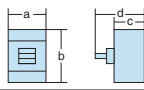


2

Ratings and Specifications

Moulded Case Circuit Breakers

12 Single phase 3-wire circuit breaker with neutral phase open protection

Frame size (A)	50	100	125	100	125	225	250
Type	PE50-NFN	PE125-NFN		NS125-SF		NE250-SF	
Number of poles / Elements	3P3E ¹⁰	3P3E ¹⁰	3P3E ¹⁰	3P3E ¹⁰	3P3E ¹⁰	3P3E ¹⁰	3P3E ¹⁰
Phase and wires	1ø3W	1ø3W	1ø3W	1ø3W	1ø3W	1ø3W	1ø3W
■ Ratings							
Rated current, A	15	60	125	15 50	125	125 225	250
Calibrated at 40°C	20	75		20 60		150	
	30	100		30 75		175	
	40			40 100		200	
	50						
Rated operational voltage AC V	100/200	100/200	100/200	100/200	100/200	100/200	100/200
Rated impulse withstand voltage (U _{imp}) kV	6	6	6	8	8	8	8
Single 3-phase neutral wire open phase	Rated operating overvoltage AC V 135	135	135	135	135	135	135
Rated non-operating overvoltage AC V	120	120	120	120	120	120	120
protection characteristics	Rated overvoltage operating time (sec)	1 or less	1 or less	1 or less	1 or less	1 or less	1 or less
■ Rated breaking capacity, kA							
JIS C 8201-2-1 Ann.2 I _{cu} (sym) AC 100/200V	10	25	25	50	50	35	35
■ External dimensions, mm							
	a	75	75	75	75	105	105
	b	130	130	130	130	165	165
	c	68	68	68	68	68	68
	d	90	90	90	95	95	95
Weight (● marked standard type) kg	0.8	0.8	0.8	0.95	0.95	1.6	1.6
■ Connections and Mountings							
Front-connected (FC)	Terminal screws	● 45	●	●	● 4	●	●
	With extension bars	○ 53	○ 53	○ 53	○ 53	○ 53	○ 53
Rear-connected (RC)	Flat bar studs	△	△	△	△	△	△
DIN rail mount		○ 11	○ 11	○ 11	○ 11	○ 11	○ 11
■ Accessories (optional)							
	Symbol						
Internally mounted	Auxiliary switch	A X	●	●	●	●	●
	Alarm switch	A L	●	●	●	●	●
	Shunt trips	S H	—	—	—	—	—
	Undervoltage trips	U V	—	—	—	—	—
	Test lead	T L	—	—	—	●	●
	Megger test switch	M G	—	—	—	●	●
	Motor operator	M C	—	—	—	—	—
	External operating handle	Breaker-mounted H B	●	●	●	●	●
		Door-mounted (variable depth) H P	●	●	●	●	●
	Externally mounted	Toggle extension	H A	—	—	—	—
Mechanical interlock		Slide type M S	●	●	●	●	●
		Link type M L	—	—	—	—	—
		Wire type M W	—	—	—	—	—
Toggle holder		H H	●	●	●	●	●
Toggle lock		H L	●	●	●	●	●
Terminal cover		For front-connected C F	●	●	●	●	●
		For rear-connected C R	●	●	●	●	●
Terminal block for lead		T F	●	●	●	●	●
Door flange		D F	—	—	—	—	—
CE marking		Non	Non	Non	Non	Non	Non
Overcurrent trip mechanism		Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic
Overvoltage operation indication function		Mechanical button	Mechanical button	Mechanical button	Mechanical button	Mechanical button	Mechanical button
Colour of cover		Grey Blue	Grey Blue	Grey Blue	Grey Blue	Grey Blue	Grey Blue
Trip button (Colour)		Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)
Suitability for isolation		Yes	Yes	Yes	Yes	Yes	Yes
Reverse power flow circuit		Non	Non	Non	Yes ⁷⁴	Yes ⁷⁴	Yes ⁷⁴
Page of characteristics and outline dimensions		7-154	7-154	7-154	7-156	7-156	7-158

Notes:

- : Standard. This configuration used unless otherwise specified.
- : Optional standard. Specify when ordering.
- : "yes" or "available". — : "no" or "not available". △ : Custom-built product. Please contact us for details.
- ④ : 50A or less is the M5 wire clamping terminal.
- 10 : They can also be applied to circuits where overcurrent flows in the neutral wire.
- 11 : Please order the DIN rail adapter separately. See page 6-156.
- 45 : A wire clamping terminal is provided.
- 53 : For the extension bars, please place the order separately in parts.
- 74 : Since the overvoltage detection circuit has a continuous rating specification, there is no need to turn off the power of the detection circuit using a megger test switch, etc.

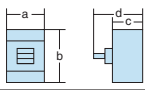
Remarks: See pages 3-25 and 3-26 for connection details.

2

Ratings and Specifications

Moulded Case Circuit Breakers

12 Single phase 3-wire circuit breaker with neutral phase open protection

Frame size (A)	225	250	400	400	600	630	800		
Type	NS250-SF		NE400-NF	NS400-NF	NS630-NF		NS800-NF		
Number of poles / Elements	3P3E ⑩	3P3E ⑩	3P2E ⑱	3P2E ⑱	3P2E ⑱	3P2E ⑱	3P2E ⑱		
Phase and wires	1ø3W	1ø3W	1ø3W	1ø3W	1ø3W	1ø3W	1ø3W		
■ Ratings									
Rated current, A	125 225	250	250	250	500	630	700		
Calibrated at 40°C	150		300	300	600		800		
	175		350	350					
	200		400	400					
Rated operational voltage AC V	100/200	100/200	100/200	100/200	100/200	100/200	100/200		
Rated impulse withstand voltage [U_{imp}] kV	8	8	8	8	8	8	8		
Single 3-phase neutral wire open phase protection characteristics	Rated operating overvoltage AC V 135 Rated non-operating overvoltage AC V 120 Rated overvoltage operating time (sec) 1 or less	135 120 1 or less	135 120 1 or less	135 120 1 or less	135 120 1 or less	135 120 1 or less	135 120 1 or less		
■ Rated breaking capacity, kA									
JIS C 8201-2-1 Ann.2 I_{cu} (sym) AC 100/200V	85	85	35	85	85	85	85		
■ External dimensions, mm									
	a	105	105	140	140	210	210	210	
	b	165	165	260	260	273	273	273	
	c	68	68	103	103	103	103	103	
	d	95	95	145	145	145	145	145	
Weight (● marked standard type) kg	1.6	1.6	4.8	4.8	10.0	10.0	11.0		
■ Connections and Mountings									
Front-connected (FC)	Terminal screws	●	●	●	●	—	—	—	
	With extension bars	○ ⑤③	○ ⑤③	○	○	●	●	●	
Rear-connected (RC)	Flat bar studs	△	△	△	△	△	△	△	
DIN rail mount		—	—	—	—	—	—	—	
■ Accessories (optional)									
	Symbol								
Internally mounted	Auxiliary switch	A X ●	●	●	●	●	●	●	
	Alarm switch	A L ●	●	●	●	●	●	●	
	Shunt trips	S H —	—	—	—	—	—	—	
	Undervoltage trips	U V —	—	—	—	—	—	—	
	Test lead	T L ●	●	●	●	●	●	●	
Externally mounted	Megger test switch	M G ●	●	●	●	●	●	●	
	Motor operator	M C ●	●	●	●	●	●	●	
	External operating handle	Breaker-mounted	H B ●	●	●	●	●	●	●
		Door-mounted (variable depth)	H P ●	●	●	●	●	●	●
	Toggle extension	Mechanical	H A —	—	●	●	●	●	●
		Slide type	M S ●	●	●	●	●	●	●
		interlock	M L —	—	—	—	—	—	—
	Toggle holder	Link type	M W —	—	—	—	—	—	—
		Wire type	M W —	—	—	—	—	—	—
		HH ●	●	●	●	●	●	●	●
	Toggle lock	H L ●	●	●	●	●	●	●	
	Terminal cover	For front-connected	C F ●	●	●	●	●	●	●
		For rear-connected	C R ●	●	●	●	●	●	●
		Terminal block for lead	T F ●	●	●	●	●	●	●
	Door flange	D F —	—	—	—	—	—	—	
CE marking	Non	Non	Non	Non	Non	Non	Non		
Overcurrent trip mechanism	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic		
Overvoltage operation indication function	Mechanical button	Mechanical button	Mechanical button	Mechanical button	Mechanical button	Mechanical button	Mechanical button		
Colour of cover	Grey Blue	Grey Blue	Grey Blue	Grey Blue	Grey Blue	Grey Blue	Grey Blue		
Trip button (Colour)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)		
Suitability for isolation	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Reverse power flow circuit	Yes ⑦④	Yes ⑦④	Yes ⑦④	Yes ⑦④	Yes ⑦④	Yes ⑦④	Yes ⑦④		
Page of characteristics and outline dimensions	7-158	7-158	7-160	7-160	7-162	7-162	7-164		

Notes:

● : Standard. This configuration used unless otherwise specified.

○ : Optional standard. Specify when ordering.

● : "yes" or "available". — : "no" or "not available". △ : Custom-built product. Please contact us for details.

⑩ : They can also be applied to circuits where overcurrent flows in the neutral wire. ⑱ : Do not apply to circuits where overcurrent flows in the neutral wire.

⑤③ : For the extension bars, please place the order separately in parts.

⑦④ : Since the overvoltage detection circuit has a continuous rating specification, there is no need to turn off the power of the detection circuit using a megger test switch, etc.

Remarks: See pages 3-25 and 3-26 for connection details.