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4.4 Recommended values for wiring capacity

Rated current (A)	10	16	20	25	32	40	50	63	80	100	125	140	160	180	200	250
Recommended sectional area of wire (mm ²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120				

Caution:
Please select an appropriate wiring terminal or busbar according to the outline of HDM3V series, the sizes C, C1, and C2 in the installation and wiring dimensions, and the diameter of the corresponding wiring screw to satisfy the corresponding wiring capacity requirements.

4.5 Recommended tightening torques of wiring screw

Product model	HDM3V	125	250
Inner hex wiring screw	M6	M8	
Torque (N·m)	5-7	7-10	

Caution:
1. Please tighten the product wiring screw according to the recommended value, otherwise too large or too small tightening torque may cause poor contact or damage to the housing.

4.6 Recommended self-tap and self-drill mounting screw (self-tap and self-drill cross recessed countersunk head screw GB/T 5036.2)

Product model	HDM3V	125	250
Recommended self-tap and self-drill screw model and specification	ST4.2×60	ST4.2×60	

Caution:
Some models of the product can be installed using self-tap and self-drill screws. As only common screws and nuts are provided with the product, please purchase the self-tap and self-drill screws of the corresponding specification.

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5. Internal accessories and extension functions

5.1 Internal accessories (undervoltage release, shunt release, auxiliary contact, alarm, dual auxiliary contact, and auxiliary alarm)

5.2 Assembly diagram

5.3 Mountable accessories in all cavities

Right auxiliary cavity: Right shunt, right single auxiliary contact, right dual auxiliary contact, right alarm, right auxiliary alarm, and undervoltage release

Wiring and schematic diagram

5.4 Electrical parameters

Product model HDM3V	Undervoltage coil holding power consumption (W)		Min. power for action of shunt coil (W)	
	AC400V	AC230V	AC400V	AC230V
125/250	0.94	0.94	Section-related type	Section-related type

Installation: 009100, 009100, 155, 150, 96

Right cavity: 125/250

Alarm and auxiliary electrical parameters		
Resistive current	3A	
Use category (GB/T 14048.5-1)	AC15	DC13
Working voltage 50/60Hz	AC400V	0.3A
	DC 220V	0.15A

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6. Maintenance and service

6.1 Maintenance and service must be conducted by the qualified professional.

6.2 Make sure that the product is deenergized.

6.3 Maintenance and service shall be conducted once every year under the normal operating conditions. Maintenance contents see Table below.

Item	Content
Appearance	No dust or condensate; clean if necessary; housing is not damaged
Wiring terminal connection	Tighten them according to the torque specified in the table of 4.5. Recommended tightening torques of wiring screw
Close/open/trip operation via handle	The handle shall be operated flexibly without any blockage; this product uses a self-clean contact structure; if the contact resistance changes due to oxidation, please conduct the closed and open operations several times to peel off the oxide layer between the movable and fixed silver points to reduce the contact resistance.

7. Unpacking inspection

After unpacking, check whether the product is intact, whether the exposed metal is rusty, and whether the product is deformed due to poor transport and storage. If found, do not use the product, and contact the supplier timely.

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User manual

HDM3V-2P

Series MOULDED-CASE CIRCUIT-BREAKER

Applied standards: GB/T 14048.2, IEC/EN 60947-2

□ Please carefully read this User Manual before installing and operating the product, and keep it properly for further reference.

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Safety Precaution

Please carefully read this manual before the installation, operation, run, maintenance, and inspection of the product, and install and operate the product strictly in accordance with this manual.

Danger:

- Do not operate the circuit breaker with wet hands.
- Do not touch the conductive part during operation.
- Make sure that the product is deenergized during maintenance and service.
- Do not use the short-circuit method for product testing.

Caution:

- The installation, maintenance and service shall be conducted by the qualified professional.
- All parts of the product are set in factory, and cannot be dismantled or adjusted without permission during operation.
- Confirm that the rated voltage, rated current, frequency, and features of the product meet the working requirements before operation.
- In order to prevent interphase short circuit, a phase partition is provided with the product when delivery, and shall be installed properly before operation. Moreover, the exposed lead or copper bus at the wiring terminal shall be subject to the insulation treatment for insulation safety.
- To test insulation resistance or power frequency withstand voltage, please disconnect the electrical elements between the current loops, otherwise the product performance may be affected.
- If found damage or abnormal sound when unpacking, please stop the product immediately and contact the supplier.
- For product with an undervoltage release, the undervoltage release must be under the rated voltage before power-on.
- Please select the matching accessories provided by our company to ensure quality. Our company will not bear any responsibility for any adverse consequence caused by the use of accessories not provided by our company.
- Please dispose the wastes of the scrapped product. Thanks for your cooperation.

Test:

- This circuit breaker passes the insulation test specified in the available standard before shipment. If the retest is required before installation, its steps are as follows.
- Use a 1000VDC megammeter.
- The insulation resistance shall not be less than 20MΩ.

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1. About HDM3V

1.1 Packing list

Product model HDM3V	Mounting screw Qty	Wiring screw Qty	Phase partition Qty	Extended handles	Circuit breaker	Manual (Including certificates)
125	M4 x 55-2	M6 x 16-4	2	-	1	1
250	M4 x 55-2	M8 x 20-4	2	-	1	1

1.2 Working environment and conditions

- The product protection grade is IP20 (IP00 at the wiring terminal).
- The pollution level of the product is Level 3.
- The rated working voltages are 230/240V, 400/415V.
- The altitude at the installation site shall not exceed 2000m. If more than 2000m, please contact the manufacturer before installation.
- The allowed ambient temperature is ranged -25°C to +70°C; the relative humidity is 95% (at ambient temperature 25°C); the mean temperature within 24h does not exceed 35°C.
- Note: If the product works under the temperature ranged -25°C to +5°C or +40°C to +70°C, please contact the manufacturer.

2. Operation and debugging of HDM3V

- Turn the handle to the "Trip" position before the shipment of circuit breaker.
- Turn the operating handle to the "Open" position before re-trip operation.
- Turn the circuit breaker to the "Close" position.
- When the Trip button is pressed, the handle of circuit breaker shall return to the "Trip" position.

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3. Outline, installation and wiring dimensions of HDM3V series

X-X' is the center axis of base, the same below
Y-Y' is the center axis of handle, the same below

Product model HDM3V	Outline dimensions												Installation dimensions												
	L	L1	L11	L2	L21	L3	W	W1	W2	H	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	C	C1	C2	φD	
125	2	132	83	41.5	50	18.5	50	56	25	24	82	71	66	56	24	24	111	55.5	18	8	8	4.5			
250	2	165	102	51	53	29	60	79	35	28	100	82	77	62.5	24	24	126	63	26	25	10	4.8			

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4. Install HDM3V

4.1 Safety distance of circuit breaker

Product model HDM3V	A, min	B, min	C, min	D, min
125	60	30	25	12.5
250	85	42.5	10	0

Caution:

- When installing the circuit breakers side by side, make sure the insulation safety between the terminals. It is recommended to install a long terminal cover or an additional phase partition for insulation protection between two products.
- If more compact installation is required, a zero arcing cover is recommended to obtain smaller safety distance.
- Provide an insulation protection on the mounting base to prevent the ground clearances of the busbar, terminal or screw are less than 8mm. It is recommended to install a base plate attached to the long terminal cover or conduct the additional ground insulation protection.

4.2 Size of holes on the circuit breaker panel

Product model HDM3V	Number of poles	With front cover and toggle handle exposed				With toggle handle exposed			
		L1	L11	W11	W1	L2	L21	W2	φD
125	2P	86	43	29.5	59	53	20	27	
250	2P	105	52.5	41	82	56	30.5	31	

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4.3 Size of holes on the mounting plate

Product model HDM3V	Number of poles	A	A1	φD
125	2P	111	55.5	5
250	2P	126	63	5

4.2 Size of holes on the circuit breaker panel

Product model HDM3V	Number of poles	With front cover and toggle handle exposed				With toggle handle exposed			
		L1	L11	W11	W1	L2	L21	W2	φD
125	2P	86	43	29.5	59	53	20	27	
250	2P	105	52.5	41	82	56	30.5	31	

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