

Magnetic Contactors and Starters

SC and SW series

Ordering code system

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SC series magnetic contactors

SC 25 B A A-M 22
①② ③④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩⑪

SW series magnetic motor starter

SC 25 B A A N-M 22 TB D
①② ③④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩⑪ ⑫ ⑬

① Product category

Description	Code
Contactors and starters	S

② Series category

Description	Code
SC and SW series	C

③④ Frame size

Frame size	Code	
	③	④
03	1	1
0	1	3
05	1	4
4-0	1	8
4-1	1	9
5-1	2	0
N1	2	5
N2	3	5
N2S	5	0
N3	6	5
N4	8	0
N5	9	3
N6	1	C
N7	1	F
N8	1	J
N10	2	C
N11	3	A
N12	4	A
N14	6	A
N16*	8	A

*Contactor only

⑤ Index

Index	Code
03 to 5-1	Blank
N1 to N16	B

⑨ Coil voltage

● Frame size 03 to N4 AC coil

Operating coil voltage		Code
50Hz	60Hz	
24V	24-26V	E
48V	48-52V	F
100V	100-110V	1
100-110V	110-120V	H
110-120V	120-130V	K
200V	200-220V	2
200-220V	220-240V	M
220-240V	240-260V	P
346-380V	380-420V	S
380-400V	400-440V	4
415-440V	440-480V	T
480-500V	500-550V	5

⑥ Version

Description	Code	
	Contactor	Starter
<u>Non-reversing, open</u> Standard	A	A
<u>Non-reversing, enclosed</u> Standard Dust-tight/light-corrosion resistant With on – off pushbutton With on – off/reset pushbutton	C – – –	C L P J
<u>Reversing, open</u> Standard	R	R
<u>Reversing, enclosed</u> Standard Dust-tight/light-corrosion resistant	M –	M G

⑦ Coil and contact specifications

Description	Code	
Standard	AC operating coil DC operating coil Both AC and DC operating coil With extra pick-up operating coil	A (Up to N4) G (Up to N3) A (N5 and above) U (Up to N4)
With super magnet	Both AC and DC operating coil	S (N1 to N4)
Mechanical latch (Contactor only)	AC operating coil DC operating coil Both AC and DC operating coil	V (Up to 5-1) D (Up to 5-1) E (N1 and above)
With single-button auxiliary contact	AC operating coil DC operating coil With extra pick-up operating coil	H (Up to N12) Q (Up to N12) L (Up to N12)

⑧ Type of thermal overload relay

Description	Code	
Standard	TR-□ TR-□/3	2-element 3-element N N
Long time operating	TR-□L TR-□L3	2-element 3-element L F
Quick operating	TR-□Q	3-element S
Open-phase protection	TK-□	3-element E

● Frame size 03 to N3 DC coil

Operating coil voltage	Code
12V DC	B
24V DC	E
48V DC	F
60V DC	G
100V DC	1
110V DC	H
120V DC	K
200V DC	2
210V DC	Y
220V DC	M

● Frame size N1/SE to N4/SE, N5 to N16 AC and DC coil (common)

Operating coil voltage		Code
AC 50/60Hz	DC	
24-25V	24V	E
48-50V	48V	F
100-127V	100-120V	1
200-250V	200-240V	2
265-347V	–	3
380-450V	–	4
460-575V	–	5

⑩⑪ **Auxiliary contact**

● **SC-03 to 5-1**

Contact arrangement	Code	
	⑨	⑩
1NO	1	0
1NC	0	1
1NO+1NC	1	1
2NO	2	0
2NC	0	2
2NO+2NC	2	2

● **SC-N1 to N16**

Contact arrangement	Code	
	⑨	⑩
2NO+2NC	2	2
3NO+3NC	3	3
4NO+4NC	4	4

⑬ **No. of heater element and reset method**

Description	Code
Manual reset	Blank
2-element	
3-element	D
Auto reset	A
2-element	
3-element	

■ **Correct mounting**

- (1) The standard mounting shown in Figure 1 is the proper mounting method. Following slanting mounting with front, behind, left and right direction is possible. (Figure 2) Allowable slant angle of SC (SW) - 03 to N16 : 30°
- (2) Side mounting can be necessary due to wiring or installation restriction. Side mounting is possible if you consider the followings, except for the types of SC-N14, 16 and mechanically latched type.
 - The performance of magnetic contactors is almost the same. Only mechanical durability and switching frequency may decrease.
 - The ultimate operational current of thermal overload relay may slightly changes.
- (3) Other mountings
 - Standard magnetic contactors and starters cannot be mounted on the ceiling. If they were mounted on the ceiling, they could not satisfy the operating performance value specified by Standards due to effect of moving section mass.
 - Standard magnetic contactors and starters cannot be mounted horizontally. External vibration or shock may result in malfunction due to effect of moving section mass. Dedicated horizontal mounting models are available on request. Add suffix "Z109" to the type number when

⑫ **Thermal overload relay ampere setting range**

Ampere setting range (A)	Code	Ampere setting range (A)	Code	Ampere setting range (A)	Code
0.1 - 0.15	TA	4 - 6	TS	65 - 95	TM
0.13 - 0.2	TB	5 - 8	TT	85 - 105	TI
0.15 - 0.24	TC	6 - 9	TU	85 - 125	TN
0.2 - 0.3	TD	7 - 11	TV	110 - 160	TP
0.24 - 0.36	TE	9 - 13	TW	125 - 185	TR
0.3 - 0.45	TF	12 - 18	TX	160 - 240	TS
0.36 - 0.54	TG	16 - 22	TQ	200 - 300	TT
0.48 - 0.72	TH	18 - 26	TB	240 - 360	TU
0.64 - 0.96	TJ	24 - 36	TE	300 - 450	TV
0.8 - 1.2	TK	28 - 40	TF	400 - 600	TW
0.95 - 1.45	TL	32 - 42	TI		
1.4 - 2.2	TM	34 - 50	TG		
1.7 - 2.6	TN	45 - 65	TJ		
2.2 - 3.4	TP	48 - 68	TO		
2.8 - 4.2	TR	53 - 80	TL		

Ordering example

● **Magnetic motor starter**

- ① Magnetic starter S
- ② SW series C
- ③④ Frame size: 5-1 20
- ⑤ Index Blank
- ⑥ Non-reversing, open: Standard A
- ⑦ Operating coil: AC operating A
- ⑧ Thermal overload relay: Standard N
- ⑨ Operating coil voltage: 220V-240V AC, 50Hz P
- ⑩⑪ Auxiliary contact: 1NO+1NC 11
- ⑫ Thermal overload relay heater range : 9-13 TW
- ⑬ No. of heater element: 3 D

Ordering code: SC20AAN-P11TWD

● **Magnetic contactor**

- ① Magnetic contactor S
- ② SC series C
- ③④ Frame size: N5 93
- ⑤ Index B
- ⑥ Non-reversing, open: Standard A
- ⑦ Operating coil: DC operating A
- ⑨ Operating coil voltage: 110V DC 1
- ⑩⑪ Auxiliary contact: 2NO+2NC 22

Ordering code: SC93BAA-122

ordering. However, the models of "Z109" specification cannot be applied to standard mounting (vertical mounting).

- (i) Dedicated horizontal mounting models have 80% of mechanical durability, electrical durability and switching frequency, compared with standard mounting models.
- (ii) For magnetic starters, the ultimate operational current of thermal overload relay slightly changes.
- (iii) The following models are available; type SC-03 to SC-5-1, type SW-03 to 5-1, type SH-4, 5, type SC-N1 to N10, type SW-N1 to N10, type SC-N1/G to N3/G, type SC-N1/SE to N4/SE, type SB-□N.
- (iv) Dedicated horizontal mounting models of type SC-03/G to SC-5-1/G, type SC-N11 to SC-N16, type SB-□NB are not available.

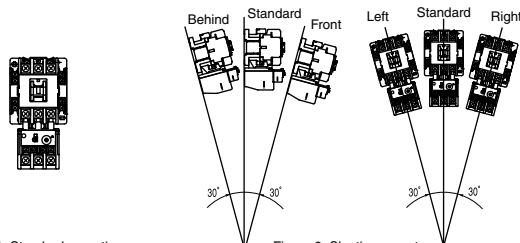


Figure 1 Standard mounting

Figure 2 Slanting mount