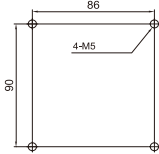
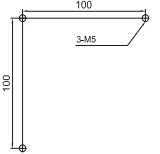
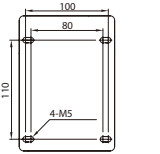


# Magnetic Contactor / Starter ◆ AC control



Model		80T	100T	125T	150T		
Type	Magnetic Contactor	Nonreversing	S-P80T	S-P100T	S-P125T	S-P150T	
		Reversing	S-2×P80T	S-2×P100T	S-2×P125T	S-2×P150T	
	Motor Starter	without enclosure	Nonreversing	MSO-P80T	MSO-P100T	MSO-P125T	MSO-P150T
			Reversing	MSO-2×P80T	MSO-2×P100T	MSO-2×P125T	MSO-2×P150T
		with enclosure	Nonreversing	MS-P80T	MS-P100T	MS-P125T	MS-P150T
			Reversing	MS-2×P80T	MS-2×P100T	MS-2×P125T	MS-2×P150T
		with enclosure (push button)	Nonreversing	—	—	—	—
		TOR	Standard	TH-P60 E(TA)	TH-P120 E(TA)	TH-P120 E(TA)	TH-P120 E(TA)
	Differential		TH-P60(TA)PP	TH-P120(TA)PP	TH-P120(TA)PP	TH-P120(TA)PP	
	Rated Capacity	IEC 60947-4-1 EN 60947-4-1 DIN VDE 0660	3 φ	240V	22/ 30/ 80	30/ 40/ 105	37/ 50/ 135
380/415V				45/ 60/ 80	60/ 80/ 105	75/ 100/ 130	90/ 125/ 160
440V				45/ 60/ 75	60/ 80/ 105	75/ 100/ 130	90/ 125/ 160
550V				45/ 60/ 60	60/ 80/ 85	75/ 100/ 105	90/ 125/ 130
660V				45/ 60/ 50	60/ 80/ 70	75/ 100/ 90	90/ 125/ 110
AC 3 (kW/HP/A)		Continuous Current (Ith) AC1 (A)	100	135	170	200	
		Rated insulation voltage (Ui) (V)	AC660	AC660	AC660	AC660	
UL 508 CSA-C22.2		1 φ	100~120V	7.5/ 80	—	—	—
			200~240V	15/ 68	—	—	—
		3 φ	200~240V	25/ 68	30/ 80	50/ 130	60/ 154
			380~480V	50/ 65	60/ 77	100/ 124	125/ 156
			550~600V	60/ 62	60/ 62	100/ 99	125/ 125
		AC3 (HP/A)	Continuous Current (Ith) AC1 (A)	90	100	170	200
Rated insulation voltage (Ui) (V)			AC600	AC600	AC600	AC600	
NEMA		3	3	3	3		
Auxiliary Contact	IEC 60947-5-1 EN 60947-5-1 GB14048.4	Contact	Standard	2NO 2NC	2NO 2NC	2NO 2NC	2NO 2NC
			Special	—	—	—	—
			220V	1.6	1.6	3.3	3.3
			380V	0.95	0.95	1.6	1.6
	AC 15	Continuous Current (Ith) AC1 (A)	16	16	16	16	
Contact class (UL)	A600, Q300	A600, Q300	A600, Q300	A600, Q300			
Electrical Life		AC3	1.2 Mil.	1.2 Mil.	1.2 Mil.	1.2 Mil.	
Mechanical Life			6 Mil.	6 Mil.	6 Mil.	6 Mil.	
Operation (Time/Hour)			1200	1200	1200	1200	
Magnetic Contactor	Weight (kg)		1.5	2.35	2.7	2.7	
	Appearance Dimensions (W×H×D) (mm)		93×142×116	120×116×128	106×152.5×140	106×152.5×140	
	Installation dimension (mm)						
	Mechanical Interlock		MPU-50	Install by manufacturer	MPU-125	MPU-125	

## 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.			

## Coil Characteristics

Type		S-P06 S-P09	S-P11 S-P15	S-P12	S-P16 S-P21 S-P25 S-P30T	S-P35T S-P40T	S-P50T S-P60T S-P80T	S-P100T	S-P125T S-P150T	S-P200T S-P220T	S-P300T S-P400T	M-600C
Characteristics												
Coil Capacity (VA)	Impulse	25	55	55	55	72	250	319	370	440	700	4840
	Operation	5	11	11	11	12	28	36	42	50	50	242
Power Consumption (W)		1.6	2.5	2.5	2.5	3	7	11	10	12	7	80
Operation Vot. (Ue)	On	55~70%	55~68%	55~68%	59~70%	60~75%	63~75%	65~75%	75~80%	75~80%	65~80%	72~79%
	Off	35~50%	34~48%	34~48%	36~52%	40~57%	40~57%	40~55%	40~55%	40~60%	20~50%	59~66%
Close Time (ms)	Aux. OFF	5-12	5-12	4-11	6-14	6-13	6-13	18-28	9-20	10-19	22-37	42-71
	Aux. ON	6-15	10-18	10-18	10-18	12-20	12-20	22-32	15-24	17-25	25-40	49-78
	Contact ON	6-15	10-18	10-18	10-18	12-20	12-20	22-32	10-20	12-27	30-45	51-80
Open Time (ms)	Aux. OFF	6-15	12-20	9-18	9-19	10-17	10-17	50-100	9-18	10-20	40-60	61-97
	Aux. ON	5-12	8-15	4-13	6-14	5-12	5-12	48-98	7-15	7-18	31-51	58-94
	Contact ON	5-12	8-15	4-13	6-14	5-12	5-12	46-96	7-15	7-20	30-50	57-93

## Coil Specification Table

◆ S-P11~S-P25, S-P30T~P220T, SR-P40~P80, SC-P12~P60						
Description	AC12V	AC24V	AC48V	AC110V	AC120V	AC220V
Coil rated specifications marking	12V 50Hz 12V 60Hz	24V 50Hz 24V 60Hz	48~50V 50Hz 48~50V 60Hz	100V 50Hz 100~110V 60Hz	110~120V 50Hz 115~120V 60Hz	200~220V 50Hz 220V 60Hz
Description	AC230V	AC240V	AC380V	AC440V	AC480V	AC550V
Coil rated specifications marking	230V 50Hz 230V 60Hz	220~240V 50Hz 240~260V 60Hz	346~380V 50Hz 380V 60Hz	400V 50Hz 400~440V 60Hz	415~440V 50Hz 460~480V 60Hz	500V 50Hz 500~550V 60Hz

◆ S-P300T~P400T					
Description	AC48V	AC110V	AC220V	AC380V	AC550V
Coil rated specifications marking	AC 48~50V 50/60Hz DC 48V	AC 100-127V 50/60 Hz DC 100-127V	AC 200~250V 50/60Hz DC 200~250V	AC 265~450V 50/60Hz	AC 440~575V 50/60Hz

◆ M-600C					
Description	AC110V	AC120V	AC220V	AC230V	AC260V
Coil rated specifications marking	100V 50Hz 100~110V 60Hz	110~120V 50Hz 115~120V 60Hz	208~220V 50Hz 220V 60Hz	230~240V 50Hz 230~240V 60Hz	240~260V 50Hz 260~280V 60Hz
Description	AC380V	AC440V	AC480V	AC550V	
Coil rated specifications marking	346~380V 50Hz 380V 60Hz	380~415V 50Hz 400~440V 60Hz	415~440V 50Hz 460~480V 60Hz	500V 50Hz 500~550V 60Hz	

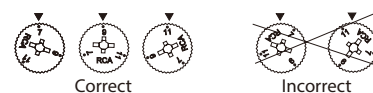


Type		60		120				
Standard	Contactor Assembled Type	TH-P60E	TH-P60ETA	TH-P120E	TH-P120ETA			
	Independently Installed Type	—	—	—	—			
With phase failure protection	Contactor Assembled Type	TH-P60PP	TH-P60TAPP	TH-P120PP	TH-P120TAPP			
	Independently Installed Type	—	—	—	—			
Reset Mode		Manual / Automatic		Manual / Automatic				
Magnetic Contactor		S-P50T, S-P60T, S-P80T.		S-P60T, S-P80T.		S-P100T, S-P125T, S-P150T.		
TOR Adjustment Range (A)	Rating (A)	Range (A)	Rating (A)	Range (A)	Rating (A)	Range (A)	Rating (A)	Range (A)
	11	9~13	67	54~80	40	32~48	105	80~130
	15	12~18	80	60~100	54	43~65	130	100~160
	21	17~24			67	54~80	160	120~200
	28	22~34			80	60~100		
	33	28~38						
	40	32~48						
	54	43~65						
Auxiliary Contact		1NO 1NC		1NO 1NC				
Weight		0.28/ 0.30	0.34/ 0.36	0.55	0.76			
Dimensions (mm) (W×H×D)		TH-P60(PP): 98×50.5×78	TH-P60TA(PP): 64.5×65.5×80	TH-P120(PP): 133×54×105	TH-P120TA(PP): 133×85.5×105			

Installation Dimensions (mm)



- Note. 1. The purpose of using TOR is protecting load tripping. For protecting circuit, please choose circuit breaker.  
 2. When adjusting the rated current; please refer to the TOR range table above. Do not exceed its range.  
 3. (E): 3 Elements



Charact-eristics

SP

Series

MS

Series

Other

Series

Coil

TH

Series

SD

Series

Selec-tion

Others







## Selection Table ◆ Magnetic contactor selection | Capacitor use

Model	3 Phase Rated Capacity kVAR(A)			
	200~220V	400~440V	500V	600V
S-P11,12	3(8.5)	4(6)	—	—
S-P21	4.5(14)	9(13)	—	—
S-P30T,S-P35T	6(18)	12(18)	—	—
S-P40T	8.5(25)	15(23)	—	—
S-P50T	12(35)	20(30)	—	—
S-P60T	13(40)	24(35)	25(30)	25(25)
S-P80T	15(50)	25(40)	30(35)	30(30)
S-P100T	22(65)	40(60)	45(50)	45(45)
S-P125T	24(72)	46(67)	50(55)	50(50)
S-P150T	25(80)	51(75)	60(70)	60(60)
S-P220T	50(150)	96(140)	110(130)	110(110)
S-P300	65(200)	120(180)	130(150)	130(130)
S-P400	85(250)	170(250)	200(230)	200(200)
S-C600	170(500)	350(500)	350(400)	400(400)

Model	Single Rated Capacity kVAR(A)			
	Single Phase		3 Phase in Series	
	200~220V	400~440V	500V	600V
S-P11,12	1.7(8.5)	2.4(6)	—	—
S-P21	2.8(14)	5(13)	—	—
S-P30T,S-P35T	3.6(18)	7(18)	—	—
S-P40T	5(25)	9(23)	—	—
S-P50T	7(35)	12(30)	—	—
S-P60T	8(40)	14(35)	20(40)	25(40)
S-P80T	10(50)	15(40)	25(50)	30(50)
S-P100T	13(65)	25(60)	30(60)	35(60)
S-P125T	14(72)	27(67)	33(70)	37(70)
S-P150T	15(80)	30(75)	35(80)	40(80)
S-P220T	30(150)	55(140)	75(150)	90(150)
S-P300	40(200)	72(180)	90(180)	100(180)
S-P400	50(250)	100(250)	120(250)	140(250)
S-C600	100(500)	200(500)	250(500)	300(500)

Note:

Single phase:  $kVAR = 6.3 \times 10^{-9} \times (Hz) \times (\mu F) \times (V)^2$

3 phase:  $\sqrt{3} \times$  single phase kVAR

Charact-eristics

SP

Series

MS

Series

Other

Series

Coil

TH

Series

SD

Series

Selec-tion

Others



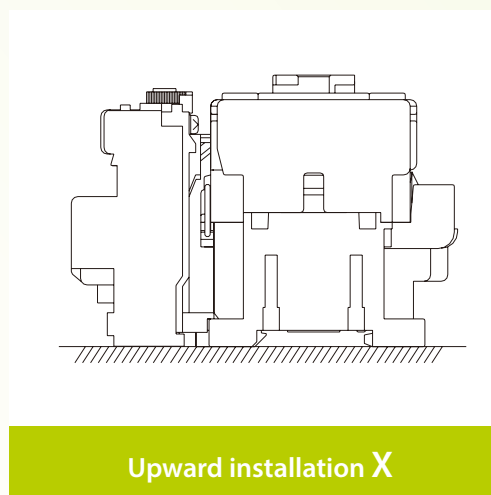
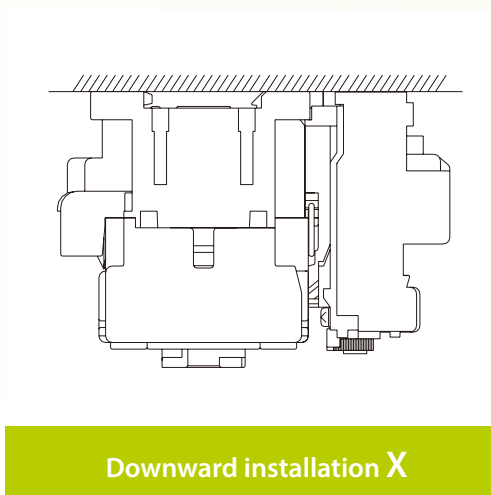
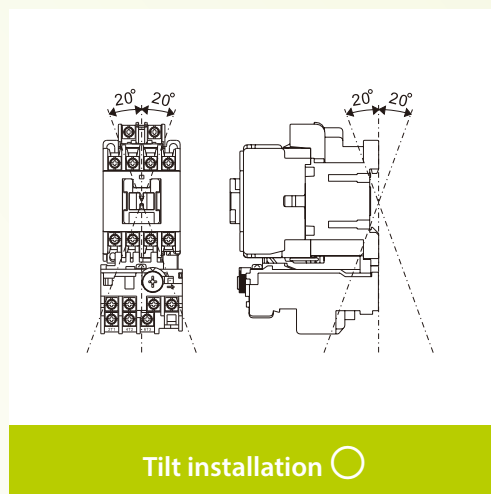
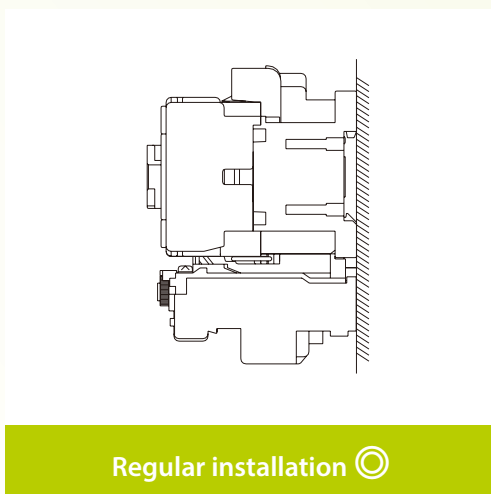
## Installation notes

### • 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