



MAGNETIC CONTACTOR & MOTOR STARTER



P Series



SHIHLIN ELECTRIC & ENGINEERING

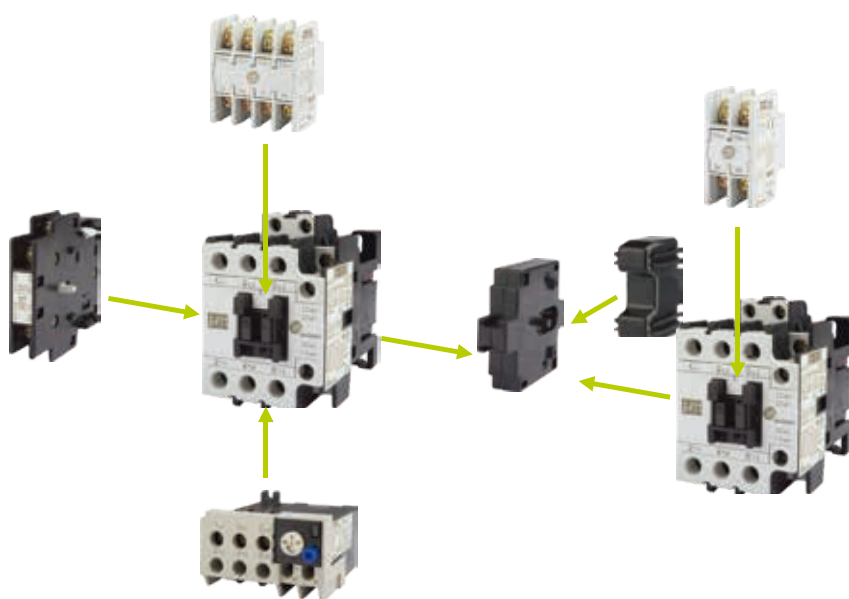
Functionalities and characteristics of Magnetic Contactor

• Configuration

Composite magnetic switch (abbreviated as MS) is comprised of a contactor for switching on and off current and a thermal overload relay for protecting the load.

• Functions

- Switching the control system for electric power transmission and distribution.
- Operation of the start and stop of motors.
- Electric power control for all kinds of industrial machinery, machine tools, injection molding machines.



• Feature

- Products comply with multiple international standards.
Compliant standards: JIS, JEM, IEC, EN, VDE
Certificate: UL, UR, CSA, TUV, CE
- Auxiliary Contact Block designed for installing on the front and on the side can satisfy the spatial requirements of different operating environments.



AP-2P
(1NO 1NC, 2NO, 2NC)



AP-4P
(2NO 2NC 4NO, 3NO 1NC)



APS-11
(1NO 1NC)

Characteristics

SP

Series

MS

Series

Other

Series

Coil

TH

Series

SD

Series

Selection

Others

MS | S-P Series

MS | S-P Series

Type designation



S-P21



S-2xP30T

MS | MS-P Series

Type designation



MSO-P11



MSO-2xP11



MS-P11PB



MS-2xP11

S	-	2×	P	35T	220V
①		②	③	④	⑤

① Model

S : AC Magnetic contactor

② Non-reversing/reversing

Blank	Non-reversing
2×	Reversing

③ Series

P	P Series
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④ Rated capacity

9T、11、12T、15、16、21、25、30T、32T、35T、38T、40T、50T、60T、80T、100T、125T、150T、200T、220T、300T、400T、600

⑤ Control circuit voltage

EX. 110V、220V、380V、440V (Refer to P34)

MS	-	2×	P	35T	PB	380V/	220V	28A	E
①		②	③	④	⑤	⑥	⑦	⑧	⑨

① Model

MSO	AC Magnetic contactor without enclosure
MS	AC Magnetic contactor with enclosure

② Non-reversing/reversing

Blank	Non-reversing
2×	Reversing

③ Series

P	P Series
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④ Rated capacity

9T、11、12T、15、16、21、25、30T、32T、35T、38T、40T、50T、60T、80T、100T、125T、150T、200T、220T、300T、400T、600

⑤ Push button

Blank	Non- Push button type
PB	With Push button type (MSO model is without PB)

⑥ Main circuit voltage

EX : 110V、220V、380V、440V (When main circuit voltage and control circuit voltage are the same, it will be blank.)

⑦ Control circuit voltage

EX : 110V、220V、380V、440V... (Refer to P34)

⑧ TH heater rated capacity

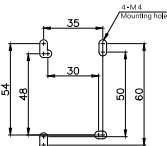
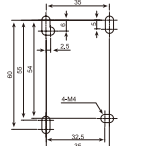
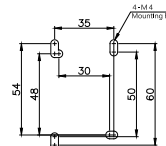
EX : 3.3A、6.5A、9A、11A、15A...350A...

⑨ TH Type

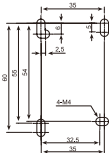
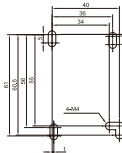
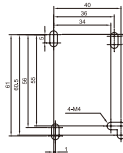
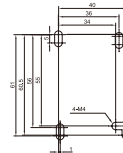
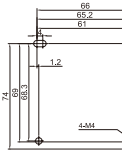
Blank	Compressor Type (2 heaters)
E	3 heaters
PP	Differential Type

Magnetic Contactor / Starter ♦ AC control



Model				9T	11	12T	
Type	Magnetic Contactor	Nonreversing		S-P9T	S-P11	S-P12T	
		Reversing		S-2XP9T	S-2XP11	S-2XP12T	
	Motor Starter	without enclosure	Nonreversing	MSO-P9T	MSO-P11	MSO-P12T	
			Reversing	MSO-2xP9T	MSO-2XP11	MSO-2xP12T	
		with enclosure	Nonreversing	MS-P9T	MS-P11	MS-P12T	
			Reversing	MS-2xP9T	MS-2XP11	MS-2xP12T	
		with enclosure (push button)	Nonreversing	MS-P9TPB	MS-P11PB	MS-P12TPB	
			TOR	Standard	TH-P12ES	TH-P12ES	TH-P12ES
				Differential	TH-P12ES PP	TH-P12ES PP	TH-P12ES PP
Rated Capacity	IEC 60947-4-1 EN 60947-4-1 DIN VDE 0660	3 Ø	240V	2.5/3/11	3.5/ 4.5/ 13	3.5/4.5/13	
			380/415V	4/5.5/9	5.5/ 7.5/ 12	5.5/7.5/12	
			440V	4/5.5/9	5.5/ 7.5/ 12	5.5/7.5/12	
			550V	4/5.5/7	5.5/ 7.5/ 9	7.5/10/12	
			660V	4/5.5/6	5.5/ 7.5/ 7	7.5/10/9	
		Continuous Current (Ith) AC1 (A)		25	20	25	
		Rated insulation voltage (Ui) (V)		AC690	AC660	AC690	
	UL 508 CSA-C22.2	1 Ø	100~120V	0.5/9.8	0.5/ 9.8	0.75/13.8	
			200~240V	1.5/10	2/ 10	2/12	
		3 Ø	200~240V	3/9.6	3/ 9.6	5/15.2	
			380~480V	5/7.6	7.5/ 11	7.5/11	
			550~600V	7.5/9	10/ 11	10/11	
			Continuous Current (Ith) AC1 (A)		25	24	25
		Rated insulation voltage (Ui) (V)		AC600	AC600	AC600	
	NEMA				-	0	-
	Auxiliary Contact	IEC 60947-5-1 EN 60947-5-1 GB14048.4	Contact	Standard	1NO 1NC	1NO	1NO 1NC
Special				-	1NC	-	
220V				1.6	1.6	1.6	
380V				0.95	0.95	0.95	
AC 15		Continuous Current (Ith) AC1 (A)		16	16	16	
		Contact class (UL)		A600 · Q300	A600, P600, Q300	A600 · Q300	
Electrical Life AC3			1.6 Mil.	1.6 Mil.	1.6 Mil.		
Mechanical Life			10 Mil.	10 Mil.	10 Mil.		
Operation (Time/Hour)			1200	1200	1200		
Magnetic Contactor	Weight (kg)		0.34	0.33	0.34		
	Appearance Dimensions (W×H×D) (mm)		43×81×86	43×81×83.5	43×81×86		
	Installation dimension (mm)						
	Mechanical Interlock			MPU-11	MPU-11	MPU-11	

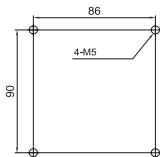
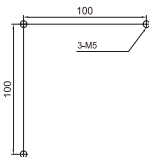
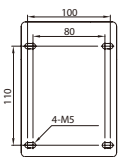
Magnetic Contactor / Starter ♦ AC control

								
Model				15	16	21 (A)	25	30T
Type	Magnetic Contactor	Nonreversing		S-P15	S-P16	S-P21 (A)	S-P25	S-P30T
		Reversing		S-2×P15	S-2×P16	S-2×P21 (A)	S-2×P25	S-2×P30T
	Motor Starter	without enclosure	Nonreversing	MSO-P15	MSO-P16	MSO-P21 (A)	MSO-P25	MSO-P30T
			Reversing	MSO-2×P15	MSO-2×P16	MSO-2×P21 (A)	MSO-2×P25	MSO-2×P30T
		with enclosure	Nonreversing	MS-P15	MS-P16	MS-P21 (A)	MS-P25	MS-P30T
			Reversing	MS-2×P15	MS-2×P16	MS-2×P21 (A)	MS-2×P25	MS-2×P30T
		with enclosure (push button)	Nonreversing	MS-P15PB	MS-P16PB	MS-P21PB (A)	MS-P25PB	MS-P30TPB
		TOR	Standard	TH-P12ES	TH-P20ES	TH-P20ES	TH-P20ES TA	TH-P20ES TA
			Differential	TH-P12ES PP	TH-P20ES PP	TH-P20ES PP	TH-P20ES TAPP	TH-P20ES TAPP
Rated Capacity	IEC 60947-4-1 EN 60947-4-1 DIN VDE 0660 AC 3 (kW/HP/A)	3 ∅	240V	4.5/ 6/ 18	4.5/ 6/ 18	5.5/ 7.5/ 24	6.5/ 8.5/ 26	7.5/ 10/ 30
			380/415V	7.5/ 10/ 18	7.5/ 10/ 18	11/ 15/ 21	12/ 16/ 25	15/ 20/ 30
			440V	7.5/ 10/ 16	7.5/ 10/ 16	11/ 15/ 21	12/ 16/ 23	15/ 20/ 27
			550V	7.5/ 10/ 13	7.5/ 10/ 13	11/ 15/ 17	12/ 16/ 20	15/ 20/ 22
			660V	7.5/ 10/ 9	7.5/ 10/ 9	11/ 15/ 14	12/ 16/ 16	15/ 20/ 18
		Continuous Current (Ith) AC1 (A)		25	30	32	32	50
		Rated insulation voltage (Ui) (V)		AC660	AC660	AC660	AC660	AC660
	UL 508 CSA-C22.2 AC3 (HP/A)	1 ∅	100~120V	-	1/ 16	2/ 24	2/ 24	2/ 24
			200~240V	-	3/ 17	3/ 17	3/ 17	5/ 28
		3 ∅	200~240V	-	5/ 15.2	7.5/ 22	10/ 28	10/ 28
			380~480V	-	10/ 14	15/ 21	15/ 21	20/ 27
			550~600V	-	10/ 11	15/ 17	15/ 17	30/ 32
		Continuous Current (Ith) AC1 (A)		-	30	35	40	50
		Rated insulation voltage (Ui) (V)		-	AC600	AC600	AC600	AC600
	NEMA				0	0	1	1
Auxiliary Contact	IEC 60947-5-1 EN 60947-5-1 GB14048.4 AC 15	Contact	Standard	1NO	1NO 1NC	1NO 1NC (2NO 2NC)	1NO 1NC	2NO 2NC
			Special	1NC	-	-	-	-
			220V	1.6	1.6	1.6	1.6	1.6
			380V	0.95	0.95	0.95	0.95	0.95
	Continuous Current (Ith) AC1 (A)		16	16	16	16	16	
	Contact class (UL)		-	A600, Q300	A600, Q300	A600, Q300	A600, Q300	
Electrical Life AC3				1.3 Mil.	1.3 Mil.	1.3 Mil.	1.3 Mil.	1.3 Mil.
Mechanical Life				10 Mil.	10 Mil.	10 Mil.	10 Mil.	10 Mil.
Operation (Time/Hour)				1200	1200	1200	1200	1200
Magnetic Contactor	Weight (kg)		0.33	0.37	0.38	0.38	0.55	
	Appearance Dimensions (W×H×D) (mm)		43×81×83.5	53.5×81×83.5	53.5×81×83.5	53.5×81×83.5	73×95×93	
	Installation dimension (mm)							
Mechanical Interlock				MPU-11	MPU-21	MPU-21	MPU-21	MPU-11



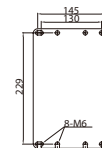
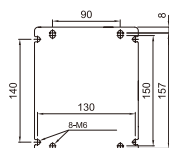
32T	35T	38T	40T	50T	60T
S-P32T	S-P35T	S-P38T	S-P40T	S-P50T	S-P60T
S-2XP32T	S-2xP35T	S-2XP38T	S-2xP40T	S-2xP50T	S-2xP60T
MSO-P32T	MSO-P35T	MSO-P38T	MSO-P40T	MSO-P50T	MSO-P60T
MSO-2xP32T	MSO-2xP35T	MSO-2xP38T	MSO-2xP40T	MSO-2xP50T	MSO-2xP60T
MS-P32T	MS-P35T	MS-P38T	MS-P40T	MS-P50T	MS-P60T
MS-2xP32T	MS-2xP35T	MS-2xP38T	MS-2xP40T	MS-2xP50T	MS-2xP60T
MS-P32TPB	MS-P35TPB	MS-P38TPB	MS-P40TPB	MS-P50TPB	MS-P60TPB
TH-P20ES TA	TH-P20ES TA	TH-P20ES TA	TH-P20ES TA	TH-P60ES	TH-P60ES TA
TH-P20ES TAPP	TH-P20ES TAPP	TH-P20ES TAPP	TH-P20ES TAPP	TH-P60ES PP	TH-P60ES TAPP
7.5/10/32	9/ 12.5/ 35	11/15/39	11/ 15/ 44	15/ 20/ 58	19/ 25/ 65
15/20/32	18.5/ 25/ 35	18.5/25/38	22/ 30/ 40	30/ 40/ 52	37/ 50/ 65
15/20/32	18.5/ 25/ 27	18.5/25/38	22/ 30/ 40	30/ 40/ 52	37/ 50/ 65
15/20/22	18.5/ 25/ 22	18.5/25/29	22/ 30/ 32	30/ 40/ 41	37/ 50/ 52
15/20/18	18.5/ 25/ 18	18.5/25/22	22/ 30/ 26	30/ 40/ 34	37/ 50/ 43
50	50	60	50	115	115
AC660	AC660	AC660	AC660	AC660	AC660
-	2/ 24	-	3/ 34	5/ 56	5/ 56
-	5/ 28	-	7.5/ 40	10/ 50	10/ 50
-	10/ 28	-	15/ 42	20/ 54	20/ 54
-	20/ 27	-	20/ 27	30/ 40	40/ 52
-	30/ 32	-	30/ 32	40/ 41	50/ 52
-	50	-	50	115	115
-	AC600	-	AC600	AC600	AC600
2	2	2	2	2	2
1NO 1NC	2NO 2NC	2NO 2NC	2NO 2NC	2NO 2NC	2NO 2NC
-	-	-	-	-	-
1.6	1.6	1.6	1.6	1.6	1.6
0.95	0.95	0.95	0.95	0.95	0.95
16	16	16	16	16	16
A600, Q300	A600, Q300	A600, Q300	A600, Q300	A600, Q300	A600, Q300
1.3 Mil.	1.3 Mil.	1.3 Mil.	1.3 Mil.	1.3 Mil.	1.3 Mil.
10 Mil.	10 Mil.	10 Mil.	10 Mil.	6 Mil.	6 Mil.
1200	1200	1200	1200	1200	1200
0.38	0.55	0.55	0.55	1.05	1.05
53.5x81x83.5	73x95x93	73x95x93	73x95x93	87.9x115x107	87.9x115x107
MPU-21	MPU-11	MPU-11	MPU-11	MPU-11	MPU-11

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-P60ES TA	TH-P120 E(TA)	TH-P120 E(TA)
			Differential	TH-P60ES TAPP	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 AC 3 (kW/HP/A)	3 Ø	240V	22/ 30/ 80	30/ 40/ 105	37/ 50/ 135	45/ 60/ 165
			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
		Continuous Current (Ith) AC1 (A)		115	150	170	225
		Rated insulation voltage (Ui) (V)		AC660	AC660	AC660	AC660
	UL 508 CSA-C22.2 AC3 (HP/A)	1 Ø	100~120V	7.5/ 80	-	-	-
			200~240V	15/ 68	-	-	-
		3 Ø	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
		Continuous Current (Ith) AC1 (A)		115	150	170	225
		Rated insulation voltage (Ui) (V)		AC600	AC600	AC600	AC600
	NEMA				3	3	3
Auxiliary Contact	IEC 60947-5-1 EN 60947-5-1 GB14048.4 AC 15	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
		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.
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



200T	220T	300T	400T
S-P200T	S-P220T	S-P300T	S-P400T
S-2xP200T	S-2xP220T	S-2xP300T	S-2xP400T
MSO-P200T	MSO-P220T	MSO-P300T	MSO-P400T
MSO-2xP200T	MSO-2xP220T	MSO-2xP300T	MSO-2xP400T
MS-P200T	MS-P220T	-	-
MS-2xP200T	MS-2xP220T	-	-
-	-	-	-
TH-P220T E	TH-P220T E	TH-P400T E	TH-P400T E
TH-P220TPP	TH-P220TPP	TH-P400TPP	TH-P400TPP
55/ 75/ 200	65/ 85/ 225	90/ 125/ 300	110/ 150/ 400
110/ 150/ 190	120/ 160/ 220	160/ 220/ 300	220/ 300/ 400
110/ 150/ 190	120/ 160/ 220	185/ 250/ 300	250/ 340/ 400
110/ 150/ 150	132/ 180/ 180	185/ 250/ 263	250/ 340/ 360
110/ 150/ 125	132/ 180/ 150	200/ 300/ 220	280/ 380/ 305
275	315	500	635
AC660	AC660	AC1000	AC1000
-	-	-	-
-	-	-	-
75/ 192	75/ 192	100/ 248	125/ 312
150/ 180	150/ 180	200/ 240	250/ 302
150/ 144	150/ 144	200/ 192	300/ 289
275	315	500	635
AC600	AC600	AC1000	AC1000
4	4	5	5
2NO 2NC	2NO 2NC	2NO 2NC	2NO 2NC
-	-	-	-
3.3	3.3	3.3	3.3
1.6	1.6	1.6	1.6
16	16	10	10
A600, Q300	A600, Q300	A600, Q300	A600, Q300
1.2 Mil.	1.2 Mil.	1.2 Mil.	1.2 Mil.
6 Mil.	6 Mil.	6 Mil.	6 Mil.
1200	1200	1200	1200
4.35	4.35	9.75	9.75
138x185x159.5	138x185x159.5	164x246x196.5	164x246x196.5



MPU-125

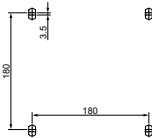
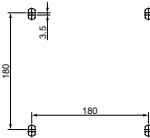
MPU-125

MPU-125

MPU-125

Magnetic Contactor / Starter ♦ AC control



Model				630T	800T	1260T	
Type	Magnetic Contactor	Nonreversing		S-P630T	S-P800T	S-P1260T	
		Reversing		S-2XP630T	S-2XP800T	S-2XP1260T	
	Motor Starter	without enclosure	Nonreversing	-	-	-	
			Reversing	-	-	-	
		with enclosure	Nonreversing	-	-	-	
			Reversing	-	-	-	
		with enclosure (push button)	Nonreversing	-	-	-	
			TOR	Standard	TH-P600(E)	TH-P600(E)	-
Differential	TH-P600PP	TH-P600PP		-			
Rated Capacity	IEC 60947-4-1 EN 60947-4-1 DIN VDE 0660 AC 3 (kW/HP/A)	3 Ø	240V	200 / 270 / 630	250 / 340 / 800	-	
			380/415V	335 / 450 / 630	450 / 610 / 800	-	
			440V	400 / 545 / 630	450 / 610 / 800	-	
			550V	400 / 545 / 552	450 / 610 / 620	-	
			660V	450 / 610 / 450	475 / 645 / 475	-	
	Continuous Current (Ith)		AC1 (A)	800	1000	1260	
	Rated insulation voltage (Ui)		(V)	AC1000	AC1000	AC1000	
	UL 508 CSA-C22.2 AC3 (HP/A)	1 Ø	100~120V	-	-	-	
			200~240V	-	-	-	
		3 Ø	200~240V	-	-	-	
			380~480V	-	-	-	
			550~600V	-	-	-	
		Continuous Current (Ith)		AC1 (A)	-	-	-
		Rated insulation voltage (Ui)		(V)	-	-	-
	NEMA			3	3	4	
Auxiliary Contact	IEC 60947-5-1 EN 60947-5-1 GB14048.4 AC 15	Contact	Standard	2NO 2NC*	2NO 2NC*	-	
			Special	-	-	-	
			220V	-	-	-	
			380V	-	-	-	
	Continuous Current (Ith)		AC1 (A)	-	-	-	
	Contact class		(UL)	-	-	-	
	Electrical Life AC3			500000	500000	-	
Mechanical Life			3000000	3000000	3000000		
Operation (Time/Hour)			-	-	-		
Magnetic Contactor	Weight (kg)		16.4	18.3	18.3		
	Appearance Dimensions (W×H×D) (mm)		309×304×255	309×338×255	309×338×255		
	Installation dimension (mm)						
Mechanical Interlock			-	-	-		

*Note: S-P630T and S-P800T is equipped with AP-22N (2NO2NC) when ordered, S-P1260T can be purchase separated.

Other | SD Series | DC control type

Type designation



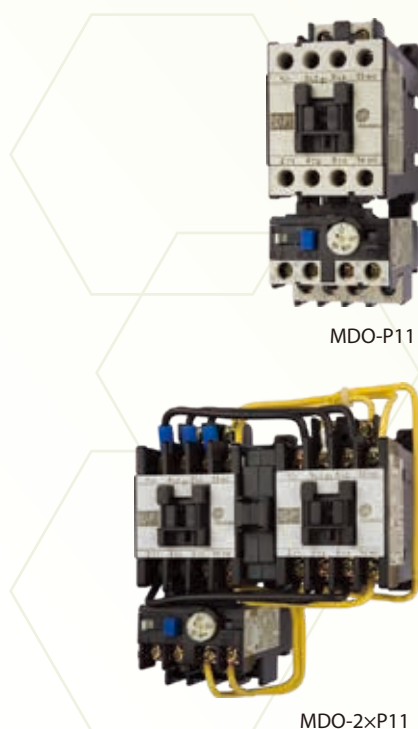
SD	-	2x	P	21	220V
①		②	③	④	⑤

①	Model	SD	DC Contactor
②	Non-reversing/ reversing	Blank	Non-reversing
		2x	Reversing
③	Series	P	P Series
④	Rated capacity	06、09、11、16、21	
⑤	Control circuit voltage	EX：12V、24V、30V*、48V...110V、220V...	

*Note: control circuit voltage 30V can be customized.

Other | MDO Series | DC control type

Type designation



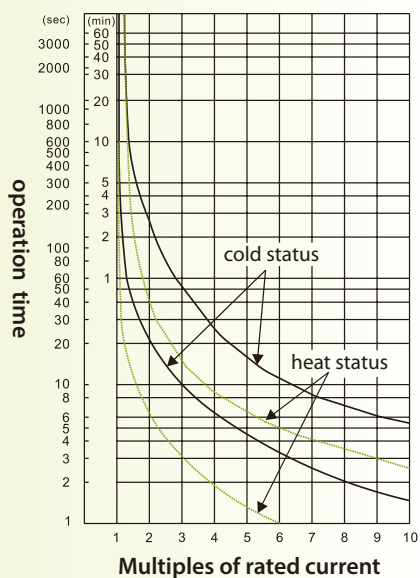
MDO	-	2x	P	21	380V /	220V	28A	E
①		②	③	④	⑤	⑥	⑦	⑧

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

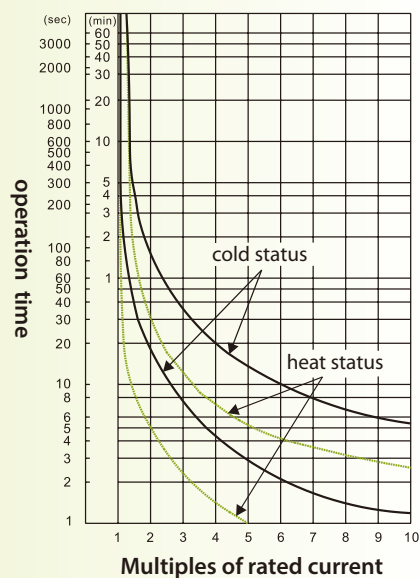
Thermal overload (overcurrent) relay | TH Series |

Tripping Characteristic

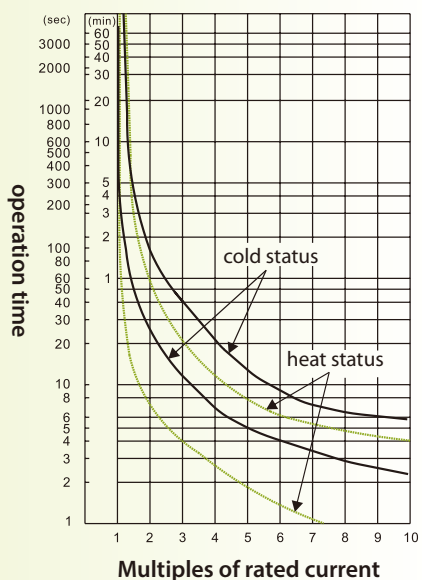
TH-P12ES tripping characteristic curve



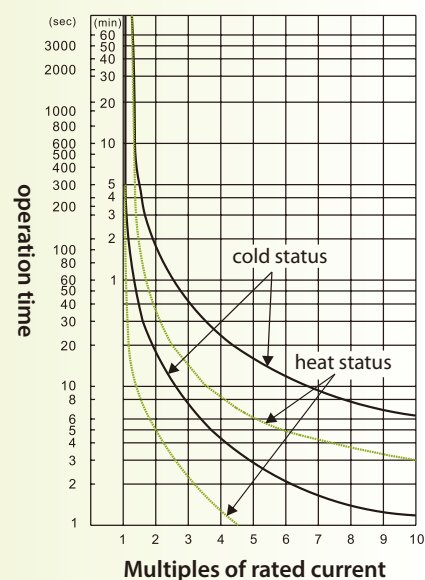
TH-P18ES – below 6.5A tripping characteristic curve



TH-P18ES – above 9A tripping characteristic curve



TH-P20ES – below 6.5A tripping characteristic curve



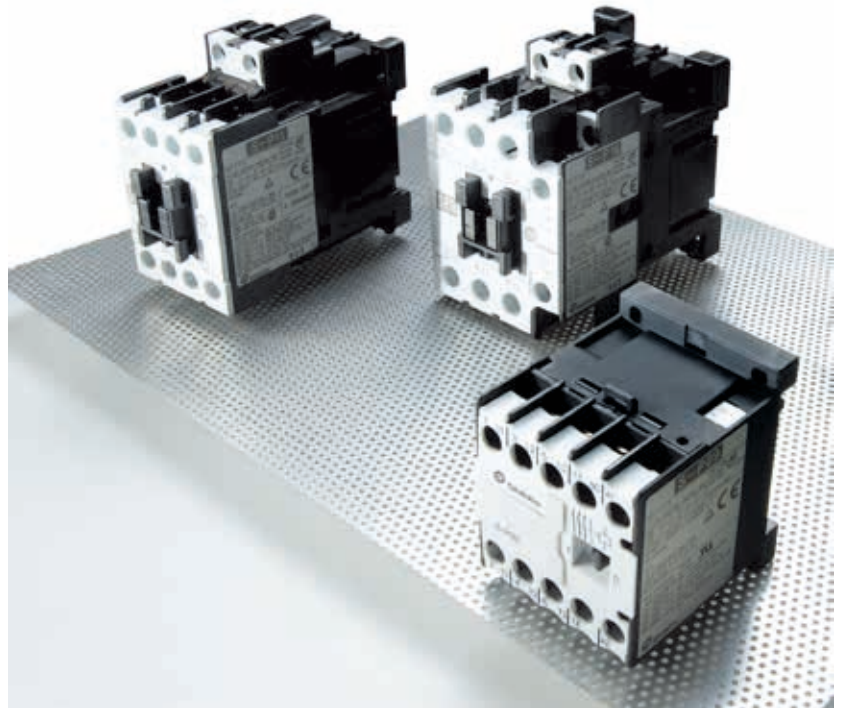


CIRCUIT BREAKER (MCCB / ELCB / EMCCB / MCB)

Breaker & Switchgear System



AIR CIRCUIT BREAKER



MAGNETIC CONTACTOR / SWITCH (CONTACTOR / MS / MMS)



AUTOMATIC TRANSFER SWITCHES



SURGE PROTECTIVE
DEVICE



SMART METER



INVERTER



LOW VOLTAGE
POWER CAPACITORS