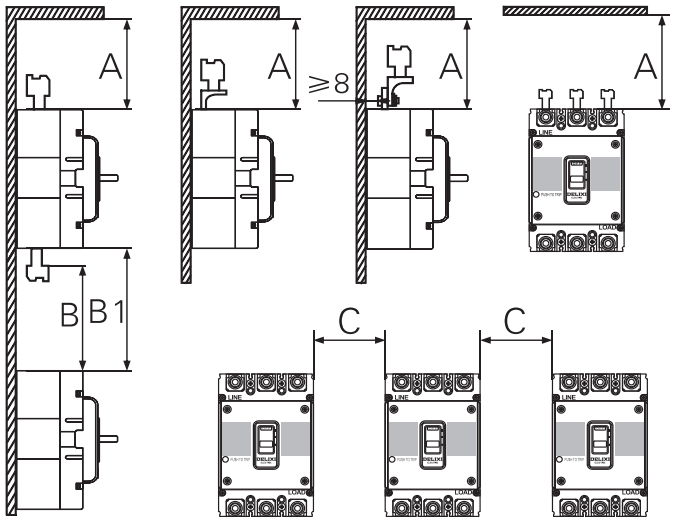
CDM6i–63A~1250A 3P



CDM6i–63A~1250A 4P

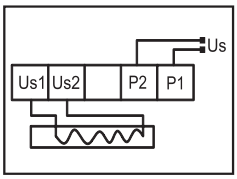
Model	Poles	Expose the front cover and toggle handle			Expose only the toggle handle		
		W1	L1	L11	W2	L2	L21
CDM6i–63 CDM6i–100L CDM6i–125L	3P	75	83	41.5	22	50	26
	4P	100	83	41.5	22	50	26
CDM6i–100M/S	3P	92	96	48	30	55	24
	4P	122	96	48	30	55	24
CDM6i–160 CDM6i–250	3P	107	102	51	26	54	27
	4P	142	102	51	26	54	27
CDM6i–400 CDM6i–630	3P	150	150	75	52.5	75.5	41
	4P	198	150	75	52.5	75.5	41
CDM6i–800	3P	210	200	100	65	102	51
	4P	280	200	100	65	102	51
CDM6i–1250	3P	213	153	76.5	61	93	46.5
	4P	283	153	76.5	61	93	46.5

Safe spacing (mm)

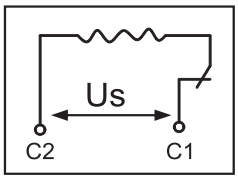


Model	A(mm)	B(mm)	B1(mm)	C(mm)
CDM6i–63	60	60	Bare conductor length + B	30
CDM6i–100L	60	60		30
CDM6i–100M/S	60	60		30
CDM6i–125L	60	60		30
CDM6i–160	60	60		30
CDM6i–250	60	60		30
CDM6i–400	110	110		70
CDM6i–630	110	110		70
CDM6i–800	110	110		70
CDM6i–1250	110	110		70

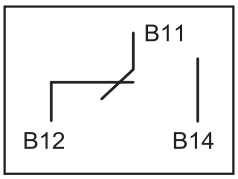
Accessory wiring diagram



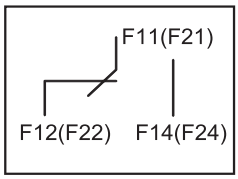
Undervoltage release



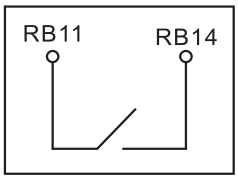
Shunt release



Alarm contact



Auxiliary contact

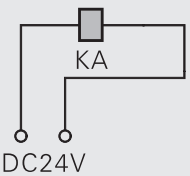


Overload alarm does not trip

When the rated control supply voltage of the shunt release is DC24V,the maximum length of the copper wire shall meet the following requirements

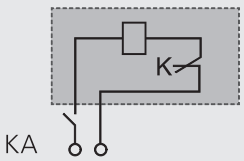
Rated control supply voltage Us(DC24V) \ Wire area	1.5mm²	2.5mm²
100%Us	150m	250m
85%Us	100m	160m

If failed to meet the requirements above,it is recommended to use the figure below to design the shunt release control loop.



KA:DC24V intermediate relay with the shock current capacity of 1A

In the dashed box is the schematic diagram of the shunt release



Power input

Voltage specification at the power input end

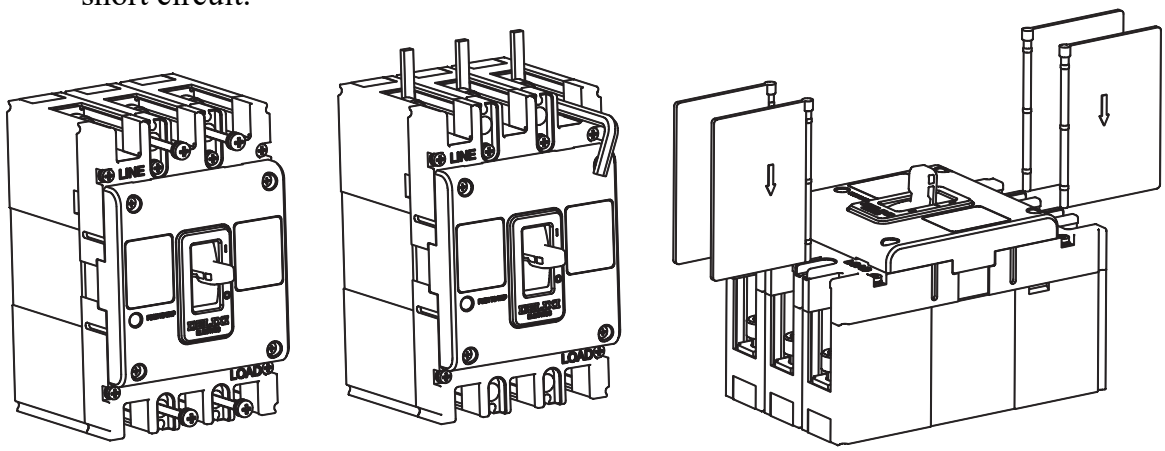
AC50Hz 230V、400V;
DC110V、220V

The time of duration on the shunt release shall not exceed 5s;otherwise the shunt release will be burned;when the shunt release with the rated control supply voltage of DC24V,the rated current shall reach 4.5A~5.5A

Overload alarm non tripping products do not have overload protection function, and when an overload alarm occurs, the main circuit of the circuit breaker continues to open; When the main circuit returns to normal current, the alarm signal elimination time T ≤ 5min.

Step 1: tighten the mounting screw
Step 2: connect the incoming line to the breaker Line and the outgoing line to Loadand then tighten the wiring screw
Step 3:install the flash barrier
Note: See the electric operation instruction for details

N phase of four-pole product is 100% phase line area;
Malfunction or refusal to move will appear in case of failure to install the wire in accordance with the product standards;
The phase partitions must be installed for products to prevent interphase short circuit.



Attached with torque table and connecting conductor table

Frame	Hexagon socket connection screw	Torque force N.m
63/100L/125L	M6×16	4~8
100FN,100M/S	M8×16	9.5~10.5
160/250	M8×20	9.5~10.5
400/630	M10×25/M10×35	19.5~20.5
800	M12×30	29.5~30.5
1250	M10×25	19.5~20.5

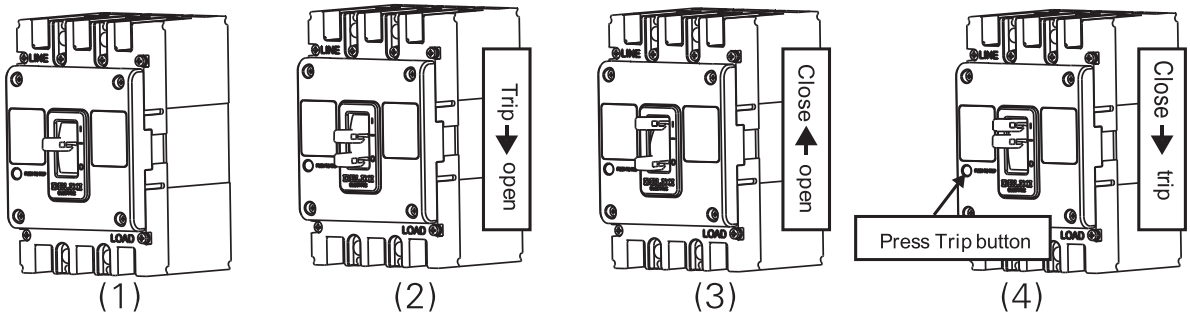
Connecting conductor (mm^2)

Rated current A	10	16 20	25	32	40 50	63	80	100	125 140	160	180 200 225	250	315 350	400
Cross-section of conductor	1.5	3	4	6	10	16	25	35	50	70	95	120	185	240

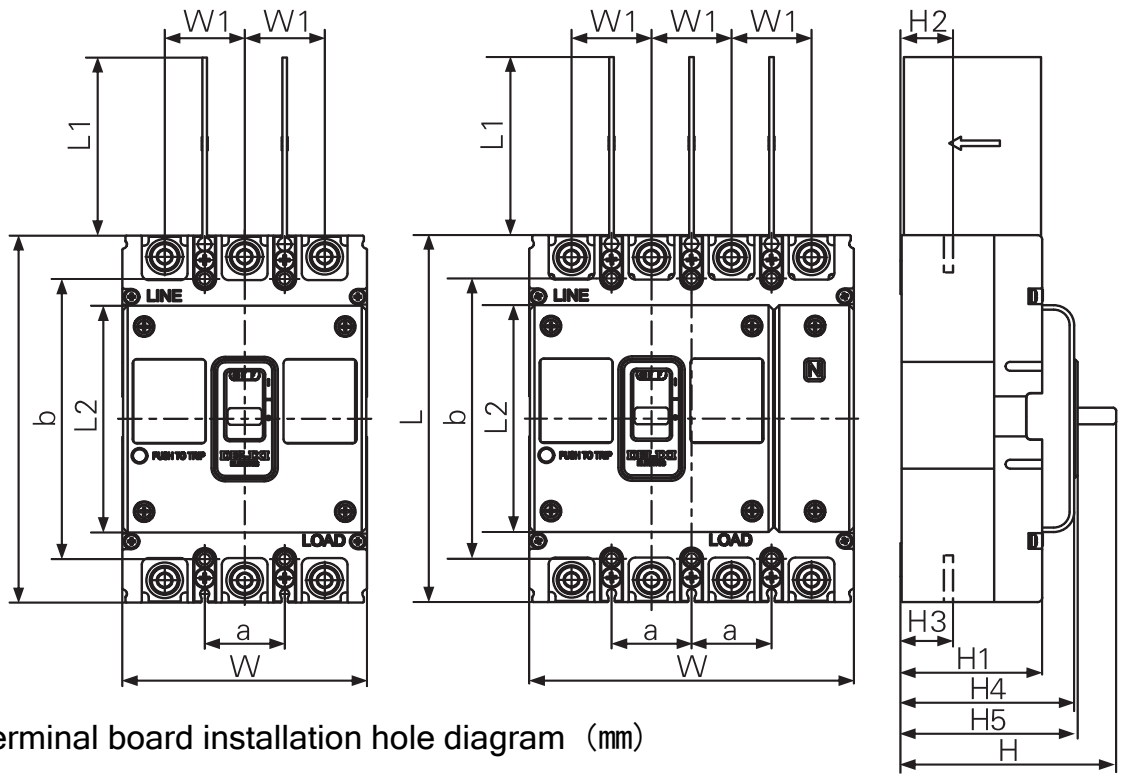
Rated current A	Quantity	Copper conductor or insulated copper wire	Copper busbar
		Cross section mm^2	Size: mm x mm
500	2	150	30×5
630	2	185	40×5
700、800	2	240	50×5
1250	2	–	100×4

Operate and debug CDM6i

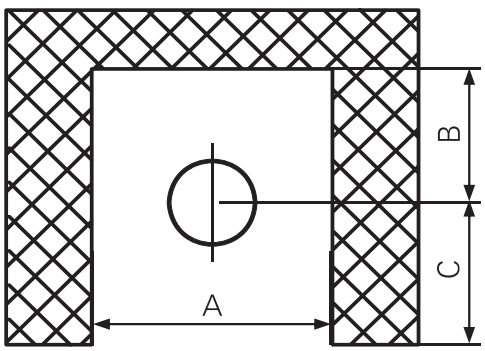
(1)The preset position is at trip
(2)Press the handle to the “Open" position
(3)Close the breaker and the handle reaches the“Close" position
(4)Press and the breaker handle returns to“Trip” position.



Overall and Installation Dimensions of CDM6i



Terminal board installation hole diagram（㎜）



Model	A	B	C
63/100L/125L	16	7.5	7
100M/S	18	7.5	9
160/250	25	12.5	9.5
400/630	32	14	16
800	44.5	12	16
1250	45.7	13	16

Frame	Poles	Overall dimension											Installation dimension	
		L	L1	L2	W	W1	H	H1	H2	H3	H4	H5	a	b
63 100L 125L	3P 4P	130	50	83	75 100	25	81.5	56	24	24	68	70.5	25	111
100M/S	3P 4P	150	50	96	92 122	30	111.5	81	28.5	28	93.5	95.5	30	129
160/250L	3P 4P	165	80	102	107 142	35	94.5	62	23	23	76	77.5	35	126
160/ 250MSH	3P 4P	165	80	102	107 142	35	112.5	80	23	23	94	95.5	35	126
400	3P 4P	257	104.5	150	150 198	48	145.9	96.2	36	36/ 36.5	107.5	112.5	44	215
630	3P 4P	257	104.5	150	150 198	48	145.9	96.2	38	39	107.5	112.5	44	215
800	3P 4P	280	102	102	210 280	70	146.5	97.5	32.5	35.5	100	114	70	243
1250	3P 4P	275.5	98	150	210 280	70	148.5	97	28	35	103	113	70	243

Maintenance and tendance

- When maintenance and tendance are performed, the work should be done by professionallyqualified persons.
- The superior power should be disconnected in order to make sure the input port is uncharged.
- In the normal operating condition, maintenance and tendance should be done once in ayear, with the content of maintenance as follows:

Type	Item	Content
Molded case circuit breaker	Appearance	No dust,no dews,if any,cleaning is needed
		No damage
		The color of housing and connection terminal is unchanged
	Arc isolating plate	Insert the arc isolating plate in place according to the iilustrated instructions
	Connections of the connection terminal	Tighten it and let it stay secure according to the torque table
	Closing/releasing operation with handle	Flexible operation is necessary
	Release button	After the product is released,the handle indicates the releasing position
	Insulation test	Conductthe test according to the requirements of the product test on the front page
Circuit breaker with accessories	With undervoltage release	Disconnectthe undervoltage release from the power,the circuit breaker should be in secure disconnection,with the handle indicating the releasing positon
	With shunt release	Connect the release with constant voltage,the circuit breaker should be in secure disconnection,with the handle indicating the releasing position
	With auxiliary contacts	When the circuit breaker is released and closed,the converting signal for the auxiliary contact is normal
	With alarm contacts	When the circuit breaker is closed and released(press the release button), the converting signal of the alarm contact is normal

The company promises

If the product is damaged or cannot be used normally due to manufacturing quality issues within 36 months from the production date, provided that the user complies with the usage and storage conditions and the product seal is intact, our company is responsible for free repair or replacement. If it exceeds the warranty period, it needs to be repaired for a fee. However, if damage is caused by the following circumstances, paid repairs will be made even during the warranty period

(1) Due to improper use, maintenance, or storage
(2) Self modification and improper maintenance
(3) Due to falling or damage during installation after purchase
(4) Force majeure such as earthquakes, fires, lightning strikes, abnormal voltages, and secondary disasters

DELIXI
ELECTRIC

Certificate of qualification

DELIXI ELECTRIC LTD

Product: Molded Case Circuit breaker

Type: CDM6i Series

This product has passed the inspection and is approved to delivery.

Standard: GB/T 14048.2

Inspector: 01

Date of production:See box label

DELIXI ELECTRIC LTD

www.delixi-electric.com