

PEMC Series

DC Molded Case
Circuit Breaker



PROJOY
electric

– Switch To Safety! –

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electric

– Switch To Safety! –



HIGH CRAFTSMANSHIP AND HIGH STANDARDS

Focus on details to achieve high-quality products



Small
Volume



Short circuit
Protection



Overload
Protection



Flame
Retardant



High Breaking
Capability



Arcing
Short



Complete
Accessories



Multiple
Wiring

Select Code

PEMC	-	250	/	3	3	X	Y	1500
↓		↓		↓	↓	↓	↓	↓
Projoy Electric Molded Case Circuit Breaker		Shell Frame Current 250A 320A 400A 630A 800A		Frame Current Poles 3P	3: Thermomagnetic 0: W/O Protection	Accessories code	Rated Current 63-800A	Rated Operating Voltage DC 1500V

Technical data

Standard		IEC/EN 60947-2				
		PEMC				
Type						
Shell Frame Current (A)		250	320	400	630	800
Rated Current I _n (A)		63-250	280-320	225-400	450-630	700-800
Number of Poles		3P				
Rated Operating Voltage U _e (V)		1500				
Rated Insulation Voltage U _i (V)		1500				
Rated Impulse Withstand Voltage U _{imp} (kV)		8		12		
Rated Ultimate Short-circuit Breaking Capacity I _{cu} (kA)		20				
Rated Service Short-circuit Breaking Capability I _{cs} (kA)		20				
Arc Distance (mm)		≤50				
Operational Performance (times)	Electrical Life	1,500	500	500		
	Mechanical Life	20,000	10,000	5,000		
Isolation Function		■				
Accessories	Shunt release	■				
	Alarm Contact	■				
	Auxiliary Contact	■				
Service Temperature		-35°C ~ +70°C				
Altitude		≤5500m				
Class of Use		A				
Protection Level		IP20				
Pollution Level		3				
Interphase Spacer		■				
	W	107	182			
	H	180	250			
	D	126	165			
Certification		CE				

■ Have □ Optional--none

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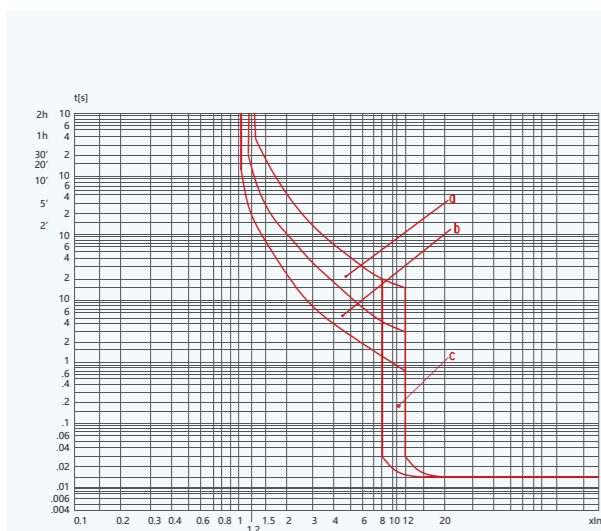
Temperature derating factor table

Product frame	Temperature derating factor table (operating current I _n)						
	40°C	45°C	50°C	55°C	60°C	65°C	70°C
PEMC-250	1.00	1.00	1.00	1.00	0.95	0.93	0.90
PEMC-320	1.00	1.00	1.00	0.94	0.92	0.90	0.88
PEMC-400	1.00	1.00	1.00	1.00	0.95	0.93	0.90
PEMC-630	1.00	1.00	1.00	0.96	0.94	0.92	0.90
PEMC-800	1.00	1.00	1.00	0.94	0.92	0.90	0.88

Altitude derating factor table

Product frame	Altitude derating factor table (operating current I _n)			
	2000m	3000m	4000m	5000m
PEMC-250	1.00	1.00	1.00	0.96
PEMC-320	1.00	0.97	0.94	0.90
PEMC-400	1.00	1.00	1.00	0.96
PEMC-630	1.00	1.00	0.96	0.94
PEMC-800	1.00	0.97	0.94	0.90

Tripping characteristics



Circuit breaker protection curve (I-T curve)

PEMC-250A, 320A, 400A, 630A, 800A protection curve

Note: The curve is only made when the ambient temperature is +40°C

- a: Thermal tripping characteristics in cold state
- b: Thermal tripping characteristics in running (hot state)
- c: Electromagnetic trip
- t: Action time

Trip mode and accessory code

Accessory code	Accessories	PEMC-250/320	PEMC-400/630/800
		2, 3poles	2, 3poles
308	Alarm contact	—	← □ □
310	Shunt release	—	□ □ →
320	Auxiliary contact(1NO1NC)	← □ □	—
	Auxiliary contact(2NO2NC)	—	← □ □
330	Undervoltage release	—	← ○ □ →
340	Shunt release+Auxiliary contact(1NO1NC)	← □ □ →	—
	Shunt release+Auxiliary contact(2NO2NC)	—	← □ □ →
350	Shunt release+Undervoltage release	—	← ○ □ →
360	Auxiliary contact(4NO4NC)	—	← □ □ □ □ →
370	Undervoltage release+Auxiliary contact(2NO2NC)	—	← ○ □ □ →
318	Shunt release+Alarm contact	—	← □ □ →
328	Auxiliary contact(1NO1NC)+Alarm contact	—	← □ □ →
338	Undervoltage release+Alarm contact	—	← ○ □ □ →
348	Shunt release+Auxiliary contact(2NO2NC)+Alarm contact	—	← □ □ →
368	Auxiliary contact(4NO4NC)+Alarm contact	—	← □ □ □ □ →
378	Auxiliary contact(2NO2NC)+Undervoltage release+Alarm contact	—	← ○ □ □ →

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Auxiliary contact

Contact capacity of auxiliary contact

Applicable frame current	Conventional thermal current	Rated working current at 400V
$I_{nm} < 250$	3A	0.30A
$I_{nm} > 400$	6A	0.40A

Mode of auxiliary contact

When the circuit breaker is in the opening position	
When the circuit breaker is in the closing position	

Alarm contact

Mode of Alarm contact

Alarm contact $U_e=220V$, $I_{th}=3A$	
When the circuit breaker is in the opening position	
When the circuit breaker is in the closing position	

Dimensions

Shunt release

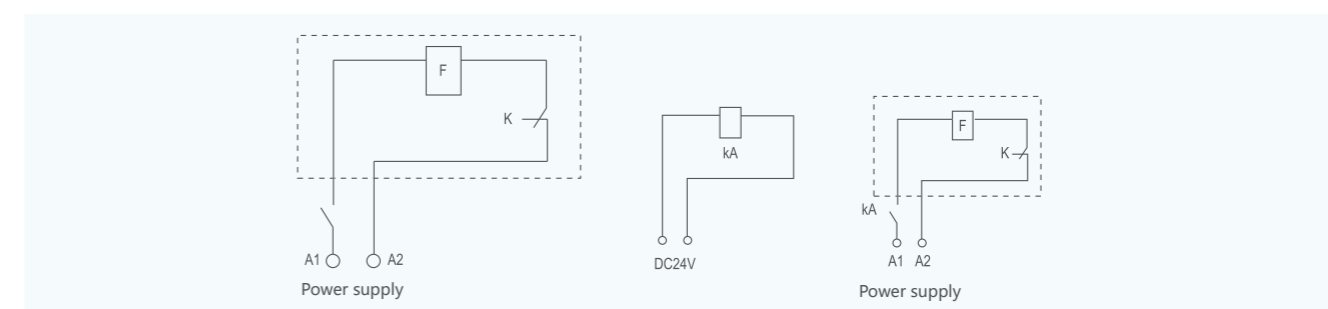
When the operating voltage is 70%~110%, the shunt release acts to make the circuit breaker trip reliably
Operation voltage: Regular model: AC 50Hz, 110V, 230V, 400V, DC 24V, 110V, 220V.

Note: When the operation voltage is DC24V, the following electrical diagram is recommended for circuit design.

KA: DC24V intermediate relay, contact current capacity is 1A .

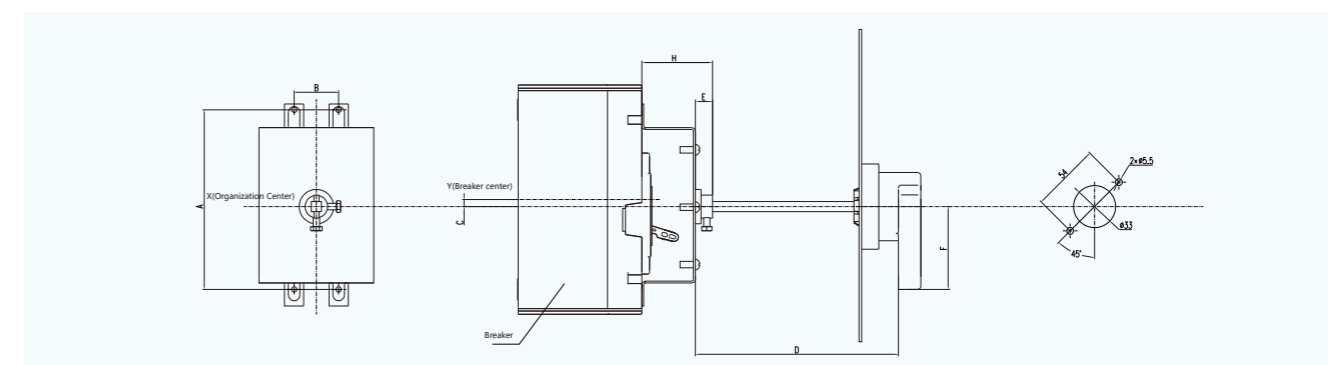
K: The microswitch in series with the coil inside the shunt release is a normally closed contact. When the circuit breaker is opened, the contact will automatically open, and when the circuit breaker is closed, the contact will close.

Wiring diagrams of shunt release



Installation and dimensions of rotary operating mechanism

Mode	A	B	C	D (Rod length)	E	F	H
PEMC-250/320	141	35	5.5	160 (default, other specifications can be customized)	13.5	65	55.5
PEMC-400/630/800	187	170	7	170 (default, other specifications can be customized)	20	125	76.5



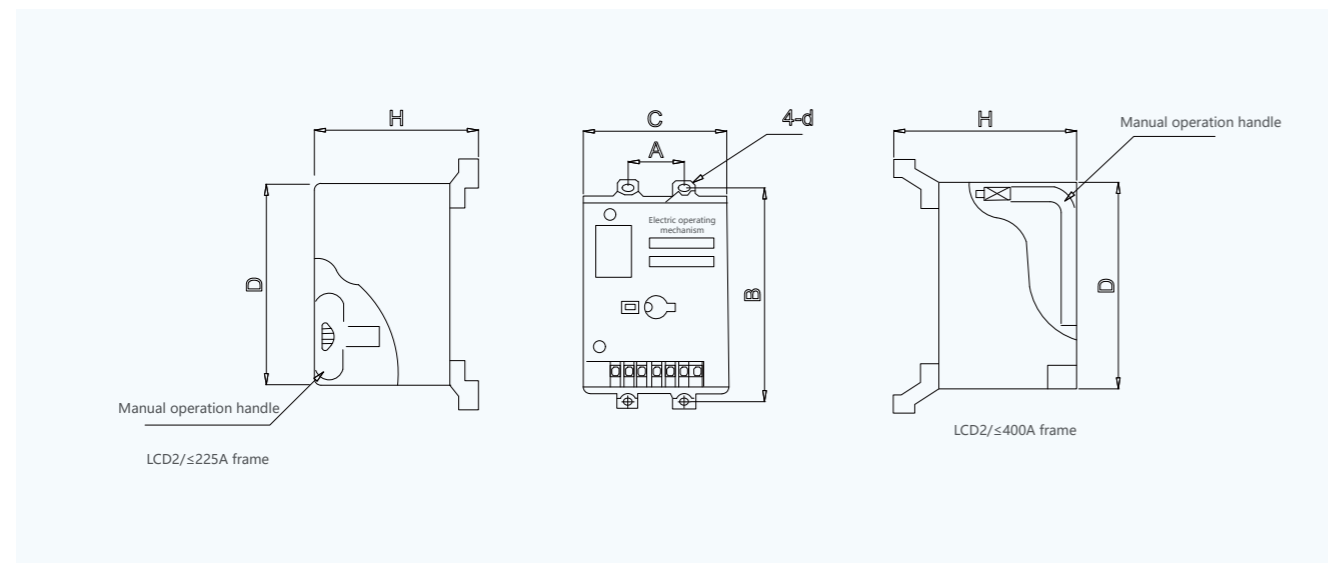
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Electric operating mechanism and model specification

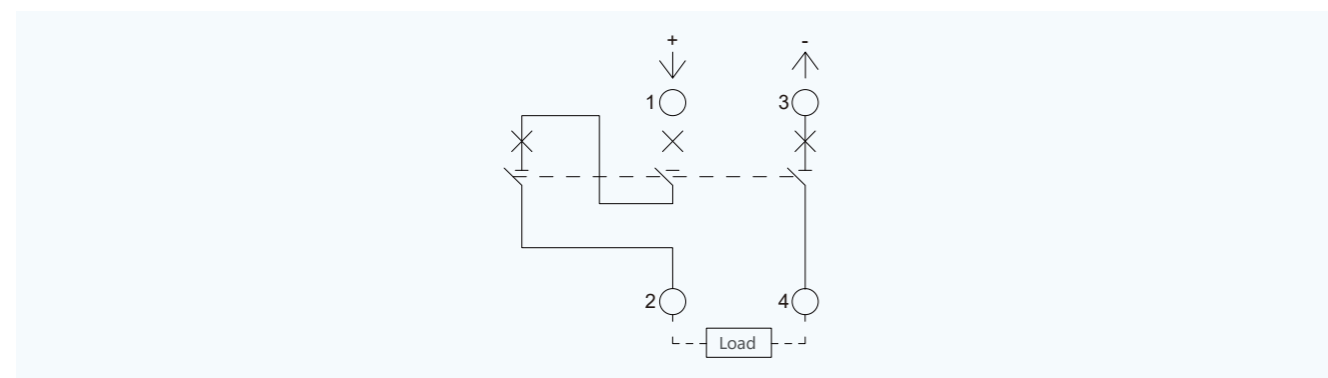
Mode	Installation Dimension (mm)						Rated control voltage	Operating current (A)	Mechanical life (Times)	Motor Power (W)
	A	B	C	D	H	d				
PEMC-250/320	35	126	90	116	93	4.5	K1	≤0.5	14000	14
PEMC-400/630/800	58	200	130	176	151	6.5	K2	≤2	5000	35

Note: Rated control voltage K1: 100~240VAC/100~220VDC or 110VAC or 24VDC. The operating frequency is not more than 180 times per hour.
Rated control voltage K2: 230VAC/220VDC or 110VAC/110VDC or 24VDC. The operating frequency is not more than 60 times per hour.

Installation and Dimensions Diagram

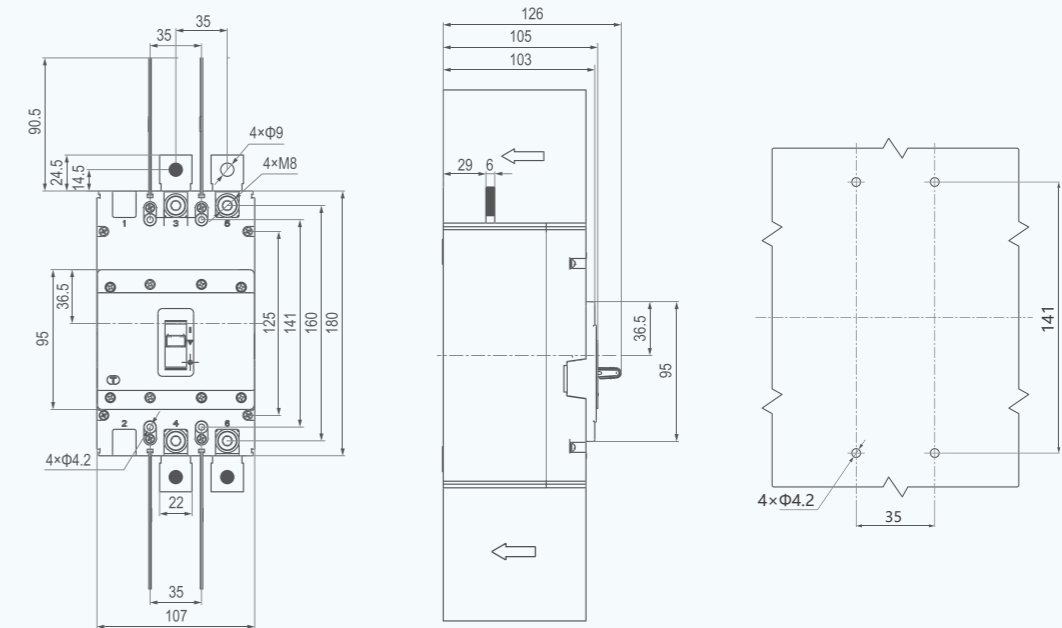


Wiring diagrams



Dimensions

PEMC-DC1500V 3P (250/320Frame)



PEMC-1500-X/Y 3P (400/630/800Frame)

