

1.6 Selection Table of Contactors

1.6.1 Non-Reversing Contactors

Type **S-N□**, **SD-N□**

Ordering Designation

Model name S-N10
 Coil designation (See page 13) AC400V
 If required special aux. contact (never specify for standard). 1B
 Complete type designation S-N10*AC400V*1B

Note: Mark*indicates a blank space.

Table 1.6.1

Rated operational current AC-3	Rated motor capacity 3-phase AC-2 & AC-3				Model name		Standard aux. contacts	Finger protection terminal cover	Additional auxiliary contact block						
	220 -240V (A)	380 -440V (A)	220 -240V (kW)	380 -440V (kW)	500V (kW)	690V (kW)			AC operated	DC operated	UN-AX2(CX)	UN-AX4(CX)	UN-AX11(CX)	UN-AX80	UN-AX150
11	9	2.5	4	4	4	S-N10 S-N10CX* S-N10(1B) S-N10CX*(1B)	—	—	1	—	—	—	—	—	—
13	12	3.5	5.5	5.5	5.5	S-N11 S-N11CX* S-N11(1B) S-N11CX*(1B)	—	SD-N11 SD-N11CX* SD-N11(1B) SD-N11CX*(1B)	1	—	—	—	2	—	—
13	12	3.5	5.5	5.5	5.5	S-N12 S-N12CX* S-N12(2A) S-N12CX*(2A)	—	SD-N12 SD-N12CX* SD-N12(2A) SD-N12CX*(2A)	1	1	—	—	—	—	—
18	16	4.5	7.5	7.5	7.5	S-N18 S-N18CX*	—	—	—	—	—	—	—	—	—
22	22	5.5	11	11	7.5	S-N20 S-N20CX* S-N20(2A) S-N20CX*(2A)	—	—	1	1	—	—	—	—	—
22	22	5.5	11	11	7.5	S-N21 S-N21CX*	—	SD-N21 SD-N21CX*	2	2	—	—	—	—	—
30	30	7.5	15	15	11	S-N25 S-N25CX*	—	—	2	2	—	—	—	—	—
40	40	11	18.5	18.5	15	S-N35 S-N35CX*	—	SD-N35 SD-N35CX*	2	2	—	—	—	—	—
55	50	15	22	22	22	S-N50 S-N50CX*	—	SD-N50	2	2	—	—	—	—	—
65	62	18.5	30	37	30	S-N65 S-N65CX*	—	SD-N65	2	2	—	—	—	—	—
85	85	22	45	45	45	S-N80	—	SD-N80	2	2	—	—	—	—	—
105	105	30	55	55	55	S-N95	—	SD-N95	2	2	—	—	Max. 2	—	—
125	120	37	60	60	60	S-N125	—	SD-N125	2	2	—	—	—	—	—
150	150	45	75	90	90	S-N150	—	SD-N150	2	2	—	—	—	—	—
180	180	55	90	110	110	S-N180	—	—	2	2	—	—	—	—	—
250	250	75	132	132	132	S-N220	—	SD-N220	2	2	—	—	—	Max. 2	—
300	300	90	160	160	200	S-N300	—	SD-N300	2	2	—	—	—	—	—
400	400	125	220	225	250	S-N400	—	SD-N400	2	2	—	—	—	—	—
630	630	190	330	330	330	S-N600	—	SD-N600	2	2	—	—	—	—	—
800	800	220	440	500	500	S-N800	—	SD-N800	2	2	—	—	—	—	1

Note: 1 "CX" denotes with finger protection terminal covers.



S-N10CX



S-N21



SD-N65



S-N220



SD-N400



S-N800

1.6.2 Reversing Contactors

Type **S-2xN□,SD-2xN□**

Ordering Designation

Model name S-2xN95
 Coil designation (See page 13) AC400V
 Complete type designation S-2xN95*AC400V

Note: Mark*indicates a blank space.

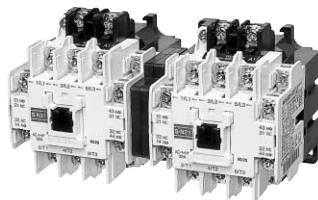
Table 1.6.2

Rated operational current AC-3		Rated motor capacity 3-phase AC-2 & AC-3				Model name		Standard aux. contacts		Additional auxiliary contact block(max).				
220 -240V (A)	380 -440V (A)	220 -240V (kW)	380 -440V (kW)	500V (kW)	690V (kW)	AC operated	DC operated	NO	NC	UN- AX2(CX)	UN- AX4(CX)	UN- AX11(CX)	UN- AX80	UN- AX150
11	9	2.5	4	4	4	S-2xN10 S-2xN10CX ¹	—	2	2	2	2	2	—	—
13	12	3.5	5.5	5.5	5.5	S-2xN11 S-2xN11CX ¹	SD-2xN11 SD-2xN11CX ¹	2	2	—	—	—	—	—
18	16	4.5	7.5	7.5	7.5	S-2xN18 S-2xN18CX ¹	—	4	4	—	—	—	—	—
22	22	5.5	11	11	7.5	S-2xN20 S-2xN20CX ¹	—	2	2	—	—	—	—	—
22	22	5.5	11	11	7.5	S-2xN21 S-2xN21CX ¹	SD-2xN21 SD-2xN21CX ¹	4	4	—	—	—	—	—
30	30	7.5	15	15	11	S-2xN25 S-2xN25CX ¹	—	4	4	2	2	2	—	—
40	40	11	18.5	18.5	15	S-2xN35 S-2xN35CX ¹	SD-2xN35 SD-2xN35CX ¹	4	4	—	—	—	—	—
55	50	15	22	22	22	S-2xN50 S-2xN50CX ¹	SD-2xN50	4	4	—	—	—	—	—
65	62	18.5	30	37	30	S-2xN65 S-2xN65CX ¹	SD-2xN65	4	4	—	—	—	—	—
85	85	22	45	45	45	S-2xN80	SD-2xN80	4	4	—	—	—	2	—
105	105	30	55	55	55	S-2xN95	SD-2xN95	4	4	—	—	—	—	—
125	120	37	60	60	60	S-2xN125	SD-2xN125	4	4	—	—	—	—	—
150	150	45	75	90	90	S-2xN150	SD-2xN150	6	6	—	—	—	—	—
180	180	55	90	110	110	S-2xN180	—	6	6	—	—	—	—	—
250	250	75	132	132	132	S-2xN220	SD-2xN220	6	6	—	—	—	—	2
300	300	90	160	160	200	S-2xN300	SD-2xN300	6	6	—	—	—	—	—
400	400	125	220	225	250	S-2xN400	SD-2xN400	6	6	—	—	—	—	—
630	630	190	330	330	330	S-2xN600	SD-2xN600	8	8	—	—	—	—	—
800	800	220	440	500	500	S-2xN800	SD-2xN800	8	8	—	—	—	—	—

Note:1 "CX" denotes with finger protection terminal covers.



S-2xN11



S-2xN21



S-2xN150

1.6.3 Non-Reversing Mechanically Latched Contactors


Type **SL-N□**, **SLD-N□**

Ordering Designation

Model name SL-N35
 Closing coil designation¹ AC200V
 Tripping coil designation¹ DC100V
 Complete type designation SL-N35*MC-AC200V*MT-DC100V

Note: Mark*indicates a blank space.
 1. See Table 1.6.3 (2).

Table 1.6.3 (1)

Rated operational current AC-3	Rated motor capacity 3-phase AC-2 & AC-3						Model name		Standard free aux. contacts 	Additional auxiliary contact block			
	220 -240V (A)	380 -440V (A)	220 -240V (kW)	380 -440V (kW)	500V (kW)	690V (kW)	AC operated (closing coil)	DC operated (closing coil)		UN-AX11	UN-AX80	UN-AX150	UN-AX600
22	22	5.5	11	11	7.5	SL-N21	SLD-N21	2	2	Max.2	—	—	—
40	40	11	18.5	18.5	15	SL-N35	SLD-N35	2	2				
55	50	15	22	22	22	SL-N50	SLD-N50	2	2				
65	62	18.5	30	37	30	SL-N65	SLD-N65	2	2				
85	85	22	45	45	45	SL-N80	SLD-N80	1	2	—	Max.2	—	—
105	105	30	55	55	55	SL-N95	SLD-N95	1	2				
125	120	37	60	60	60	SL-N125	SLD-N125	1	2	—	—	Max.2	—
150	150	45	75	90	90	SL-N150	SLD-N150	1	2				
250	250	75	132	132	132	SL-N220	SLD-N220	1	2				
300	300	90	160	160	200	SL-N300	SLD-N300	1	2				
400	400	125	220	225	250	SL-N400	SLD-N400	1	2	—	—	—	1
630	630	190	330	330	330	SL-N600	SLD-N600	1	2				
800	800	220	440	500	500	SL-N800	SLD-N800	1	2				

• Coil Ratings (Closing & Tripping)

Table 1.6.3 (2)

Ordering designation	Applicable voltage
AC100V	100-127VAC 50/60Hz
AC200V	200-240VAC 50/60Hz
AC300V	260-350VAC 50/60Hz
AC400V	380-440VAC 50/60Hz
AC500V	460-550VAC 50/60Hz
DC24V	24VDC
DC48V	48VDC
DC100V	100-110VDC
DC125V	120-125VDC
DC200V	200-220VDC

• Precautions

- Minimum energising time, both for closing and tripping must be set longer than the followings.
 SL(D)-N21 to N220 : 0.3 sec.
 SL(D)-N300 to N800 : 0.5 sec.
- Make sure never to over lap the energising time for closing and tripping.



SL-N35



SL-N150

1.6.4 Reversing Mechanically Latched Contactors

(Components for Automatic Transfer Switches)

Type **SL-2xN□**, **SLD-2xN□**, **SLxS-N□**

Ordering Designation

• Mechanically latched & mechanically latched contactor	
Model name	SL-2xN35
Closing coil designation in normal left side ¹	AC200V
Tripping coil designation in normal left side ¹	DC100V
Closing coil designation in standby right side ¹	DC100V
Tripping coil designation in standby right side ¹	AC200V
Complete type designation	SL-2xN35*MC1-AC200V*MT1-DC100V*MC2-DC100V*MT2-AC200V
• Mechanically latched & normal contactor	
Model name	SLxS-N150
Closing coil designation in normal left side ¹	AC200V
Tripping coil designation in normal left side ¹	AC100V
Coil designation in standby right side ²	AC100V
Complete type designation	SLxS-N150*MC1-AC200V*MT1-AC100V*AC100V

Notes: Mark*indicates a blank space.

1. See Table 1.6.3(2) 2. See Table 1.5.2

Table 1.6.4

Rated operational current AC-3		Rated motor capacity 3-phase AC-2 & AC-3				Model name mechanically latched & mechanically latched			Mechanically latched & normal			Additional auxiliary contact block		
220	380	220	380			AC operated	DC operated	AC operated	UN-AX11	UA-AX80	UA-AX150			
-240V	-440V	-240V	-440V	500V	690V	(closing coil)	(closing coil)	(closing coil)						
(A)	(A)	(kW)	(kW)	(kW)	(kW)									
22	22	5.5	11	11	7.5	SL-2xN21	SLD-2xN21	—	Max.2	—	—			
40	40	11	18.5	18.5	15	SL-2xN35	SLD-2xN35	—						
55	50	15	22	22	22	SL-2xN50	SLD-2xN50	—						
65	62	18.5	30	37	30	SL-2xN65	SLD-2xN65	SLxS-N65						
85	85	22	45	45	45	SL-2xN80	SLD-2xN80	—	—	Max.2	—			
105	105	30	55	55	55	SL-2xN95	SLD-2xN95	—						
125	120	37	60	60	60	SL-2xN125	SLD-2xN125	SLxS-N125						
150	150	45	75	90	90	SL-2xN150	SLD-2xN150	SLxS-N150	—	—	Max.2			
250	250	75	132	132	132	SL-2xN220	SLD-2xN220	SLxS-N220						
300	300	90	160	160	200	SL-2xN300	SLD-2xN300	SLxS-N300						
400	400	125	220	225	250	SL-2xN400	SLD-2xN400	SLxS-N400						
630	630	190	330	330	330	SL-2xN600	SLD-2xN600	—	—	—	—			
800	800	220	440	500	500	SL-2xN800	SLD-2xN800	—						

• Precautions

- Minimum energising time both for closing and tripping must be set longer than the followings.

SL(D)-2xN21 to N220, SLxS-N65 to N220 : 0.3 sec.

SL(D)-2xN300 to N800, SLxS-N300 and N400 : 0.5 sec.

Make sure never to overlap the energising time for closing and tripping.



SL-2xN35

1.7 Selection Table of Direct-On-Line Motor Starters

1.7.1 Non-Reversing Motor Starters without Enclosure (IP 00)

Type MSO-N□

Ordering Designation

Model name MSO-N50KP
 Heater designation of overload relay 42A
 Main circuit voltage 440VAC
 Coil designation (See page 13) AC200V
 Complete type designation MSO-N50KP*42A*440V*AC200V

Note: Mark*indicates a blank space.

Table 1.7.1

Rated operational current AC-3		Rated motor capacity 3-phase AC-2 & AC-3				Model name		Aux. contacts	Heater designation of overload relay (ordering designation)
220 -240V (A)	380 -440V (A)	220 -240V (kW)	380 -440V (kW)	500V (kW)	690V (kW)	Phase failure protection type	Two heater type		
11	9	2.5	4	4	4	MSO-N10KP MSO-N10CXKP ¹	MSO-N10	1 —	0.12A, 0.17A, 0.24A, 0.35A, 0.5A, 0.7A 0.9A, 1.3A, 1.7A, 2.1A, 2.5A, 3.6A, 5A 6.6A, 9A
13	12	3.5	5.5	5.5	5.5	MSO-N11KP MSO-N11CXKP ¹	MSO-N11	1 —	
13	12	3.5	5.5	5.5	5.5	MSO-N12KP MSO-N12CXKP ¹	MSO-N12	1 1	15A
18	16	4.5	7.5	7.5	7.5	MSO-N18KP MSO-N18CXKP ¹	MSO-N18	— —	19A
22	22	5.5	11	11	7.5	MSO-N20KP MSO-N20CXKP ¹	MSO-N20	1 1	0.24A, 0.35, 0.5A, 0.7A, 0.9A, 1.3A, 1.7A, 2.1A, 2.5A, 3.6A, 5A, 6.6A, 9A, 11A, 15A
22	22	5.5	11	11	7.5	MSO-N21KP MSO-N21CXKP ¹	MSO-N21	2 2	
30	30	7.5	15	15	11	MSO-N25KP MSO-N25CXKP ¹	MSO-N25	2 2	15A, 22A, 29A, 35A, 42A, 54A
40	40	11	18.5	18.5	15	MSO-N35KP MSO-N35CXKP ¹	MSO-N35	2 2	
55	50	15	22	22	22	MSO-N50KP MSO-N50CXKP ¹	MSO-N50	2 2	42A, 54A, 67A, 82A, 105A
65	62	18.5	30	37	30	MSO-N65KP MSO-N65CXKP ¹	MSO-N65	2 2	
85	85	22	45	45	45	MSO-N80KP	MSO-N80	2 2	82A, 105A, 125A, 150A
105	105	30	55	55	55	MSO-N95KP	MSO-N95	2 2	
125	120	37	60	60	60	MSO-N125KP	MSO-N125	2 2	105A, 125A, 150A, 180A, 250A
150	150	45	75	90	90	MSO-N150KP	MSO-N150	2 2	
180	180	55	90	110	110	MSO-N180KP	MSO-N180	2 2	
250	250	75	132	132	132	MSO-N220KP	MSO-N220	2 2	
300	300	90	160	160	200	MSO-N300KP	MSO-N300	2 2	
400	400	125	220	225	250	MSO-N400KP	MSO-N400	2 2	

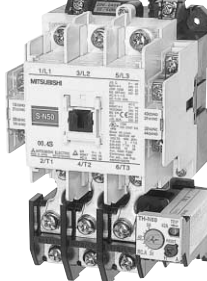
Note: 1. "CX" denotes with finger protection terminal covers.



MSO-N11CXKP



MSO-N18KP



MSO-N50



MSO-N125KP



MSO-N220

1.7.2 Reversing Motor Starters without Enclosure (IP 00)

Type MSO-2xN□

Ordering Designation

Model name MSO-2xN35KP
 Heater designation of overload relay 29A
 Main circuit voltage 440VAC
 Coil designation (See page 13) AC200V

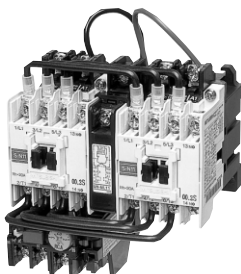
Complete type designation MSO-2xN35KP*29A*440V*AC200V

Note: Mark*indicates a blank space.

Table 1.7.2

Rated operational current AC-3		Rated motor capacity 3-phase AC-2 & AC-3				Model name		Free aux. contacts	Heater designation of overload relay
220 -240V (A)	380 -440V (A)	220 -240V (kW)	380 -440V (kW)	500V (kW)	690V (kW)	Phase failure protection type	Two heater type		(ordering designation)
11	9	2.5	4	4	4	MSO-2xN10KP MSO-2xN10CXKP ¹	MSO-2xN10	2 —	0.12A, 0.17A, 0.24A, 0.35A, 0.5A, 0.7A
13	12	3.5	5.5	5.5	5.5	MSO-2xN11KP MSO-2xN11CXKP ¹	MSO-2xN11	2 —	0.9A, 1.3A, 1.7A, 2.1A, 2.5A, 3.6A, 5A
18	16	4.5	7.5	7.5	7.5	MSO-2xN18KP MSO-2xN18CXKP ¹	MSO-2xN18	4 2	6.6A, 9A, 11A
22	22	5.5	11	11	7.5	MSO-2xN20KP MSO-2xN20CXKP ¹	MSO-2xN20	2 —	0.24A, 0.35A, 0.5A, 0.7A, 0.9A, 1.3A, 1.7A, 2.1A, 2.5A, 3.6A, 5A, 6.6A, 9A, 11A, 15A
22	22	5.5	11	11	7.5	MSO-2xN21KP MSO-2xN21CXKP ¹	MSO-2xN21	4 2	
30	30	7.5	15	15	11	MSO-2xN25KP MSO-2xN25CXKP ¹	MSO-2xN25	4 2	22A 29A 35A
40	40	11	18.5	18.5	15	MSO-2xN35KP MSO-2xN35CXKP ¹	MSO-2xN35	4 2	
55	50	15	22	22	22	MSO-2xN50KP MSO-2xN50CXKP ¹	MSO-2xN50	4 2	15A, 22A, 29A, 35A, 42A, 54A
65	62	18.5	30	37	30	MSO-2xN65KP MSO-2xN65CXKP ¹	MSO-2xN65	4 2	
85	85	22	45	45	45	MSO-2xN80KP	MSO-2xN80	4 2	67A
105	105	30	55	55	55	MSO-2xN95KP	MSO-2xN95	4 2	82A 95A
125	120	37	60	60	60	MSO-2xN125KP	MSO-2xN125	4 2	42A, 54A, 67A, 82A, 105A
150	150	45	75	90	90	MSO-2xN150KP	MSO-2xN150	6 4	
180	180	55	90	110	110	MSO-2xN180KP	MSO-2xN180	6 4	82A, 105A, 125A, 150A
250	250	75	132	132	132	MSO-2xN220KP	MSO-2xN220	6 4	
300	300	90	160	160	200	MSO-2xN300KP	MSO-2xN300	6 4	180A, 210A
400	400	125	220	225	250	MSO-2xN400KP	MSO-2xN400	6 4	

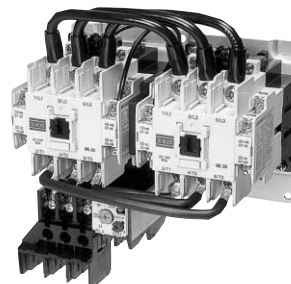
Note:1. "CX" denotes with finger protection terminal covers.



MSO-2xN11KP



MSO-2xN18



MSO-2xN35



MSO-2xN150KP