

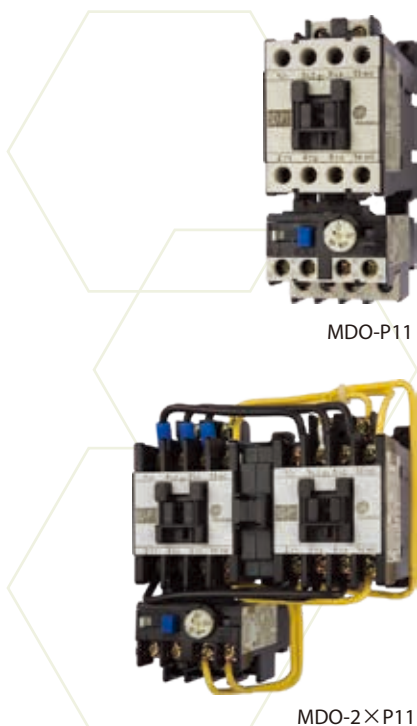
Type designation



SD	-	2X	P	21	220V
①		②	③	④	⑤

①	Model	SD	DC Contactor
②	Non-reversing/ reversing	Blank	Non-reversing
		2X	Reversing
③	Series	P	P Series
④	Rated capacity	11、16、21	
⑤	Control circuit voltage	EX : 12V、24V、48V...110V、220V... (Refer to P33)	

Type designation



MDO	-	2X	P	21	380V /	220V	28A	E
①		②	③	④	⑤	⑥	⑦	⑧

①	Model	MDO	DC Magnetic Switch without enclosure
②	Non-reversing/ reversing	Blank	Non-reversing
		2X	Reversing
③	Series	P	P Series
④	Rated capacity	11、16、21	
⑤	Main circuit voltage	EX : 110V、220V、380V、440V... (When main circuit voltage and control circuit voltage are the same, it will be blank.)	
⑥	Control circuit voltage	EX : 12V、24V、48V...110V、220V...	
⑦	TH heater rated capacity	EX : 3.3A、6.5A、9A、11A...21A...	
⑧	TH Type	Blank	Compressor Type (2 heaters)
		E	3 heaters
		PP	Differential

Charact-eristics

SP

Series

MS

Series

Other

Series

Coil

TH

Series




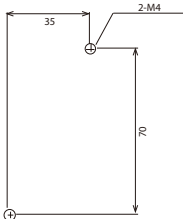
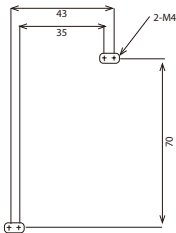
SD

Series

Selec-tion

Others

## Magnetic Contactor / Starter ◆ DC control

						
Type	Magnetic Contactor	Nonreversing		SD-P11	SD-P16	SD-P21
		Reversing		SD-2×P11	SD-2×P16	SD-2×P21
	Motor Starter	without enclosure	Nonreversing	MDO-P11	MDO-P16	MDO-P21
			Reversing	MDO-2×P11	MDO-2×P16	MDO-2×P21
		with enclosure	Nonreversing	—	—	—
			Reversing	—	—	—
		with enclosure (push button)	Nonreversing	—	—	—
		TOR	Standard	TH-P12	TH-P20	TH-P20
	Differential		TH-P12PP	TH-P20PP	TH-P20PP	
	Rated Capacity	IEC 60947-4-1 EN 60947-4-1 DIN VDE 0660 AC 3 (kW/HP/A)	3 ∅	240V	3.5/ 4.5/ 13	4.5/ 6/ 18
380/440V				5.5/ 7.5/ 12	7.5/ 10/ 18	11/ 15/ 21
550V				5.5/ 7.5/ 9	7.5/ 10/ 13	11/ 15/ 17
660V				5.5/ 7.5/ 7	7.5/ 10/ 9	11/ 15/ 14
Continuous Current (Ith) AC1 (A)			20	30	32	
UL 508 CSA-C22.2 AC3 (HP/A)		1 ∅	110~120V	0.5/ 9.8	1/ 16	2/ 24
			220~240V	2/ 12	3/ 17	3/ 17
		3 ∅	220~240V	3/ 9.6	5/ 15.2	7.5/ 22
			440~480V	7.5/ 11	10/ 14	15/ 21
			550~600V	10/ 11	10/ 11	15/ 17
Continuous Current (Ith) AC1 (A)			24	30	35	
NEMA			0	0	1	
Auxiliary contact			1NO or 1NC	1NO 1NC	1NO 1NC	
Control coil voltage DC (V)				12/ 24/ 48/ 72/ 110/ 125/ 220		
Electrical Life	AC3 (10 thousand)		120	120	120	
Mechanical Life	(10 thousand)		600	600	600	
Magnetic Contactor	Weight (kg)		0.33	0.37	0.38	
	Appearance Dimensions (W×H×D) (mm)		43×81×83.5	53.5×81×83.5	53.5×81×83.5	
	Installation dimension (mm)					
Mechanical Interlock			MPU-11	MPU-11	MPU-11	

## Auxiliary Contact Block

### ◆ AP Series



Installation		2P FRONT MOUNTED TYPE			4P FRONT MOUNTED TYPE			SIDE MOUNTED TYPE	
Type		AP-20	AP-11	AP-02	AP-40	AP-31	AP-22	APS-11	APL-11
Contact		2NO	1NO 1NC	2NC	4NO	3NO 1NC	2NO 2NC	1NO 1NC	1NO 1NC
Applicable contactor		SR-P40, SR-P50 S-P11~ S-P80T SD-P11~ SD-P21			SR-P40, SR-P50 S-P11~ S-P80T SD-P11~ SD-P21			SR-P40, SR-P50 S-P11~ S-P60T SD-P11~ SD-P21	
Rated Capacity AC 15 (A)	220V	1.6							
	380V	0.95							
Operation current (Ith) (A)		16							

## Auxiliary Contact Block

### ◆ MAP Series

Installation		2P FRONT MOUNTED TYPE			4P FRONT MOUNTED TYPE		
Type		MAP-20	MAP-11	MAP-02	MAP-40	MAP-31	MAP-22
Contact		2NO	1NO 1NC	2NC	4NO	3NO 1NC	2NO 2NC
Applicable contactor		S-P06, S-P09.					
Rated Capacity AC 15 (A)	220V	3.3					
	380V	1.9					
Continuous Current (Ith) (A)		10					

## Timer



Type		PTR-30		PTR-180	
Contact		1NO 1NC		1NO 1NC	
Adjustable time (Sec)		0~30		0~180	
Applicable contactor		SR-P40, SR-P50, S-P11~ S-P60T, SD-P11~ SD-P21.			
Rated Capacity AC 15 (A)	220V	1.6			
	380V	0.95			
Continuous Current (Ith) (A)		16			

## Varistors: Anti-surge interference



Type	BMSACW220V	BMSACW380V
Applicable contactor	SR-P40, SR-P50, S-P11~ S-P60T.	

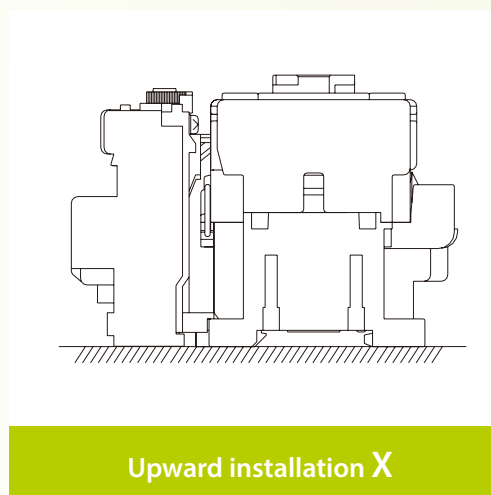
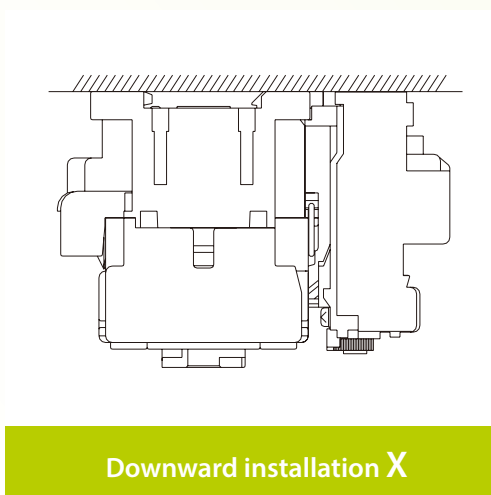
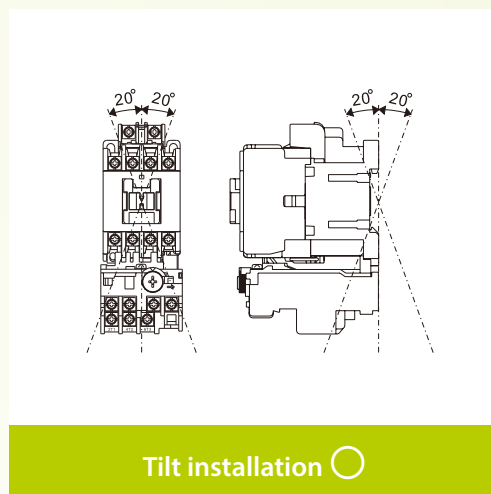
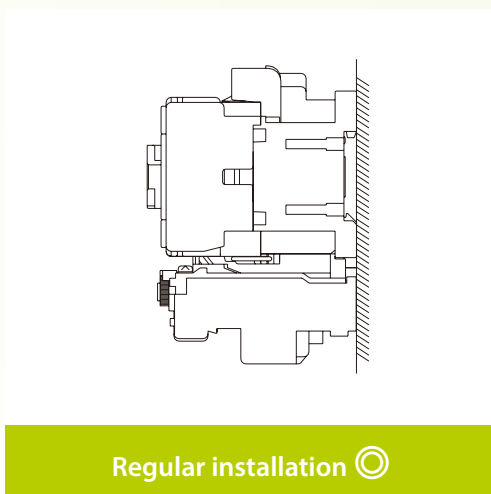
## Installation notes

### • Operating environment

- Altitude below 3000m
- Ambient temperature:  $-30^{\circ}\text{C}\sim+70^{\circ}\text{C}$  (dew is not allowed)
- Relative humidity: Relative humidity could not exceed 50% when the surrounding temperature is  $+40^{\circ}\text{C}$ . For lower temperature, the relative humidity can be higher. The average maximum relative humidity for the month with the highest humidity is 90%, and the average lowest temperature of that month is  $+25^{\circ}\text{C}$ . Please consider the possibility of frosting on the surface of the product due to temperature change.
- Withstand vibration 10Hz~55Hz 2G
- Withstand impact 5G
- Storage temperature:  $-50^{\circ}\text{C}\sim+85^{\circ}\text{C}$  (dew is not allowed)
- Please do not install in a place that contains dust, moisture, salt, oil stains, or corrosive or flammable gases.
- After switch installed, please add temporary protection to avoid harmful substances like dust or moisture etc coming into contact with it, if the switch is not to be used for a long period of time.
- Coil operating voltage should be applied within 85~110% of rated voltage. If higher than 110%, the coil life will be reduced, or the coil could burn out if lower than 85%.

### • Installation direction

The regular installation direction of the contactor is vertical, but is allowed 20° tilt along all directions. Refer to the figure below.



Charact  
-eristics

SP

Series

MS

Series

Other

Series

Coil

TH

Series

SD

Series

Selec  
-tion

Others