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DATA SHEET

SC & SW SERIES CONTACTORS

Based on D&C Catalog 19th Edition Revised No. 01

■ **Types and ratings/Non-reversing, Open**

Frame size		**03**	**0**	**05**	**4-0**	Further information
Max. motor capacity (kW)	200–240V	2.5	3.5	3.5	4.5	
	380–440V	4	5.5	5.5	7.5	
AC-3, IEC 60947-4-1	500–550V	4	5.5	5.5	7.5	
	600–660V	4	5.5	5.5	7.5	
Operational current (A)	200–240V	11	13	13	18	
	380–440V	9	12	12	16	
	500–550V	7	9	9	13	
	600–660V	5	7	7	9	
Operational current (A)	AC-1	20	20	20	25	
Conventional free air thermal current (A)		20	20	20	25	
Auxiliary contact arrangement		1NO 1NC	1NO 1NC	1NO+1NC 2NO, 2NC	1NO 1NC	
Standard	Contactor Starter	SC-03 SW-03/3H	SC-0 SW-0/3H	SC-05 SW-05/3H	SC-4-0 SW-4-0/3H	
DC operated	Contactor Starter	SC-03/G SW-03/G3H	SC-0/G SW-0/G3H	SC-05/G SW-05/G3H	SC-4-0/G SW-4-0/G3H	
OFF-delay release *1	Contactor Starter	SC-03/G+SZ-DE□ SW-03/G3H+ SZ-DE□	SC-0/G+SZ-DE□ SW-0/G3H+ SZ-DE□	SC-05/G+SZ-DE□ SW-05/G3H+ SZ-DE□	SC-4-0/G+SZ-DE□ SW-4-0/G3H+ SZ-DE□	
With extra pick-up operating coil	Contactor Starter	SC-03/U SW-03/U3H	SC-0/U SW-0/U3H	SC-05/U SW-05/U3H	SC-4-0/U SW-4-0/U3H	
Mechanical latch AC operated	Contactor Starter	SC-03/V –	SC-0/V –	SC-05/V –	SC-4-0/V –	
Mechanical latch DC operated	Contactor Starter	SC-03/VG –	SC-0/VG –	SC-05/VG –	SC-4-0/VG –	
Heavy starting duty	Contactor Starter	– SW-03/3L	– SW-0/3L	– SW-05/3L	– SW-4-0/3L	
With quick operating overload relay	Contactor Starter	– SW-03/3Q	– SW-0/3Q	– SW-05/3Q	– SW-4-0/3Q	
With phase-loss protective device	Contactor Starter	– SW-03/2E	– SW-0/2E	– SW-05/2E	– SW-4-0/2E	
With phase-loss and phase sequence protective device *2	Contactor Starter	– SW-03/2E+QE-□0N	– SW-0/2E+QE-□0N	– SW-05/2E+QE-□0N	– SW-4-0/2E+QE-□0N	
For single-phase resistance load	Contactor Starter	SC-03+SZ-SP1 –	SC-0+SZ-SP1 –	SC-05+SZ-SP1 –	SC-4-0+SZ-SP2 –	
With quick counection terminals	Contactor starter	SC-03Y SW-03Y	SC-0Y SW-0Y	SC-05Y SW-05Y	– –	
Thermal overload relay On-contactor mounting						
Standard		TR-0N/3	TR-0N/3	TR-0N/3	TR-5-1N/3	
Long time operation		TR-0NL/3	TR-0NL/3	TR-0NL/3	TR-5-1NL/3	
Quick operation		TR-0NQ	TR-0NQ	TR-0NQ	TR-5-1NQ	
Phase-loss protection		TK-0N	TK-0N	TK-0N	TK-5-1N	

Note: *1 Replace the □ mark in the type number by the operating voltage code.
100V AC: 100, 110V AC: 110, 200V AC: 200, 220V AC: 220
*2 Replace the □ mark in the type number by the operating voltage code.
200-220V AC: 2, 380-415V AC: 4

■ **Types and ratings/Non-reversing, Open**

Frame size		**4-1**	**5-1**	**N1**	**N2**	Further information
Max. motor capacity (kW)	200–240V	5.5	5.5	7.5	11	
	380–440V	11	11	15	18.5	
AC-3, IEC 60947-4-1	500–550V	11	11	15	18.5	
	600–660V	7.5	7.5	11	15	
Operational current (A)	200–240V	22	22	32	40	
	380–440V	22	22	32	40	
	500–550V	17	17	24	29	
	600–660V	9	9	15	19	
Operational current (A)	AC-1	32	32	50	60	
Conventional free air thermal current (A)		32	32	50	60	
Auxiliary contact arrangement		1NO 1NC	1NO+1NC, 2NO 2NO+2NC, 2NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactor	SC-4-1	SC-5-1	SC-N1	SC-N2	
	Starter	SW-4-1/3H	SW-5-1/3H	SW-N1/3H	SW-N2/3H	
DC operated	Contactor	SC-4-1/G	SC-5-1/G	SC-N1/G	SC-N2/G	
	Starter	SW-4-1/G3H	SW-5-1/G3H	SW-N1/G3H	SW-N2/G3H	
OFF-delay release *1	Contactor	SC-4-1/G+SZ-DE□	SC-5-1/G+SZ-DE□	SC-N1/G+ SZ-N1/GDE	SC-N2/G+ SZ-N1/GDE	
	Starter	SW-4-1/G3H+ SZ-DE□	SW-5-1/G3H+ SZ-DE□	SW-N1/G3H+ SZ-N1/GDE	SW-N2/G3H+ SZ-N1/GDE	
With extra pick-up operating coil	Contactor	SC-4-1/U	SC-5-1/U	SC-N1/U	SC-N2/U	
	Starter	SW-4-1/U3H	SW-5-1/U3H	SW-N1/U3H	SW-N2/U3H	
Mechanical latch AC operated	Contactor	SC-4-1/V	SC-5-1/V	SC-N1/VS	SC-N2/VS	
	Starter	–	–	–	–	
Mechanical latch DC operated	Contactor	SC-4-1/VG	SC-5-1/VG	SC-N1/VS	SC-N2/VS	
	Starter	–	–	–	–	
Heavy starting duty	Contactor	–	–	–	–	
	Starter	SW-4-1/3L	SW-5-1/3L	SW-N1/3L	SW-N2/3L	
With quick operating overload relay	Contactor	–	–	–	–	
	Starter	SW-4-1/3Q	SW-5-1/3Q	SW-N1/3Q	SW-N2/3Q	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-4-1/2E	SW-5-1/2E	SW-N1/2E	SW-N2/2E	
With phase-loss and phase sequence protective device *2	Contactor	–	–	–	–	
	Starter	SW-4-1/2E+QE-□0N	SW-5-1/2E+QE-□0N	SW-N1/2E+QE-□0N	SW-N2/2E+QE-□0N	
For single-phase resistance load	Contactor	SC-4-1+SZ-SP2	SC-5-1+SZ-SP2	SC-N1+SZ-SP3	SC-N2+SZ-SP3	
	Starter	–	–	–	–	
With quick counection terminals	Contactor	–	SC-5-1Y	–	–	
	starter	–	SW-5-1Y	–	–	
Thermal overload relay On-contactor mounting						
Standard		TR-5-1N/3	TR-5-1N/3	TR-N2/3	TR-N2/3	
Long time operation		TR-5-1NL/3	TR-5-1NL/3	TR-N2L/3	TR-N2L/3	
Quick operation		TR-5-1NQ	TR-5-1NQ	TR-N2Q	TR-N2Q	
Phase-loss protection		TK-5-1N	TK-5-1N	TK-N2	TK-N2	

Note: *1 Replace the □ mark in the type number by the operating voltage code.
100V AC: 100, 110V AC: 110, 200V AC: 200, 220V AC: 220
*2 Replace the □ mark in the type number by the operating voltage code.
200-220V AC: 2, 380-415V AC: 4

■ **Types and ratings/Non-reversing, Open**

Frame size		N2S	N3	N4	N5	Further information
Max. motor capacity (kW)	200–240V	15	18.5	22	30	
	380–440V	22	30	40	55	
AC-3, IEC 60947-4-1	500–550V	25	37	37	55	
	600–660V	22	30	37	55	
Operational current (A)	200–240V	50	65	80	105	
	380–440V	50	65	80	105	
	500–550V	38	60	60	85	
	600–660V	26	38	44	64	
Operational current (A)	AC-1	80	100	135	150	
Conventional free air thermal current (A)		80	100	135	150	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactor	SC-N2S	SC-N3	SC-N4	SC-N5	
	Starter	SW-N2S/3H	SW-N3/3H	SW-N4/3H	SW-N5/3H	
DC operated	Contactor	SC-N2S/G	SC-N3/G	SC-N4/SE	SC-N5	
	Starter	SW-N2S/G3H	SW-N3/G3H	SW-N4/SE3H	SW-N5/3H	
OFF-delay release	Contactor	SC-N2S/G+ SZ-N2S/GDE	SC-N3/G+ SZ-N2S/GDE	SC-N4/SE+ SZ-N5/DE	SC-N5+ SZ-5N/DE	
	Starter	SW-N2S/G3H+ SZ-N2S/GDE	SW-N3/G3H+ SZ-N2S/GDE	SW-N4/SE3H+ SZ-N5/SEDE	SW-N5/3H+ SZ-N5/DE	
With extra pick-up *1 operating coil	Contactor	SC-N2S/U	SC-N3/U	SC-N4/U	–	
	Starter	SW-N2S/U3H	SW-N3/U3H	SW-N4/U3H	–	
Mechanical latch AC operated	Contactor	SC-N2S/VS	SC-N3/VS	SC-N4/VS	SC-N5/VS	
	Starter	–	–	–	–	
Mechanical latch DC operated	Contactor	SC-N2S/VS	SC-N3/VS	SC-N4/VS	SC-N5/VS	
	Starter	–	–	–	–	
Heavy starting duty	Contactor	–	–	–	–	
	Starter	SW-N2S/3L	SW-N3/3L	SW-N4/3L	SW-N5/3L	
With quick operating overload relay	Contactor	–	–	–	–	
	Starter	SW-N2S/3Q	SW-N3/3Q	SW-N4/3Q	SW-N5/3Q	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N2S/2E	SW-N3/2E	SW-N4/2E	SW-N5/2E	
With phase-loss and phase sequence protective device *2	Contactor	–	–	–	–	
	Starter	SW-N2S/2E+QE-□0N	SW-N3/2E+QE-□0N	SW-N4/2E+QE-□0N	SW-N5/2E+QE-□0N	
For single-phase resistance load	Contactor	SC-N2S+SZ-SP4	SC-N3+SZ-SP4	SC-N4+SZ-SP5	SC-N5+SZ-SP5	
	Starter	–	–	–	–	
Thermal overload relay On-contactor mounting						
Standard		TR-N3/3	TR-N3/3	TR-N5/3	TR-N5/3	
Long time operation		TR-N3L/3	TR-N3L/3	TR-N5L/3	TR-N5L/3	
Quick operation		TR-N3Q	TR-N3Q	TR-N5Q	TR-N5Q	
Phase-loss protection		TK-N3	TK-N3	TK-N5	TK-N5	

Note: *1 The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.
*2 Replace the □ mark in the type nanber by the operating voltage code.
200-220V AC: 2, 380-415V AC: 4

■ **Types and ratings/Non-reversing, Open**

Frame size		N6	N7	N8	N10	Further information
Max. motor capacity (kW) AC-3, CEC 60947-4-1	200–240V	37	45	55	65	
	380–440V	60	75	90	110	
	500–550V	60	75	130	132	
	600–660V	60	90	132	132	
Operational current (A)	200–240V	125	150	180	220	
	380–440V	125	150	180	220	
	500–550V	90	120	180	200	
	600–660V	72	103	150	150	
Operational current (A)	AC-1	150	200	260	260	
Conventional free air thermal current (A)		150	200	260	260	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactor	SC-N6	SC-N7	SC-N8	SC-N10	
	Starter	SW-N6/3H	SW-N7/3H	SW-N8/3H	SW-N10/3H	
DC operated	Contactor	SC-N6	SC-N7	SC-N8	SC-N10	
	Starter	SW-N6/3H	SW-N7/3H	SW-N8/3H	SW-N10/3H	
OFF-delay release	Contactor	SC-N6+SZ-N6/DE	SC-N7+SZ-N6/DE	SC-N8+SZ-N8/DE	SC-N10+SZ-N8/DE	
	Starter	SW-N6/3H+ SZ-N6/DE	SW-N7/3H+ SZ-N6/DE	SW-N8/3H+ SZ-N8/DE	SW-N10/3H+ SZ-N8/DE	
With extra pick-up operating coil *1	Contactor	–	–	–	–	
	Starter	–	–	–	–	
Mechanical latch/ AC operated	Contactor	SC-N6/VS	SC-N7/VS	SC-N8/VS	SC-N10/VS	
	Starter	–	–	–	–	
Mechanical latch/ DC operated	Contactor	SC-N6/VS	SC-N7/VS	SC-N8/VS	SC-N10/VS	
	Starter	–	–	–	–	
Heavy starting duty	Contactor	–	–	–	–	
	Starter	SW-N6/3L	SW-N7/3L	SW-N8/3L	SW-N10/3L	
With quick operating overload relay	Contactor	–	–	–	–	
	Starter	–	–	–	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N6/2E	SW-N7/2E	SW-N8/2E	SW-N10/2E	
With phase-loss and phase sequence protective device *2	Contactor	–	–	–	–	
	Starter	SW-N6/2E+QE-□0N	SW-N7/2E+QE-□0N	SW-N8/2E+QE-□0N	SW-N10/2E+QE-□0N	
For single-phase resistance load	Contactor	SC-N6+SZ-SP7	SC-N7+SZ-SP7	SC-N8+SZ-SP8	SC-N10+SZ-SP8	
	Starter	–	–	–	–	
Thermal overload relay On-contactor mounting						
Standard		TR-N6/3	TR-N7/3	TR-N8/3	TR-N10/3	
Long time operation		TR-N6L/3	TR-N7L/3	TR-N10L/3	TR-N10L/3	
Quick operation		–	–	–	–	
Phase-loss protection		TK-N6	TK-N7	TK-N8	TK-N10	

Note: *1 The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.
*2 Replace the □ mark in the type number by the operating voltage code.
200-220V AC: 2, 380-415V AC: 4

■ **Types and ratings/Non-reversing, Open**

Frame size		N11	N12	N14	N16	Further information
Max. motor capacity (kW)	200–240V	90	120	180	220	
	380–440V	160	220	315	440	
AC-3, IEC 60947-4-1	500–550V	160	250	400	500	
	600–660V	200	300	480	500	
Operational current (A)	200–240V	300	400	600	800	
	380–440V	300	400	600	800	
	500–550V	230	360	600	720	
	600–660V	230	360	600	630	
Operational current (A)	AC-1	350	450	660	800	
Conventional free air thermal current (A)		350	450	660	800	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactor	SC-N11	SC-N12	SC-N14	SC-N16	
	Starter	SW-N11/3H	SW-N12/3H	SW-N14/3H	–	
DC operated	Contactor	SC-N11	SC-N12	SC-N14	SC-N16	
	Starter	SW-N11/3H	SW-N12/3H	SW-N14/3H	–	
OFF-delay release	Contactor	SC-N11+SZ-N11/DE	SC-N12+SZ-N11/DE	SC-N14+SZ-N14/DE	–	
	Starter	SW-N11/3H+ SZ-N11/DE	SW-N12/3H+ SZ-N11/DE	SW-N14/3H+ SZ-N14/DE	– –	
With extra pick-up *1	Contactor	–	–	–	–	
operating coil	Starter	–	–	–	–	
Mechanical latch	Contactor	SC-N11/VS	SC-N12/VS	SC-N14/VS	–	
AC operated	Starter	–	–	–	–	
Mechanical latch	Contactor	SC-N11/VS	SC-N12/VS	SC-N14/VS	–	
DC operated	Starter	–	–	–	–	
Heavy starting duty	Contactor	–	–	–	–	
	Starter	SW-N11/3L	SW-N12/3L	SW-N14/3L	–	
With quick operating	Contactor	–	–	–	–	
overload relay	Starter	–	–	–	–	
With phase-loss	Contactor	–	–	–	–	
protective device	Starter	SW-N11/2E	SW-N12/2E	SW-N14/2E	–	
With phase-loss and	Contactor	–	–	–	–	
phase sequence	Starter	SW-N11/2E+QE-□0N	SW-N12/2E+QE-□0N	SW-N14/2E+QE-□0N	–	
protective device *2						
For single-phase	Contactor	SC-N11+SZ-SP9	SC-N12+SZ-SP9	SC-N14+SZ-SP10	SC-N16+SZ-SP10	
resistance load	Starter	–	–	–	–	
Thermal overload relay						
On-contactor mounting						
Standard		TR-N12/3	TR-N12/3	TR-N14/3	–	
Long time operation		TR-N12L/3	TR-N12L/3	TR-N14L/3	–	
Quick operation		–	–	–	–	
Phase-loss protection		TK-N12	TK-N12	TK-N14	–	

Note: *1 The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.
*2 Replace the □ mark in the type number by the operating voltage code.
200-220V AC: 2, 380-415V AC: 4

■ **Types and ratings/Non-reversing, Enclosed**

Frame size		**03**	**0**	**05**	**4-0**	Further information
Max. motor capacity (kW)	200–240V	2.5	3.5	3.5	4.5	
	380–440V	4	5.5	5.5	7.5	
AC-3, IEC 60947-4-1	500–550V	4	5.5	5.5	7.5	
	600–660V	4	5.5	5.5	7.5	
Operational current (A)	200–240V	11	13	13	18	
	380–440V	9	12	12	16	
	500–550V	7	9	9	13	
	600–660V	5	7	7	9	
Operational current (A)	AC-1	20	20	20	25	
Conventional free air thermal current (A)		20	20	20	25	
Auxiliary contact arrangement		1NO 1NC	1NO 1NC	1NO+1NC 2NO, 2NC	1NO 1NC	
Standard	Contactor	SC-03C	SC-0C	SC-05C	SC-4-0C	
	Starter	SW-03C/3H	SW-0C/3H	SW-05C/3H	SW-4-0C/3H	
With extra pick-up operating coil	Contactor	–	–	–	–	
	Starter	SW-03C/U3H	SW-0C/U3H	SW-05C/U3H	SW-4-0C/U3H	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-03C/2E	SW-0C/2E	SW-05C/2E	SW-4-0C/2E	
With ON-OFF/reset pushbuttons	Contactor	–	–	–	–	
	Starter	SW-03P/3H	SW-0P/3H	SW-05P/3H	SW-4-0P/3H	
Dust tight/light corrosion resistant	Contactor	–	–	–	–	
	Starter	SW-03LG/3H	SW-0LG/3H	SW-05LG/3H	SW-4-0LG/3H	
Thermal overload relay		*See page 01/12.* Same as the open types				

Frame size		**4-1**	**5-1**	**N1**	**N2**	Further information
Max. motor capacity (kW)	200–240V	5.5	5.5	7.5	11	
	380–440V	11	11	15	18.5	
AC-3, IEC 60947-4-1	500–550V	11	11	15	18.5	
	600–660V	7.5	7.5	11	15	
Operational current (A)	200–240V	22	22	32	40	
	380–440V	22	22	32	40	
	500–550V	17	17	24	29	
	600–660V	9	9	15	19	
Operational current (A)	AC-1	32	32	50	60	
Conventional free air thermal current (A)		32	32	50	60	
Auxiliary contact arrangement		1NO 1NC	1NO+1NC 2NO, 2NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactor	SC-4-1C	SC-5-1C	SC-N1C	SC-N2C	
	Starter	SW-4-1C/3H	SW-5-1C/3H	SW-N1C/3H	SW-N2C/3H	
With extra pick-up operating coil	Contactor	–	–	–	–	
	Starter	SW-4-1C/U3H	SW-5-1C/U3H	SW-N1C/U3H	SW-N2C/U3H	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-4-1C/2E	SW-5-1C/2E	SW-N1C/2E	SW-N2C/2E	
With ON-OFF pushbuttons	Contactor	–	–	–	–	
	Starter	–	–	SW-N1P/3H	SW-N2P/3H	
With ON-OFF/reset pushbuttons	Contactor	–	–	–	–	
	Starter	SW-4-1P/3H	SW-5-1P/3H	SW-N1PB/3H	SW-N2PB/3H	
Dust tight/light corrosion resistant	Contactor	–	–	–	–	
	Starter	SW-4-1LG/3H	SW-5-1LG/3H	SW-N1LG/3H	SW-N2LG/3H	
Thermal overload relay		*See page 01/13.* Same as the open types				

■ Types and ratings/Non-reversing, Enclosed

Frame size		N2S	N3	N4	N5	Further information
Max. motor capacity (kW)	200–240V	15	18.5	22	30	
	380–440V	22	30	40	55	
AC-3, IEC 60947-4-1	500–550V	25	37	37	55	
	600–660V	22	30	37	55	
Operational current (A)	200–240V	50	65	80	105	
	380–440V	50	65	80	105	
	500–550V	38	60	60	85	
	600–660V	26	38	44	64	
Operational current (A)	AC-1	80	100	135	150	
Conventional free air thermal current (A)		80	100	135	150	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactor	SC-N2SC	SC-N3C	SC-N4C	SC-N5C	
	Starter	SW-N2SC/3H	SW-N3C/3H	SW-N4C/3H	SW-N5C/3H	
With extra pick-up operating coil *	Contactor	–	–	–	–	
	Starter	SW-N2SC/U3H	SW-N3C/U3H	SW-N4C/SE3H	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N2SC/2E	SW-N3C/2E	SW-N4C/2E	SW-N5C/2E	
With ON-OFF pushbuttons	Contactor	–	–	–	–	
	Starter	SW-N2SP/3H	SW-N3P/3H	–	–	
With ON-OFF and reset pushbuttons	Contactor	–	–	–	–	
	Starter	SW-N2SPB/3H	SW-N3PB/3H	SW-N4PB/3H	SW-N5PB/3H	
Dust tight/light corrosion resistant	Contactor	–	–	–	–	
	Starter	SW-N2SLG/3H	SW-N3LG/3H	SW-N4LG/3H	SW-N5LG/3H	
Thermal overload relay		*See page 01/14.* Same as the open types				

Frame size		N6	N7	N8	N10	Further information
Max. motor capacity (kW)	200–240V	37	45	55	65	
	380–440V	60	75	90	110	
AC-3, IEC 60947-4-1	500–550V	60	75	130	132	
	600–660V	60	90	132	132	
Operational current (A)	200–240V	125	150	180	220	
	380–440V	125	150	180	220	
	500–550V	90	120	180	200	
	600–660V	72	103	150	150	
Operational current (A)	AC-1	150	200	260	260	
Conventional free air thermal current (A)		150	200	260	260	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactor	SC-N6C	SC-N7C	SC-N8C	SC-N10C	
	Starter	SW-N6C/3H	SW-N7C/3H	SW-N8C/3H	SW-N10C/3H	
With extra pick-up operating coil *	Contactor	–	–	–	–	
	Starter	–	–	–	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N6C/2E	SW-N7C/2E	SW-N8C/2E	SW-N10C/2E	
With ON-OFF pushbuttons	Contactor	–	–	–	–	
	Starter	–	–	–	–	
With ON-OFF and reset pushbuttons	Contactor	–	–	–	–	
	Starter	SW-N6PB/3H	–	SW-N8PB/3H	SW-N10PB/3H	
Dust tight/light corrosion resistant	Contactor	–	–	–	–	
	Starter	SW-N6LG/3H	SW-N7LG/3H	SW-N8LG/3H	SW-N10LG/3H	
Thermal overload relay		*See page 01/15.* Same as the open types				

Note: * The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.

■ **Types and ratings/Non-reversing, Enclosed**

Frame size		N11	N12	N14	N16	Further information
Max. motor capacity (kW)	200–240V	90	120	180	–	
	380–440V	160	220	315	–	
AC-3, IEC 60947-4-1	500–550V	160	250	400	–	
	600–660V	200	300	480	–	
Operational current (A)	200–240V	300	400	600	–	
	380–440V	300	400	600	–	
	500–550V	230	360	600	–	
	600–660V	230	360	600	–	
Operational current (A)	AC-1	350	450	660	–	
Conventional free air thermal current (A)		350	450	660	–	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	– –	
Standard	Contactor	SC-N11C	SC-N12C	SC-N14C	–	
	Starter	SW-N11C/3H	SW-N12C/3H	SW-N14C/3H	–	
With extra pick-up operating coil *	Contactor	–	–	–	–	
	Starter	–	–	–	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N11C/2E	SW-N12C/2E	SW-N14C/2E	–	
With ON-OFF pushbuttons	Contactor	–	–	–	–	
	Starter	–	–	–	–	
With ON-OFF and reset pushbuttons	Contactor	–	–	–	–	
	Starter	–	–	–	–	
Dust tight/light corrosion resistant	Contactor	–	–	–	–	
	Starter	–	–	–	–	
Thermal overload relay		*See page 01/16.* Same as the open types				

Note: * The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.

■ Types and ratings/Reversing, Open

Frame size		03	0	05	4-0	Further information
Max. motor capacity (kW) AC-3, IEC 60947-4-1	200–240V	2.5	3.5	3.5	4.5	
	380–440V	4	5.5	5.5	7.5	
	500–550V	4	5.5	5.5	7.5	
	600–660V	4	5.5	5.5	7.5	
Operational current (A)	200–240V	11	13	13	18	
	380–440V	9	12	12	16	
	500–550V	7	9	9	13	
	600–660V	5	7	7	9	
Conventional free air thermal current (A)		20	20	20	25	
Auxiliary contact arrangement		1NC×2 1NO×2	1NC×2 1NO×2	(1NO+1NC)×2 2NC×2	1NC×2 1NO×2	
Standard	Contactor	SC-03RM	SC-0RM	SC-05RM	SC-4-0RM	
	Starter	SW-03RM/3H	SW-0RM/3H	SW-05RM/3H	SW-4-0RM/3H	
DC operated	Contactor	SC-03RM/G	SC-0RM/G	SC-05RM/G	SC-4-0RM/G	
	Starter	SW-03RM/G3H	SW-0RM/G3H	SW-05RM/G3H	SW-4-0RM/G3H	
Mechanical latch AC operated	Contactor	SC-03RM/V	SC-0RM/V	SC-05RM/V	SC-4-0RM/V	
	Starter	–	–	–	–	
Mechanical latch DC operated	Contactor	SC-03RM/VG	SC-0RM/VG	SC-05RM/VG	SC-4-0RM/VG	
	Starter	–	–	–	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-03RM/2E	SW-0RM/2E	SW-05RM/2E	SW-4-0RM/2E	
Thermal overload relay On-contactor mounting						
Standard		TR-0N/3	TR-0N/3	TR-0N/3	TR-5-1N/3	
Phase-loss protection		TK-0N	TK-0N	TK-0N	TK-5-1N	

Frame size		4-1	5-1	N1	N2	Further information
Max. motor capacity (kW) AC-3, IEC 60947-4-1	200–240V	5.5	5.5	7.5	11	
	380–440V	11	11	15	18.5	
	500–550V	11	11	15	18.5	
	600–660V	7.5	7.5	11	15	
Operational current (A)	200–240V	22	22	32	40	
	380–440V	22	22	32	40	
	500–550V	17	17	24	29	
	600–660V	9	9	15	19	
Conventional free air thermal current (A)		32	32	50	60	
Auxiliary contact arrangement		1NC×2 1NO×2	(1NO+1NC)×2,2NC×2 (2NO+2NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contactor	SC-4-1RM	SC-5-1RM	SC-N1RM	SC-N2RM	
	Starter	SW-4-1RM/3H	SW-5-1RM/3H	SW-N1RM/3H	SW-N2RM/3H	
DC operated	Contactor	SC-4-1RM/G	SC-5-1RM/G	SC-N1RM/G	SC-N2RM/G	
	Starter	SW-4-1RM/G3H	SW-5-1RM/G3H	SW-N1RM/G3H	SW-N2RM/G3H	
Mechanical latch AC operated	Contactor	SC-4-1RM/V	SC-5-1RM/V	SC-N1RM/VS	SC-N2RM/VS	
	Starter	–	–	–	–	
Mechanical latch DC operated	Contactor	SC-4-1RM/VG	SC-5-1RM/VG	SC-N1RM/VS	SC-N2RM/VS	
	Starter	–	–	–	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-4-1RM/2E	SW-5-1RM/2E	SW-N1RM/2E	SW-N2RM/2E	
Thermal overload relay On-contactor mounting						
Standard		TR-5-1N/3	TR-5-1N/3	TR-N2/3	TR-N2/3	
Phase-loss protection		TK-5-1N	TK-5-1N	TK-N2	TK-N2	

Note: Auxiliary contact arrangements indicate the ones for types except mechanical latch types.

■ **Types and ratings/Reversing, Open**

Frame size		N2S	N3	N4	N5	Further information
Max. motor capacity (kW) AC-3, IEC 60947-4-1	200–240V	15	18.5	22	30	
	380–440V	22	30	40	55	
	500–550V	25	37	37	55	
	600–660V	22	30	37	55	
Operational current (A)	200–240V	50	65	80	105	
	380–440V	50	65	80	105	
	500–550V	38	60	60	85	
	600–660V	26	38	44	64	
Conventional free air thermal current (A)		80	100	135	150	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contactor	SC-N2SRM	SC-N3RM	SC-N4RM	SC-N5RM	
	Starter	SW-N2SRM/3H	SW-N3RM/3H	SW-N4RM/3H	SW-N5RM/3H	
DC operated	Contactor	SC-N2SRM/G	SC-N3RM/G	SC-N4RMSE	SC-N5RM	
	Starter	SW-N2SRM/G3H	SW-N3RM/G3H	SW-N4RM/SE3H	SW-N5RM/3H	
Mechanical latch AC operated	Contactor	SC-N2SRM/VS	SC-N3RM/VS	SC-N4RM/VS	SC-N5RM/VS	
	Starter	–	–	–	–	
Mechanical latch DC operated	Contactor	SC-N2SRM/VS	SC-N3RM/VS	SC-N4RM/VS	SC-N5RM/VS	
	Starter	–	–	–	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N2SRM/2E	SW-N3RM/2E	SW-N4RM/2E	SW-N5RM/2E	
Thermal overload relay On-contactor mounting						
Standard		TR-N3/3	TR-N3/3	TR-N5/3	TR-N5/3	
Phase-loss protection		TK-N3	TK-N3	TK-N5	TK-N5	

Frame size		N6	N7	N8	N10	Further information
Max. motor capacity (kW) AC-3, IEC 60947-4-1	200–240V	37	45	55	65	
	380–440V	60	75	90	110	
	500–550V	60	75	130	132	
	600–660V	60	90	132	132	
Operational current (A)	200–240V	125	150	180	220	
	380–440V	125	150	180	220	
	500–550V	90	120	180	200	
	600–660V	72	103	150	150	
Conventional free air thermal current (A)		150	200	260	260	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contactor	SC-N6RM	SC-N7RM	SC-N8RM	SC-N10RM	
	Starter	SW-N6RM/3H	SW-N7RM/3H	SW-N8RM/3H	SW-N10RM/3H	
DC operated	Contactor	SC-N6RM	SC-N7RM	SC-N8RM	SC-N10RM	
	Starter	SW-N6RM/3H	SW-N7RM/3H	SW-N8RM/3H	SW-N10RM/3H	
Mechanical latch AC operated	Contactor	SC-N6RM/VS	SC-N7RM/VS	SC-N8RM/VS	SC-N10RM/VS	
	Starter	–	–	–	–	
Mechanical latch DC operated	Contactor	SC-N6RM/VS	SC-N7RM/VS	SC-N8RM/VS	SC-N10RM/VS	
	Starter	–	–	–	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N6RM/2E	SW-N7RM/2E	SW-N8RM/2E	SW-N10RM/2E	
Thermal overload relay On-contactor mounting						
Standard		TR-N6/3	TR-N7/3	TR-N8/3	TR-N10/3	
Phase-loss protection		TK-N6	TK-N7	TK-N8	TK-N10	

Note: Auxiliary contact arrangements indicate the ones for types except mechanical latch types.

■ **Types and ratings/Reversing, Open**

Frame size		N11	N12	N14	N16	Further information
Max. motor capacity (kW) AC-3, IEC 60947-4-1	200–240V	90	120	180	–	
	380–440V	160	220	315	–	
	500–550V	160	250	400	–	
	600–660V	200	300	480	–	
Operational current (A)	200–240V	300	400	600	–	
	380–440V	300	400	600	–	
	500–550V	230	360	600	–	
	600–660V	230	360	600	–	
Conventional free air thermal current (A)		350	450	660	–	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	– –	
Standard	Contactor	SC-N11RM	SC-N12RM	SC-N14RM	–	
	Starter	SW-N11RM/3H	SW-N12RM/3H	SW-N14RM/3H	–	
DC operated	Contactor	SC-N11RM	SC-N12RM	SC-N14RM	–	
	Starter	SW-N11RM/3H	SW-N12RM/3H	SW-N14RM/3H	–	
Mechanical latch AC operated	Contactor	SC-N11RM/VS	SC-N12RM/VS	SC-N14RM/VS	–	
	Starter	–	–	–	–	
Mechanical latch DC operated	Contactor	SC-N11RM/VS	SC-N12RM/VS	SC-N14RM/VS	–	
	Starter	–	–	–	–	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N11RM/2E	SW-N12RM/2E	SW-N14RM/2E	–	
Thermal overload relay On-contactor mounting						
Standard		TR-N11/3	TR-N12/3	TR-N14/3	–	
Phase-loss protection		TK-N11	TK-N12	TK-N14	–	

Note: Auxiliary contact arrangements indicate the ones for types except mechanical latch types.

■ Types and ratings/Reversing, Enclosed

Frame size		03	0	05	4-0	Further information
Max. motor capacity (kW)	200–240V	2.5	3.5	3.5	4.5	
	380–440V	4	5.5	5.5	7.5	
AC-3, IEC 60947-4-1	500–550V	4	5.5	5.5	7.5	
	600–660V	4	5.5	5.5	7.5	
Operational current (A)	200–240V	11	13	13	18	
	380–440V	9	12	12	16	
	500–550V	7	9	9	13	
	600–660V	5	7	7	9	
Conventional free air thermal current (A)		20	20	20	25	
Auxiliary contact arrangement		1NC×2 1NO×2	1NC×2 1NO×2	(1NO+1NC)×2 2NC×2	1NC×2 1NO×2	
Standard	Contactor	SC-03RMC	SC-0RMC	SC-05RMC	SC-4-0RMC	
	Starter	SW-03RMC/3H	SW-0RMC/3H	SW-05RMC/3H	SW-4-0RMC/3H	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-03RMC/2E	SW-0RMC/2E	SW-05RMC/2E	SW-4-0RMC/2E	
With ON-OFF pushbuttons	Contactor	–	–	–	–	
	Starter	–	–	–	–	
Thermal overload relay On-contactor mounting						
Standard		TR-0N/3	TR-0N/3	TR-0N/3	TR-5-1N/3	
Phase-loss protection		TK-0N	TK-0N	TK-0N	TK-5-1N	

Frame size		4-1	5-1	N1	N2	Further information
Max. motor capacity (kW)	200–240V	5.5	5.5	7.5	11	
	380–440V	11	11	15	18.5	
AC-3, IEC 60947-4-1	500–550V	11	11	15	18.5	
	600–660V	7.5	7.5	11	15	
Operational current (A)	200–240V	22	22	32	40	
	380–440V	22	22	32	40	
	500–550V	17	17	24	29	
	600–660V	9	9	15	19	
Conventional free air thermal current (A)		32	32	50	60	
Auxiliary contact arrangement		1NC×2 1NO×2	(1NO+1NC)×2 2NC×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contactor	SC-4-1RMC	SC-5-1RMC	SC-N1RMC	SC-N2RMC	
	Starter	SW-4-1RMC/3H	SW-5-1RMC/3H	SW-N1RMC/3H	SW-N2RMC/3H	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-4-1RMC/2E	SW-5-1RMC/2E	SW-N1RMC/2E	SW-N2RMC/2E	
With ON-OFF pushbuttons	Contactor	–	–	–	–	
	Starter	–	–	–	–	
Thermal overload relay On-contactor mounting						
Standard		TR-5-1N/3	TR-5-1N/3	TR-N2/3	TR-N2/3	
Phase-loss protection		TK-5-1N	TK-5-1N	TK-N2	TK-N2	

■ **Types and ratings/Reversing, Enclosed**

Frame size		N2S	N3	N4	N5	Further information
Max. motor capacity (kW)	200–240V	15	18.5	22	30	
	380–440V	22	30	40	55	
AC-3, IEC 60947-4-1	500–550V	25	37	37	55	
	600–660V	22	30	37	55	
Operational current (A)	200–240V	50	65	80	105	
	380–440V	50	65	80	105	
	500–550V	38	60	60	85	
	600–660V	26	38	44	64	
Conventional free air thermal current (A)		80	100	135	150	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contactor	SC-N2SRMC	SC-N3RMC	SC-N4RMC	SC-N5RMC	
	Starter	SW-N2SRMC/3H	SW-N3RMC/3H	SW-N4RMC/3H	SW-N5RMC/3H	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N2SRMC/2E	SW-N3RMC/2E	SW-N4RMC/2E	SW-N5RMC/2E	
With ON-OFF pushbuttons	Contactor	–	–	–	–	
	Starter	–	–	–	–	
Thermal overload relay On-contactor mounting						
Standard		TR-N3/3	TR-N3/3	TR-N5/3	TR-N5/3	
Phase-loss protection		TK-N3	TK-N3	TK-N5	TK-N5	

Frame size		N6	N7	N8	N10	Further information
Max. motor capacity (kW)	200–240V	37	45	55	65	
	380–440V	60	75	90	110	
AC-3, IEC 60947-4-1	500–550V	60	75	130	132	
	600–660V	60	90	132	132	
Operational current (A)	200–240V	125	150	180	220	
	380–440V	125	150	180	220	
	500–550V	90	120	180	200	
	600–660V	72	103	150	150	
Conventional free air thermal current (A)		150	200	260	260	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contactor	SC-N6RMC	SC-N7RMC	SC-N8RMC	SC-N10RMC	
	Starter	SW-N6RMC/3H	SW-N7RMC/3H	SW-N8RMC/3H	SW-N10RMC/3H	
With phase-loss protective device	Contactor	–	–	–	–	
	Starter	SW-N6RMC/2E	SW-N7RMC/2E	SW-N8RMC/2E	SW-N10RMC/2E	
With ON-OFF pushbuttons	Contactor	–	–	–	–	
	Starter	–	–	–	–	
Thermal overload relay On-contactor mounting						
Standard		TR-N6/3	TR-N7/3	TR-N8/3	TR-N10/3	
Phase-loss protection		TK-N6	TK-N7	TK-N8	TK-N10	

■ Ratings

Conforming to IEC 60947-4-1, EN 60947-4-1, VDE 0660

Contactor Type	Starter Type	Max. motor capacity (kW) 200V | 240V	380V | 440V	500V | 550V	600V | 660V	Rated operational current (A) 200V | 240V	380V | 440V	500V | 550V	600V | 660V	Thermal current (A) *1
SC-03	**SW-03/3H**	2.5	4	4	4	11	9	7	5	20
SC-0	**SW-0/3H**	3.5	5.5	5.5	5.5	13	12	9	7	20
SC-05	**SW-05/3H**	3.5	5.5	5.5	5.5	13	12	9	7	20
SC-4-0	**SW-4-0/3H**	4.5	7.5	7.5	7.5	18	16	13	9	25
SC-4-1	**SW-4-1/3H**	5.5	11	11	7.5	22	22	17	9	32
SC-5-1	**SW-5-1/3H**	5.5	11	11	7.5	22	22	17	9	32
SC-N1	**SW-N1/3H**	7.5	15	15	11	32	32	24	15	50
SC-N2	**SW-N2/3H**	11	18.5	18.5	15	40	40	29	19	60
SC-N2S	**SW-N2S/3H**	15	22	25	22	50	50	38	26	80
SC-N3	**SW-N3/3H**	18.5	30	37	30	65	65	60	38	100
SC-N4	**SW-N4/3H**	22	40	37	37	80	80	60	44	135
SC-N5	**SW-N5/3H**	30	55	55	55	105	105	85	64	150
SC-N6	**SW-N6/3H**	37	60	60	60	125	125	90	72	150
SC-N7	**SW-N7/3H**	45	75	75	90	150	150	120	103	200
SC-N8	**SW-N8/3H**	55	90	130	132	180	180	180	150	260
SC-N10	**SW-N10/3H**	65	110	132	132	220	220	200	150	260
SC-N11	**SW-N11/3H**	90	160	160	200	300	300	230	230	350
SC-N12	**SW-N12/3H**	120	220	250	300	400	400	360	360	450
SC-N14	**SW-N14/3H**	180	315	400	480	600	600	600	600	660
SC-N16	–	220	440	500	500	800	800	720	630	800

Note: *1 The values are applied to contactors.

■ Making and breaking capacities

Utilization category	Typical applications		IEC 60947-4-1, EN 60947-4-1, VDE 0660, JIS C 8201-4-1 Making and breaking Ic/Ie	Ur/Ue	cosø or L/R	Making I/Ie	U/Ue	cosø or L/R
AC-1	Non-inductive or slightly inductive loads, resistance furnaces		1.5	1.05	0.8	1.5	1.05	0.8
AC-2	Slip-ring motors: Starting, switching off		4.0	1.05	0.65	4.0	1.05	0.65
AC-3	Squirrel-cage motors:	Ie 100A	8.0	1.05	0.45	10	1.05	0.45
	Starting, switching off duling running	Ie > 100A	8.0	1.05	0.35	10	1.05	0.35
AC-4	Squirrel-cage motors:	Ie 100A	10	1.05	0.45	12	1.05	0.45
	Starting, plugging, inching	Ie > 100A	10	1.05	0.35	12	1.05	0.35
AC-5a	Switching of electric discharge lamp controls		3.0	1.05	0.45	3.0	1.05	0.45
AC-5b	Switching of incandescent lamps		1.5	1.05	*	1.5	1.05	*

Note: *Test to be carried out with an incandescent lamp load.
Ie: Rated operational current Ue: Rated operational voltage I: Current made
U: Voltage before make Ur: Recovery voltage Ic: Current broken

■ Auxiliary contact ratings

Conforming to IEC 60947-5-1, EN 60947-5-1, VDE 0660

Type	Continuous currnet (A)	Make and break capacity at AC (A)	Rated operational current (A) AC Voltage (V)	AC-15 (Ind.load)	AC-12 (Res.load)	DC Voltage (V)	DC-13 (Ind.load)	DC-12 (Res.load)	Minimum voltage and current
SC-03	10	60	100–120	6	10	24	3	5	5V 3mA
to		30	200–240	3	8	48	1.5	3	
SC-N12		15	380–440	1.5	5	110	0.55	2.5	
		12	500–600	1.2	5	220	0.27	1	
SC-N14	10	60	100–120	6	10	24	5	10	24V 10mA
to		60	200–240	6	10	48	1.5	5	
SC-16N		40	380–440	4	10	110	0.55	2.5	
		25	500–600	2.5	10	220	0.27	1	

■ Inching and plugging operations (Conforming to IEC 60947-4-1)

In applications where inching and plugging operations are included the contact wear will be increased. Therefore, it is necessary to select ones having larger frame sizes than in standard applications so as to minimize the needs of maintenance and replacement.

Voltage	Motor ratings Capacity (kW)	Full load current (A)	50% inching operation Electrical durability 100,000 operations	500,000 operations
200V	0.2	1.8	SC-03	SC-03
|	0.4	3.2	SC-03	SC-03
240V	0.75	4.8	SC-03	SC-0, 05
	1.5	8.0	SC-03	SC-4-1, 5-1
	2.2	11.1	SC-4-0	SC-N1
	3.7	17.4	SC-4-1, 5-1	SC-N2
	5.5	26	SC-N1	SC-N3
	7.5	34	SC-N2	SC-N5
	11	48	SC-N2S	SC-N7
	15	65	SC-N4	SC-N8
	18.5	79	SC-N5	SC-N10
	22	93	SC-N6	SC-N11
	30	124	SC-N7	SC-N14
	37	152	SC-N8	SC-N14
	45	180	SC-N10	–
	55	220	SC-N11	–
	75	300	SC-N14	–
380V	0.75	2.4	SC-03	SC-03
|	1.5	4.0	SC-03	SC-03
440V	2.2	5.6	SC-03	SC-4-0
	3.7	8.7	SC-03	SC-4-1, 5-1
	5.5	13	SC-4-0	SC-N1
	7.5	17	SC-4-1, 5-1	SC-N2S
	11	24	SC-N1	SC-N3
	15	32.5	SC-N2	SC-N5
	18.5	39.5	SC-N2S	SC-N6
	22	46.5	SC-N3	SC-N7
	30	62	SC-N4	SC-N8
	37	76	SC-N5	SC-N10
	45	90	SC-N6	SC-N11
	55	110	SC-N8	SC-N12
	75	150	SC-N10	SC-N14
	90	180	SC-N11	–
	110	220	SC-N12	–
	132	264	SC-N14	–
	150	300	SC-N14	–
	160	320	SC-N14	–

Notes: 1. Inching % = $\frac{\text{No. of inching operations}}{\text{Total No. of switching operations}} \times 100\%$

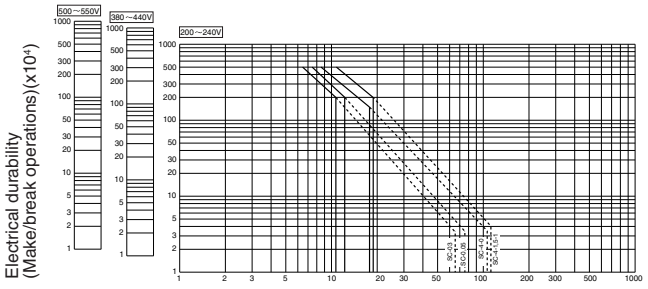
2. Light inching: 50%
Printing machine and similar equipment
Heavy inching: 75 – 100%
Machine tool, hoist and similar equipment (In cases when there are frequent on/off operations involving starting rush current).

■ Standard conditions for operation in service

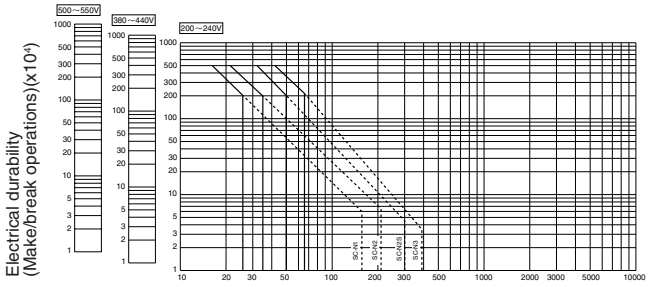
- Temperature range:
  Operating: –5°C to+40°C
  (–5°C to + 55°C inside panel box)
  Storage: –40°C to + 65°C
- Humidity: 45 to 85% RH
- Vibration: 10 to 55Hz, 15m/s^2
- Shock: 50m/s^2
- Altitude: 2000m (6600ft) or lower
- IP40

■ Breaking current and electrical durability

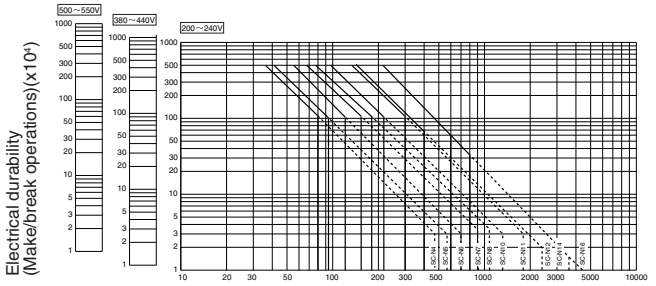
SC-03 to 5-1



SC-N1 to N3

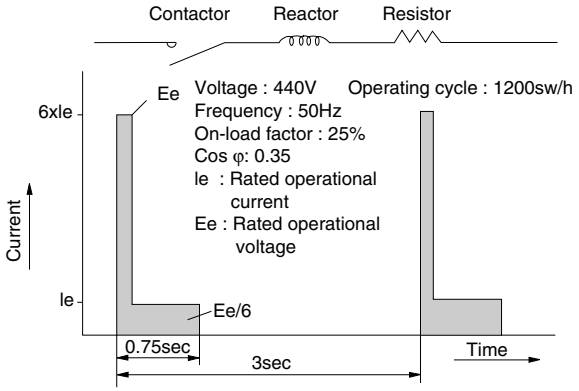


SC-N4 to N16



■ Testing method—Category AC-3

The method of determining the life expectancy and performance is prescribed by IEC as below.



A current equal to six times that of the rated operational current of the starter is applied to the terminals the switch is closed and the current immediately reduced to the rated operational current and then interrupted.

■ Performance data

Frame size	Making capacity I/Ie	Breaking capacity I/Ie	Operating cycles per hour	Voltage	Durability (operations) Electrical *	Mechanical
03, 0, 05	12	10	1,800	200/240V AC 380/440V AC	2 million	10 million
4-0	12	10	1,800	200/240V AC 380/440V AC	1.5 million	10 million
4-1, 5-1	12	10	1,800	200/240V AC 380/440V AC	2 million	10 million
N1 to N3	12	10	1,200	200/240V AC 380/440V AC	2 million	10 million (N1, N2) 5 million (N2S, N3)
N4 to N11	12	10	1,200	200/240V AC 380/440V AC	1 million	5 million
N12, N14	12	10	1,200	200/240V AC 380/440V AC	500,000	5 million
N16	12	10	1,200	200/240V AC 380/440V AC	250,000	2.5 million

Ie: Rated operational currnet. I: Making or breaking current * For delails, refer to page 01/29

■ Coil voltage

● Frame size 03 to N4

Frame size	Coil operating voltage and frequency (AC)	Order voltage	Coil voltage code	Identificaiton by coil color	Wiring
03	24V 50Hz/24–26V 60Hz	AC24V	**E**	White	
0	48V 50Hz/48–52V 60Hz	AC48V	**F**	White	
05	100V 50Hz/100–110V 60Hz	AC100V	**1**	Green (Standard voltage)	
4-0	100–110V 50Hz/110–120V 60Hz	AC110V	**H**	White	
4-1	110–120V 50Hz/120–130V 60Hz	AC120V	**K**	White	
5-1	200V 50Hz/200–220V 60Hz	AC200V	**2**	Yellow (Standard voltage)	A1 A2
N1	200–220V 50Hz/220–240V 60Hz	AC220V	**M**	White	
N2	220–240V 50Hz/240–260V 60Hz	AC240V	**P**	White	
N2S	346–380V 50Hz/380–420V 60Hz	AC380V	**S**	White	
N3	380–400V 50Hz/400–440V 60Hz	AC400V	**4**	Purple (Standard voltage)	
N4	415–440V 50Hz/440–480V 60Hz	AC440V	**T**	White	
	480–500V 50Hz/500–550V 60Hz	AC500V	**5**	White	

Notes: • Other voltages are available in 24 to 600V ranges on request.
• For frame size N1/SE to N4/SE, 24V to 250V AC (24V to 240V DC) is available.
• Use the coil voltage code, not specifying your actual voltage when ordering. Contactors with coil voltage range which corresponds to the voltage code you specified will be shipped from factory.
The above coil operating voltage and frequency (not voltage code) are shown on the products.

● Frame size N5 to N16

Frame size	Coil operating voltage and frequency AC	Coil operating voltage and frequency DC	Order voltage	Coil voltage code	Identificaiton by coil color	Wiring
N5	24–25V 50/60Hz	24V	AC24V *3	**E**	White	
N6	48–50V 50/60Hz	48V	AC48V *3	**F**	White	
N7	100–127V 50/60Hz	100–120V *1	AC100V	**1**	Green (Standard voltage)	A1 A2
N8						
N10	200–250V 50/60Hz	200–240V *2	AC200V	**2**	Yellow (Standard voltage)	
N11	265–347V 50/60Hz	–	AC300V	**3**	White	
N12	380–450V 50/60Hz	–	AC400V	**4**	Purple (Standard voltage)	
N14	460–575V 50/60Hz	–	AC500V	**5**	White	
N16						

Notes: • The coils are AC/DC common use (rated voltage 200V or less)
• Standard rated voltages are 100V, 200V and 400V.
Other voltages are available in 24V to 575V AC (24V to 240V DC) in frame size N5 to N12, also available in 100V to 575V AC (100V to 240V DC) in frame size N14 to N16.
• Use the coil voltage code, not specifying your actual voltage when ordering. Contactors with coil voltage range which corresponds to the voltage code you specified will be shipped from factory.
The above coil operating voltage and frequency (not voltage code) are shown on the products.
*1 The coil voltage from a DC power supply with single phase full-wave rectification will be 100 to 110 V.
*2 The coil voltage from a DC power supply with single phase full-wave rectification will be 200 to 220 V.
*3 The coil voltage 24V and 48V are not available in frame size N14 to N16.

■ Coil characteristics

● Frame size 03 to N4

Frame size	Power consumption Inrush (VA)	Sealed (VA)	Watt loss (W) 200V 50Hz	220V 60Hz	Pick-up voltage (V) 200V 50Hz	220V 60Hz	Drop-out voltage (V) 200V 50Hz	220V 60Hz	Operating time (ms) Coil ON→ Contact ON	Coil OFF→ Contact OFF
03	95	9	2.7	2.8	105–125	116–136	70–98	80–110	9–20	5–16
0	95	9	2.7	2.8	105–125	116–136	70–98	80–110	9–20	5–16
05	95	9	2.7	2.8	105–125	116–136	70–98	80–110	9–20	5–16
4–0	95	9	2.7	2.8	118–136	130–146	75–106	88–120	9–20	5–16
4–1	95	9	2.7	2.8	118–136	130–146	75–106	88–120	9–20	5–16
5–1	95	9	2.7	2.8	118–136	130–146	75–106	88–120	9–20	5–16
N1	135	12.7	3.6	3.8	110–130	120–140	75–105	85–115	10–17	6–17
N2	135	12.7	3.6	3.8	110–130	120–140	75–105	85–115	10–17	6–17
N2S	190	13.4	4.5	5	115–135	130–150	85–110	100–125	10–18	8–18
N3	190	13.4	4.5	5	115–135	130–150	85–110	100–125	10–18	8–18
N4	210	14.4	4.8	5.3	120–140	135–155	70–95	95–120	16–23	7–17

Note: Coil ratings 200V 50Hz, 200 to 220V 60Hz. Operating time is based on 200V 50Hz.

● Frame size N5 to N16, N1/SE to N4/SE (contactor only)

AC operating

Frame size	Power consumption Inrush (VA)	Sealed (VA)	Watt loss (W) 200V 50Hz	220V 60Hz	Pick-up voltage (V) 200V 50/60Hz	Drop-out voltage (V) 200V 50/60Hz	Operating time (ms) Coil ON→ Contact ON	Coil OFF→ Contact OFF
N5	95	4.6	3.2	3.6	140–150	60–100	39–45	27–33
N6	230	5.8	3.4	3.7	140–150	60–100	31–37	30–36
N7	230	5.8	3.4	3.7	140–150	60–100	31–37	30–36
N8	255	6.2	4.7	5.2	140–150	60–100	38–44	31–37
N10	255	6.2	4.7	5.2	140–150	60–100	38–44	31–37
N11	320	6.5	5.6	6	140–150	60–100	43–49	41–47
N12	320	6.5	5.6	6	140–150	60–100	43–49	41–47
N14	460	11	7.8	8.6	140–160	60–100	69–75	56–62
N16	460	11	7.8	8.6	140–160	60–100	69–75	56–62
N1/SE	130	4.2	2.8	3.2	140–150	60–100	21–27	18–24
N2/SE	130	4.2	2.8	3.2	140–150	60–100	21–27	18–24
N2S/SE	160	4.3	2.9	3.3	140–150	60–100	24–30	24–32
N3/SE	160	4.3	2.9	3.3	140–150	60–100	24–30	24–32
N4/SE	95	4.6	3.2	3.6	140–150	60–100	39–45	26–33

Note: Coil ratings 200 to 250V 50/60Hz, 200 to 220V DC. Operating time is based on 200V 50/60Hz.

DC operating

Frame size	Power consumption Inrush (W)	Sealed (W)	Time constant (ms) Sealed	Pick-up voltage (V) 200V DC	Drop-out voltage (V) 200V DC	Operating time (ms) Coil ON→ Contact ON	Coil OFF→ Contact OFF
N5	110	3	1	140–160	40–100	35–41	26–32
N6	275	4	1	140–160	40–100	28–34	27–33
N7	275	4	1	140–160	40–100	28–34	27–33
N8	300	4.5	1	140–160	40–100	33–39	31–37
N10	300	4.5	1	140–160	40–100	33–39	31–37
N11	410	4.6	1	140–160	40–100	38–44	41–47
N12	410	4.6	1	140–160	40–100	38–44	41–47
N14	500	8.8	1	140–160	40–100	64–70	52–57
N16	500	8.8	1	140–160	40–100	64–70	52–57

Note: Coil ratings 200 to 250V 50/60Hz, 200 to 220V DC. Operating time is based on 200V DC.

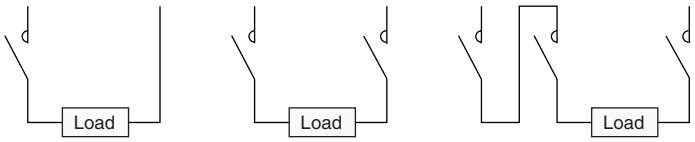
DC applications of magnetic contactors

■ Description

FUJI magnetic contactors in the SC series are normally used in AC circuit applications. However, they may also be used in DC circuits, and in this case their contacts must be connected in series as shown in the diagram.
When used in this manner they will be found to be more economical than using contactors exclusively designed for DC applications. Coils are available for both AC and DC.
If the following ratings are observed the equipment will have an electrical durability of approx. 500,000 operations.

■ Wiring connection

Contacts must be connected in series when the contactors are used in DC applications.



Series contact 1 Series contact 2 Series contact 3

■ Ratings

Type	No. of contacts connected in series	Rated operational current (A)							
		Class DC-1(JEM1038) (Resistive, L/R ≦ 1ms.)				Class DC2, 4,(JEM1038) (DC motor, L/R ≦ 15ms.)			
		24V	48V	110V	220V	24V	48V	110V	220V
SC-03	1	13	13	10	1.2	6	3	2	0.35
	2	13	13	10	6	12	6	4	1.2
	3	15	15	15	15	15	10	8	4
SC-0	1	13	13	10	1.2	6	3	2	0.35
	2	13	13	10	6	12	6	4	1.2
	3	15	15	15	15	15	10	8	4
SC-05	1	13	13	10	1.2	6	3	2	0.35
	2	13	13	10	6	12	6	4	1.2
	3	15	15	15	15	15	10	8	4
SC-4-0	1	16	13	10	1.5	8	6	2	0.35
	2	16	16	12	8	16	12	6	1.5
	3	18	18	18	15	18	18	12	6
SC-4-1	1	20	15	12	2	10	8	3	0.35
	2	20	20	15	10	20	15	8	2
	3	22	22	20	15	22	22	15	8
SC-5-1	1	20	15	12	2	10	8	3	0.35
	2	20	20	15	10	20	15	8	2
	3	22	22	20	15	22	22	15	8
SC-N1	1	25	25	15	2	15	8	3	0.35
	2	25	25	25	20	25	15	8	2
	3	35	35	30	25	35	25	20	8
SC-N2	1	30	30	20	2	20	15	4	0.35
	2	30	30	30	20	30	20	15	3
	3	45	45	40	35	35	30	30	8
SC-N2S	2	60	60	40	20	60	30	20	3.5
	3	60	60	60	40	60	60	60	13
SC-N3	2	80	80	50	20	80	40	20	4
	3	80	80	80	60	80	80	80	20
SC-N4	2	80	80	50	20	80	40	20	4
	3	80	80	80	60	80	80	80	20
SC-N5	2	120	120	80	40	120	80	40	15
	3	120	120	120	120	120	120	120	80
SC-N6	2	120	120	80	40	120	80	40	15
	3	120	120	120	120	120	120	120	80
SC-N7	2	160	160	100	80	160	120	80	40
	3	160	160	160	160	160	160	160	160
SC-N8	2	200	200	160	160	200	160	120	60
	3	200	200	200	200	200	200	200	200
SC-N10	2	200	200	160	160	200	160	120	60
	3	200	200	200	200	200	200	200	200
SC-N11	2	300	300	200	200	300	200	160	80
	3	300	300	300	300	300	300	300	300
SC-N12	2	400	400	330	300	400	300	200	100
	3	400	400	400	400	400	400	400	400
SC-N14	2	600	500	420	300	–	–	–	–
	3	600	600	600	420	–	–	–	–

Standard type non-reversing contactors and starters
Up to 315kW 440 Volts 3-phase
(440kW for contactor only)


KK04-086

SC-5-1


KK05-056

SW-N5/3H

■ Description
The starter consists of a magnetic contactor and a thermal overload relay and is designed for the full voltage starting of 3-phase induction motor.

■ Standards
- Meet the requirements of BS, NEMA, IEC, VDE and JIS.
  The SC series contactors have already been approved by NK, LR, BV for marine use, UL, CSA and TÜV. These contactors can be used universally because of their high efficiency and reliability and are completely safe. Their maximum rated voltage is 660V AC.

■ Features
SC-03 to SC-5-1
- Small frame contactors have such options as additional auxiliary blocks, operation counter unit with snap-on fittings, and coil surge suppressors. Modification can be made quickly and easily on site.
- Bifurcated type auxiliary contacts have a high degree of contact reliability. They can be used in low level circuit of 5V, 3mA.
- Type and rating are indicated on the front of contactor.

Contactors with single button auxiliary contacts (SC-03H to N12H)

SC-N1 to SC-N16
- Adoption of improved contact material and arc-extinguishing grid permits further improvement in breaking efficiency.
- Type and rating are indicated on the front of contactor.
- Auxiliary contact arrangements are available up to 4NO+4NC.
- Can be mounted on 35mm rails to meet the requirements of IEC Standards. (SC-N1 to N3)
- Bifurcated type auxiliary contacts have a high degree of contact reliability. They can be used in low level circuit of 5V, 3mA.(SC-N1 to N12)

SUPER MAGNET(SC-N5 to SC-N16)
- The electronically-controlled SUPER MAGNET has an IC built into the coil circuit. Its operation is based on the "AC input, DC operated" concept.
- Operate on both AC and DC power supply. The operating voltage range has been greatly expanded.
- Coil burning and contact chattering due to voltage fluctuation have been eliminated.
- A built-in surge suppression device prevents surges from occurring on ON-OFF operations.

■ Thermal overload relays
- Superior protection
  The starter is fitted with a TR type thermal overload relay which features ambient temperature compensation, auto-manual resetting, and trip indicator.
- Alarm contacts are available in 1NO+1NC arrangements.
- Optional operation indicating lamp can be fitted on request.

■ **Thermal overload relays :** *See page 01/97.*
■ **Auxiliary contact ratings :** *See page 14.*
■ **Performance data :** *See page 16.*
■ **Coil ratings :** *See page 16.*

■ Types and ratings

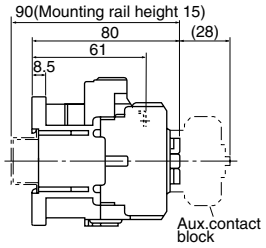
Max. motor capacity (kW) 200V 240V	380V 440V	Rated operation current (A) 200V 240V	380V 440V	Rated thermal current (A)	Auxiliary contact NO	NC	Contactor Open Type	Ordering code	Starter (3-element) Open Type	Ordering code	Enclosed Type	Ordering code
2.5	4	11	9	20	1	–*1	**SC-03**	SC11AA-■10	**SW-03/3H**	SC11AAN-■10T□D	**SW-03C/3H**	SC11CAN-■10T□D
3.5	5.5	13	12	20	1	–*1	**SC-0**	SC13AA-■10	**SW-0/3H**	SC13AAN-■10T□D	**SW-0C/3H**	SC13CAN-■10T□D
3.5	5.5	13	12	20	1	1*2	**SC-05**	SC14AA-■11	**SW-05/3H**	SC14AAN-■11T□D	**SW-05C/3H**	SC14CAN-■11T□D
4.5	7.5	18	16	25	1	–*1	**SC-4-0**	SC18AA-■10	**SW-4-0/3H**	SC18AAN-■10T□D	**SW-4-0C/3H**	SC18CAN-■10T□D
5.5	11	22	22	32	1	–*1	**SC-4-1**	SC19AA-■10	**SW-4-1/3H**	SC19AAN-■10T□D	**SW-4-1C/3H**	SC19CAN-■10T□D
5.5	11	22	22	32	1	1*3	**SC-5-1**	SC20AA-■11	**SW-5-1/3H**	SC20AAN-■11T□D	**SW-5-1C/3H**	SC20CAN-■11T□D
7.5	15	32	32	50	2	2	**SC-N1**	SC25BAA-■22	**SW-N1/3H**	SC25BAAN-■22T□D	**SW-N1C/3H**	SC25BCAN-■22T□D
11	18.5	40	40	60	2	2	**SC-N2**	SC35BAA-■22	**SW-N2/3H**	SC35BAAN-■22T□D	**SW-N2C/3H**	SC35BCAN-■22T□D
15	22	50	50	80	2	2	**SC-N2S**	SC50BAA-■22	**SW-N2S/3H**	SC50BAAN-■22T□D	**SW-N2SC/3H**	SC50BCAN-■22T□D
18.5	30	65	65	100	2	2	**SC-N3**	SC65BAA-■22	**SW-N3/3H**	SC65BAAN-■22T□D	**SW-N3C/3H**	SC65BCAN-■22T□D
22	40	80	80	135	2	2	**SC-N4**	SC80BAA-■22	**SW-N4/3H**	SC80BAAN-■22T□D	**SW-N4C/3H**	SC80BCAN-■22T□D
30	55	105	105	150	2	2	**SC-N5**	SC93BAA-■22	**SW-N5/3H**	SC93BAAN-■22T□D	**SW-N5C/3H**	SC93BCAN-■22T□D
37	60	125	125	150	2	2	**SC-N6**	SC1CBAA-■22	**SW-N6/3H**	SC1CBAAN-■22T□D	**SW-N6C/3H**	SC1CBCAN-■22T□D
45	75	150	150	200	2	2	**SC-N7**	SC1FBAA-■22	**SW-N7/3H**	SC1FBAAN-■22T□D	**SW-N7C/3H**	SC1FBCAN-■22T□D
55	90	180	180	260	2	2	**SC-N8**	SC1JBAA-■22	**SW-N8/3H**	SC1JBAAN-■22T□D	**SW-N8C/3H**	SC1JBCAN-■22T□D
65	110	220	220	260	2	2	**SC-N10**	SC2CBAA-■22	**SW-N10/3H**	SC2CBAAN-■22T□D	**SW-N10C/3H**	SC2CBCAN-■22T□D
90	160	300	300	350	2	2	**SC-N11**	SC3ABAA-■22	**SW-N11/3H**	SC3ABAAN-■22T□D	**SW-N11C/3H**	SC3ABCAN-■22T□D
120	220	400	400	450	2	2	**SC-N12**	SC4ABAA-■22	**SW-N12/3H**	SC4ABAAN-■22T□D	**SW-N12C/3H**	SC4ABCAN-■22T□D
180	315	600	600	660	2	2	**SC-N14**	SC6ABAA-■22	**SW-N14/3H**	SC6ABAAN-■22T□D	**SW-N14C/3H**	SC6ABCAN-■22T□D
220	440	800	800	800	2	2	**SC-N16**	SC8ABAA-■22				

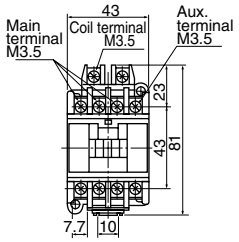
Notes : 1. ■ : Coil voltage code, □ : Thermal overload relay ampere setting range code.
2. *1 Auxiliary contact 1NC is available. *2 Auxiliary contact 2NC or 2NC is available.
*3 Auxiliary contact 2NO, 2NC, or 2NO+2NC is available. For enclosed type, 2NO+2NC is not available.
3. Auxiliary contact 4NO+4NC is available on request for frame size N1 and above.
4. Contactor with enclosure is also available.

■ Dimensions, mm

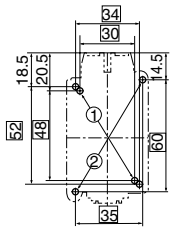
Contactors/Open type

SC-03, SC-0



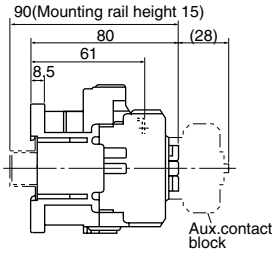


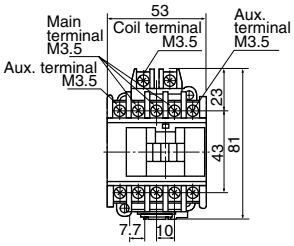
Panel drilling

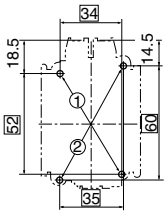


Mass: 0.32kg

SC-05

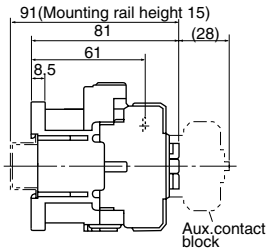


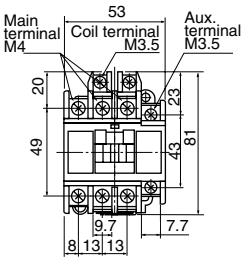


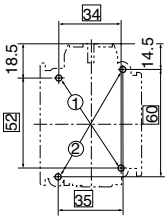


Mass: 0.34kg

SC-4-0, SC-4-1

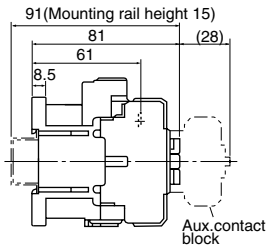


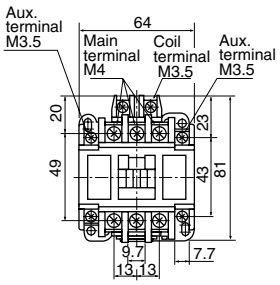


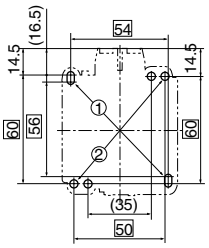


Mass: 0.36kg

SC-5-1

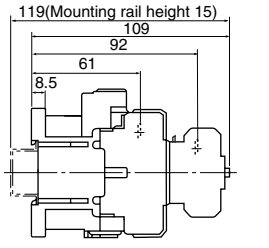


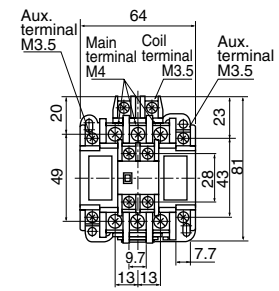


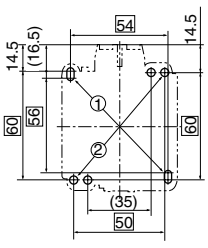


Mass: 0.38kg

SC-5-1





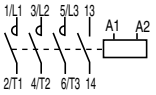


Mass: 0.4kg

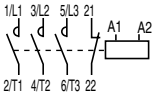
■ Wiring diagrams

Auxiliary contact

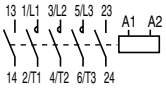
1NO



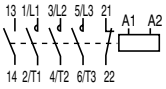
1NC



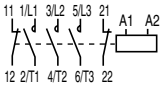
2NO



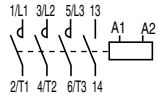
1NO+1NC



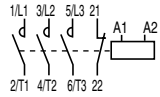
2NC



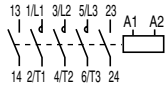
1NO



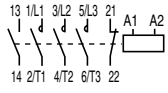
1NC



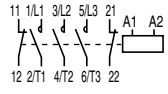
2NO



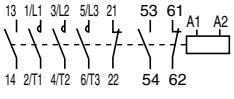
1NO+1NC



2NC



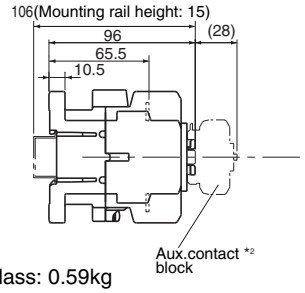
2NO+2NC

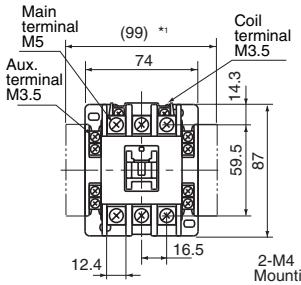


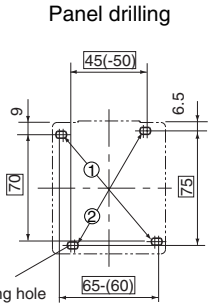
Note: Use the two mounting holes on a diagonal line to mount a contactor.
Mounting holes indicated by ① are compatible with those of SRC type.
Mounting holes indicated by ② are compatible with IEC standard

■ Dimensions, mm
Contactors/Open type

SC-N1, SC-N2

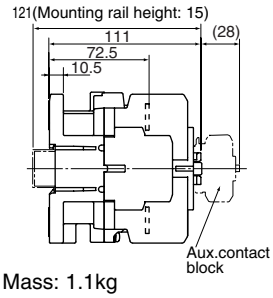


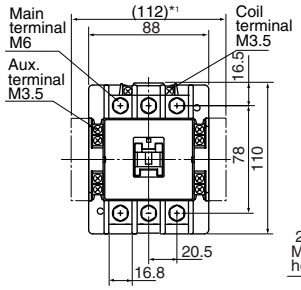


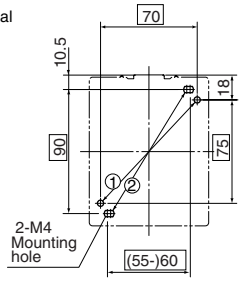


Mass: 0.59kg

SC-N2S, SC-N3

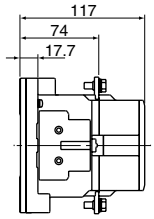


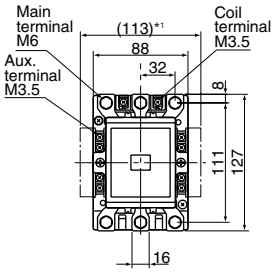


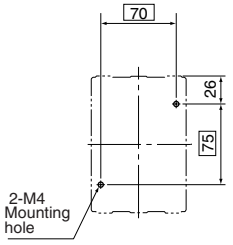


Mass: 1.1kg

SC-N4

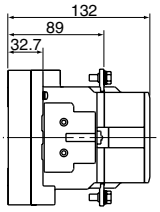


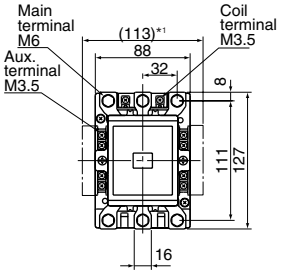


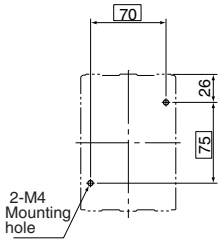


Mass: 1.5kg

SC-N5

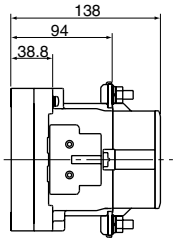


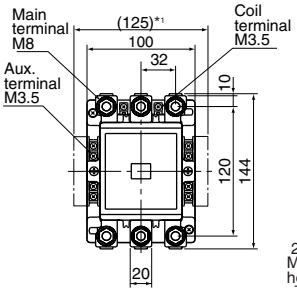


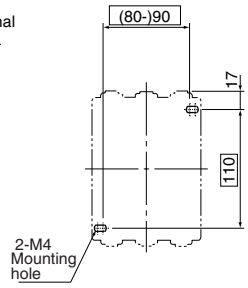


Mass: 1.8kg

SC-N6

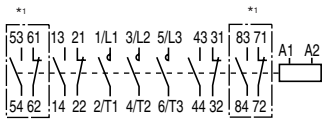






Mass: 2.4kg

■ Wiring diagrams
SC-N1 to SC-N16

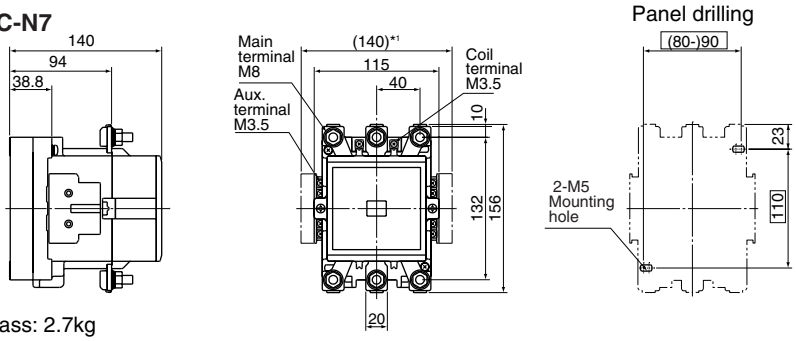


*1 In case of auxiliary contact 4NO+4NC

Note: • Use the two mounting holes on a diagonal line to mount a contactor.
Mounting holes indicated by ① are compatible with those of SRC type.
Mounting holes indicated by ② are compatible with IEC standard
*1 For two side mounting aux. contact blocks mounted
*2 For front mounting aux. contact blocks mounted

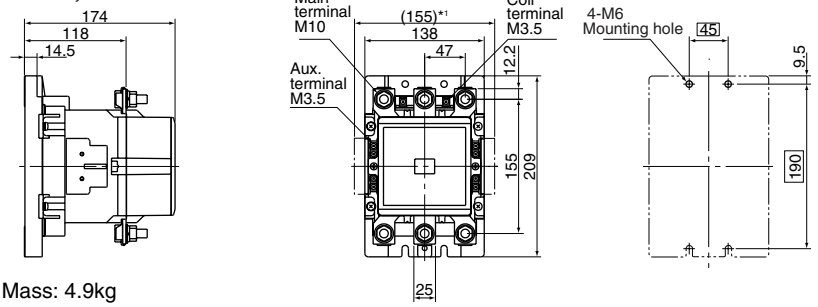
■ **Dimensions, mm**
Contactors/Open type

SC-N7



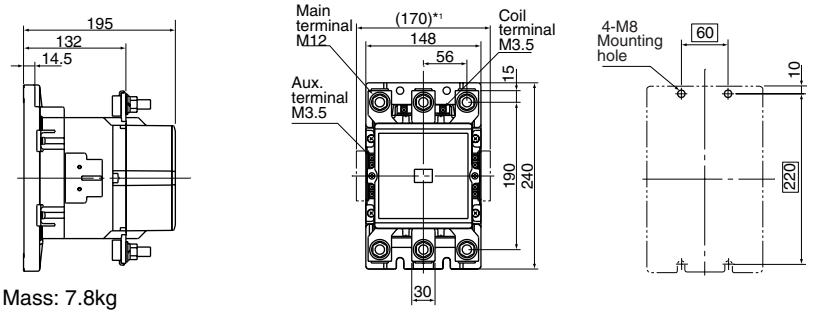
Mass: 2.7kg

SC-N8, SC-N10



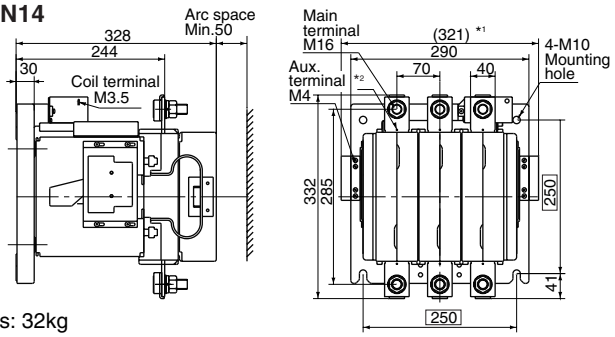
Mass: 4.9kg

SC-N11, SC-N12



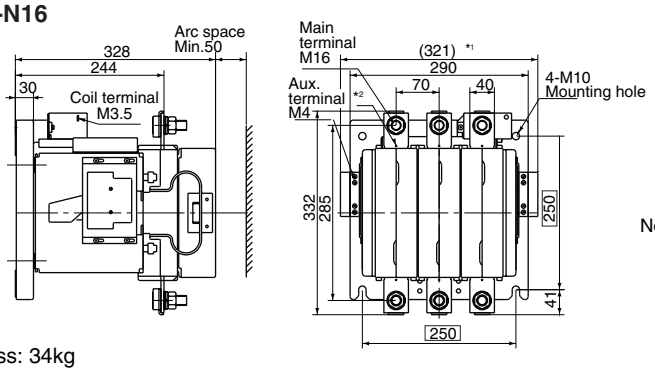
Mass: 7.8kg

SC-N14



Mass: 32kg

SC-N16



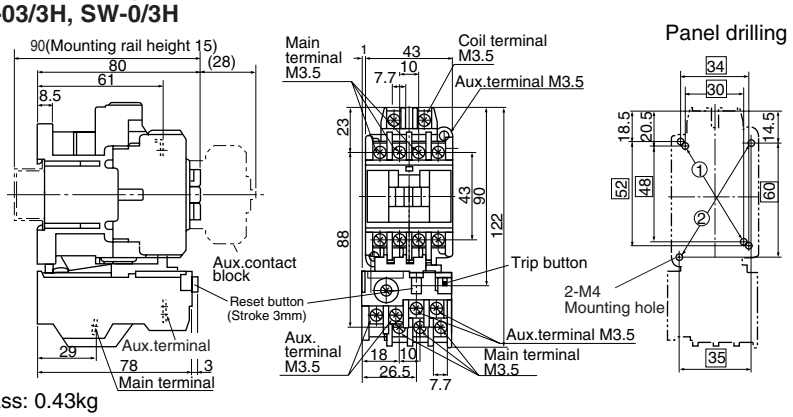
Note: *1 For two side mounting aux.contact blocks mounted
*2 M4 tap for control circuit

Mass: 34kg

■ Dimensions, mm

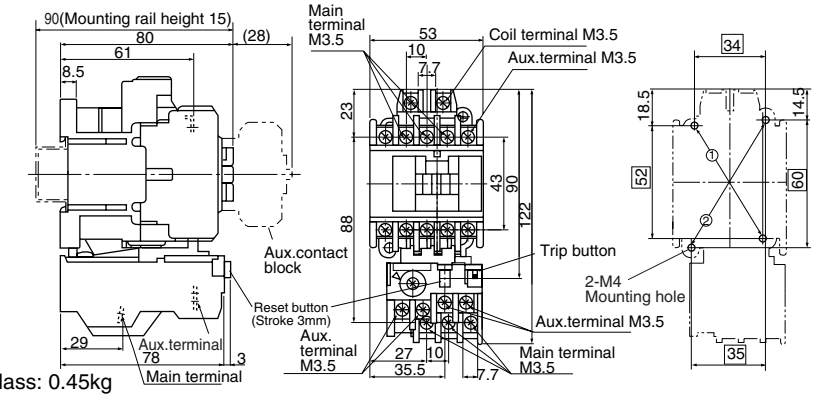
Starters/Open type

SW-03/3H, SW-0/3H



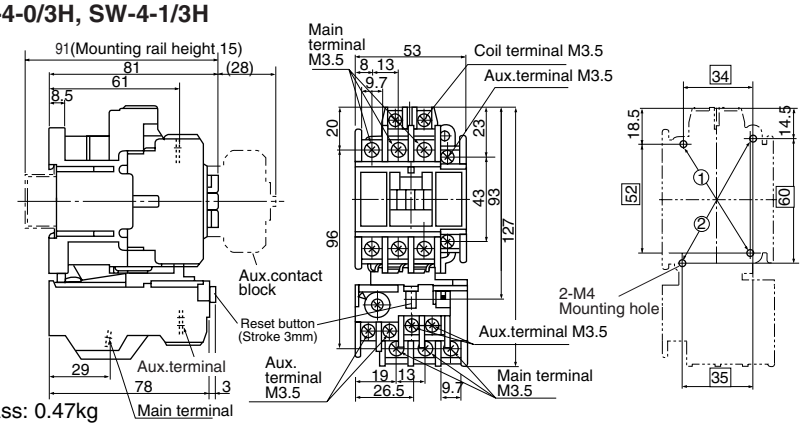
Mass: 0.43kg

SW-05/3H



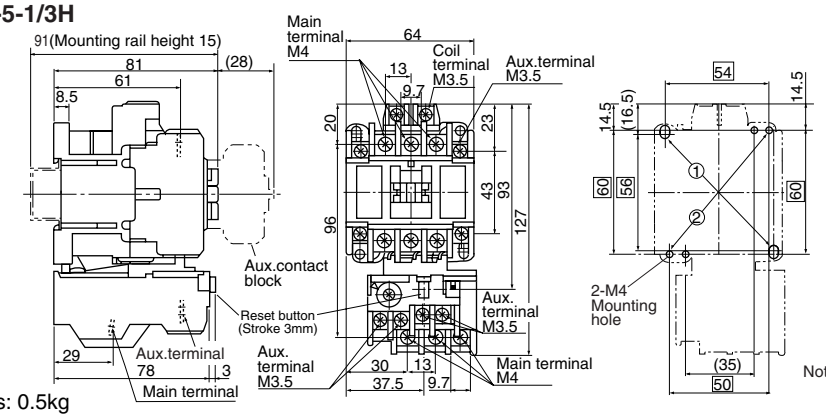
Mass: 0.45kg

SW-4-0/3H, SW-4-1/3H



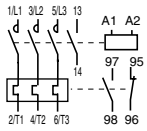
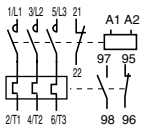
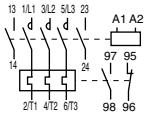
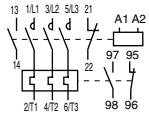
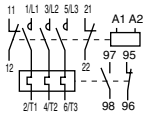
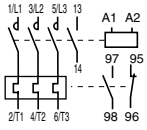
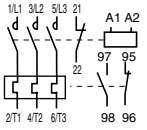
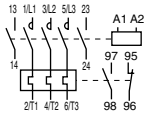
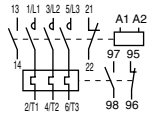
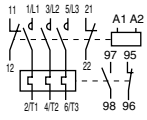
Mass: 0.47kg

SW-5-1/3H



Mass: 0.5kg

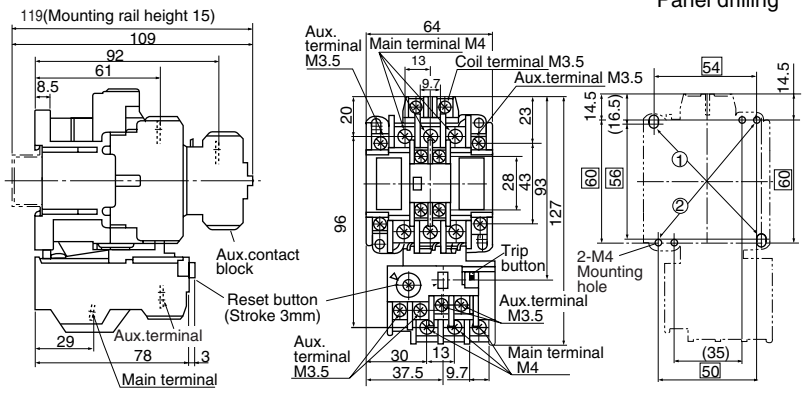
■ Wiring diagrams

Auxiliary contact	
1NO	
1NC	
2NO	
1NO+1NC	
2NC	
1NO	
1NC	
2NO	
1NO+1NC	
2NC	

Note: Use the two mounting holes on a diagonal line to mount a contactor.
Mounting holes indicated by ① are compatible with those of SRC type.
Mounting holes indicated by ② are compatible with IEC standard

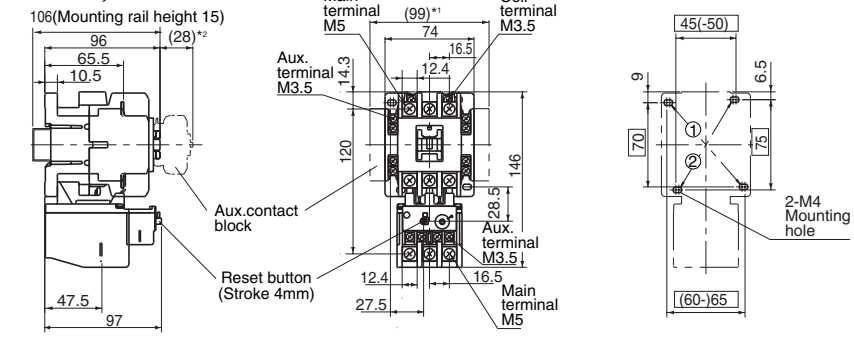
■ Dimensions, mm
Starters/Open type

SW-5-1/3H



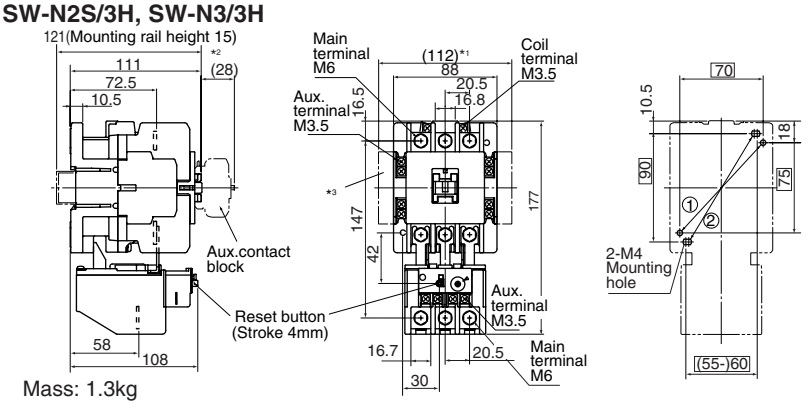
Mass: 0.52kg

SW-N1/3H, SW-N2/3H



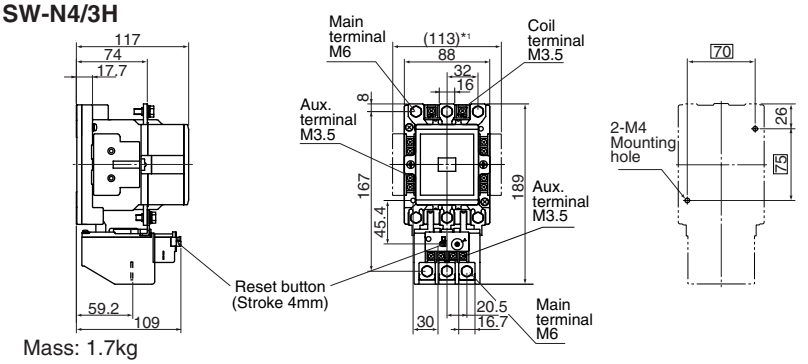
Mass: 0.77kg

SW-N2S/3H, SW-N3/3H



Mass: 1.3kg

SW-N4/3H

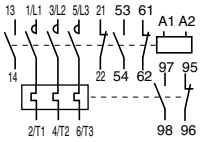


Mass: 1.7kg

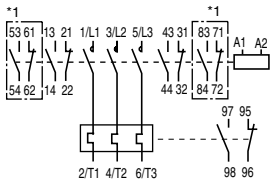
■ Wiring diagrams
SW-5-1/3H

Auxiliary contact

2NC+2NO



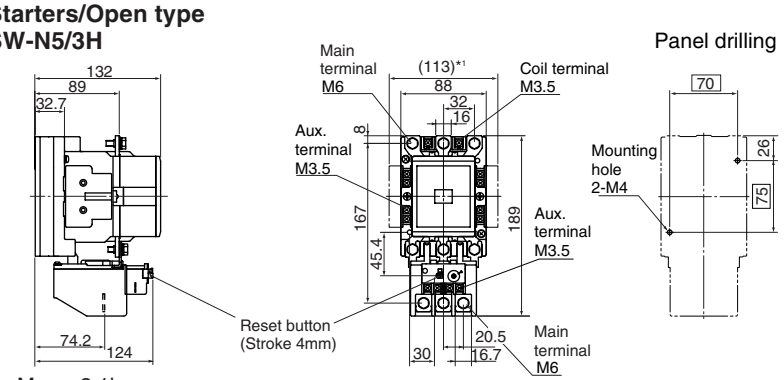
■ Wiring diagrams
SW-N1/3H to SW-N8/3H



*1 In case of auxiliary contact 4NO+4NC

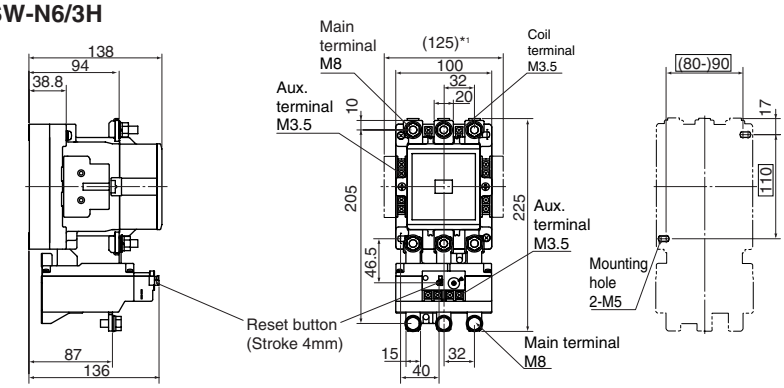
Note: • Use the two mounting holes on a diagonal line to mount a contactor.
Mounting holes indicated by ① are compatible with those of SRC type.
Mounting holes indicated by ② are compatible with IEC standard
*1 For two side mounting aux. contact blocks mounted
*2 For front mounting aux. contact blocks mounted

■ **Dimensions, mm**
Starters/Open type
SW-N5/3H



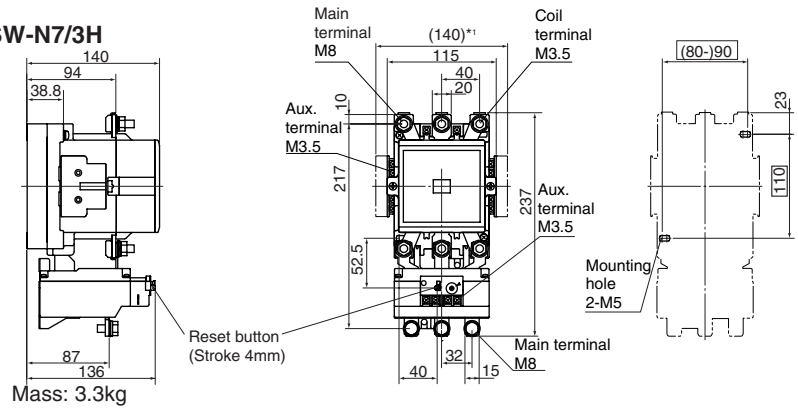
Mass: 2.1kg

SW-N6/3H



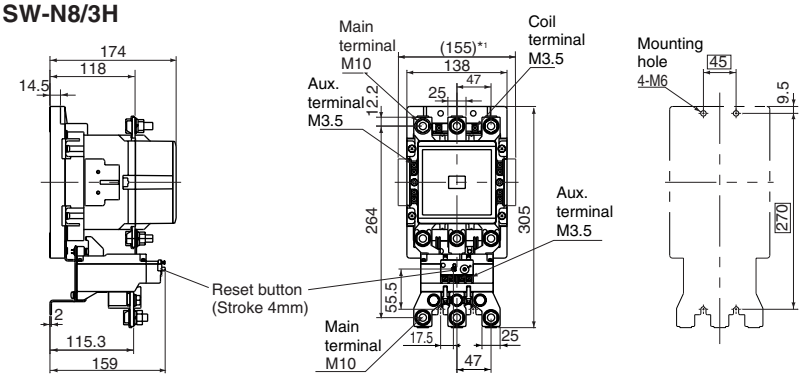
Mass: 3kg

SW-N7/3H



Mass: 3.3kg

SW-N8/3H



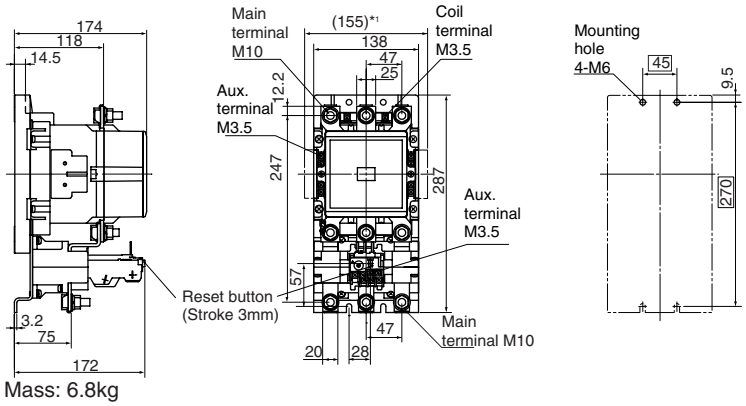
Mass: 6.1kg

Note: *1 For two side mounting aux. contact blocks mounted

■ Dimensions, mm

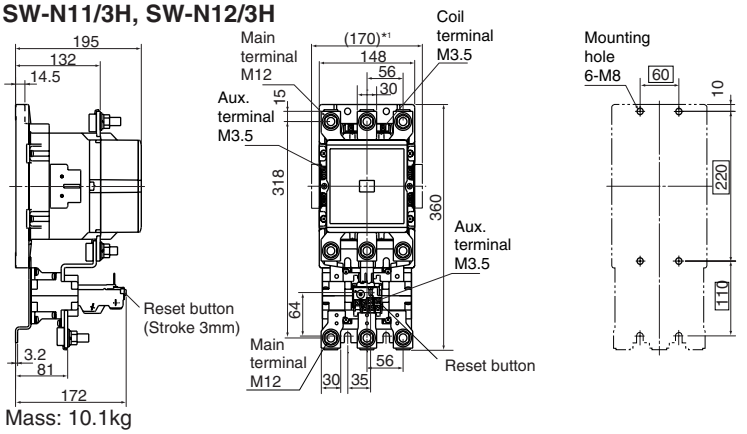
Starters/Open type

SW-N10/3H



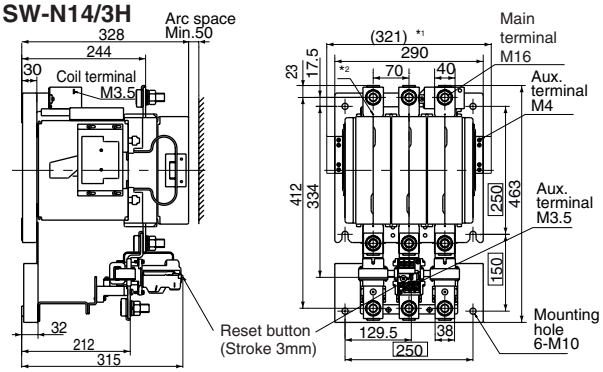
Mass: 6.8kg

SW-N11/3H, SW-N12/3H



Mass: 10.1kg

SW-N14/3H

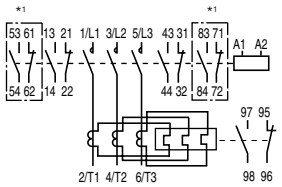


Mass: 37kg

Note: *1 For two side mounting aux. contact blocks mounted
*2 For front mounting aux. contact blocks mounted

■ Wiring diagrams

SW-N10/3H to SW-N14/3H



*1 In case of auxiliary contact 4NO+4NC

Starters/Enclosed type

AF88-1347

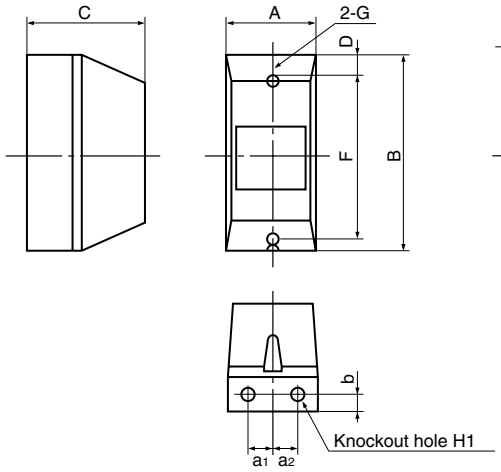


Fig. 1 Plastic enclosure

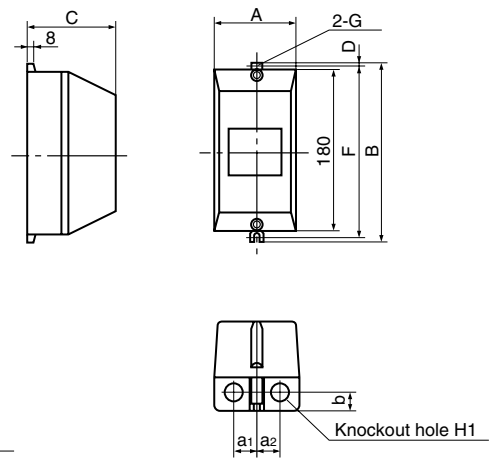


Fig. 2 Plastic enclosure

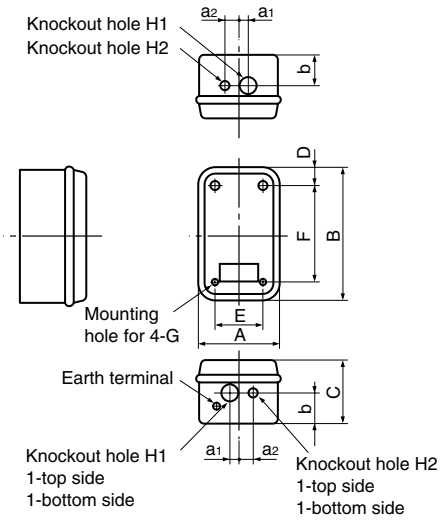


Fig. 3 Steel enclosure

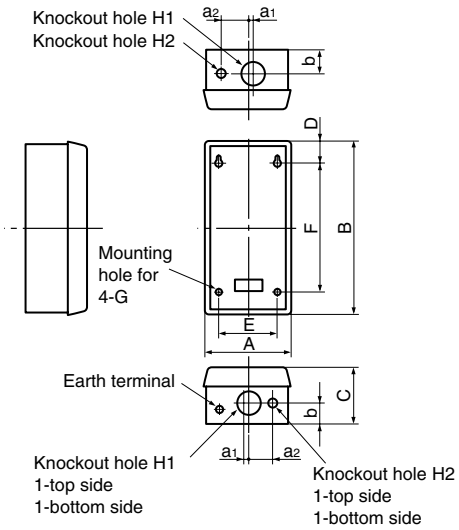


Fig. 4 Steel enclosure

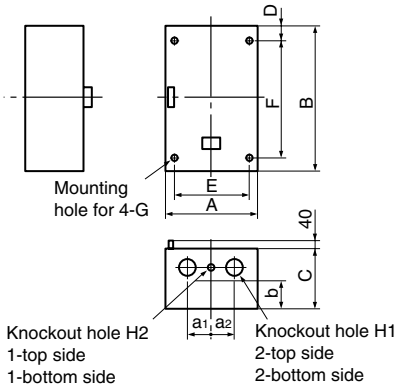


Fig. 5 Steel enclosure

Type	A	B	C	D	E	F	G	Lead hole H1	Lead hole H2	a_1	a_2	b	Mass (kg)	Fig. No.
SW-03C/3H	76	165	94	14.5	–	135	M4	ϕ17	ϕ17	19	19	18.5	0.7	
SW-0C/3H	76	165	94	14.5	–	135	M4	ϕ17	ϕ17	19	19	18.5	0.7	1
SW-05C/3H	76	165	94	14.5	–	135	M4	ϕ17	ϕ17	19	19	18.5	0.72	
SW-4-0C/3H	90	200	94	5	–	190	M4	ϕ21	ϕ21	24	24	22.5	0.80	
SW-4-1C/3H	90	200	94	5	–	190	M4	ϕ21	ϕ21	24	24	22.5	0.80	2
SW-5-1C/3H	90	200	94	5	–	190	M4	ϕ21	ϕ21	24	24	22.5	0.83	
SW-N1C/3H	145	246	132	18	80	210	M6	ϕ28	ϕ28	Top:	20	60	2.0	
SW-N2C/3H	145	246	132	18	80	210	M6	ϕ28	ϕ28	Bottom:	27	60	2.0	
SW-N2SC/3H	175	320	145	35	110	250	M6	ϕ35	ϕ28	15	35	70	3	3
SW-N3C/3H	175	320	145	35	110	250	M6	ϕ35	ϕ28	15	35	70	3	
SW-N4C/3H	200	400	160	37	125	325	M8	ϕ43	ϕ28	20	40	80	4.4	
SW-N5C/3H	200	400	160	37	125	325	M8	ϕ43	ϕ28	20	40	80	7.0	
SW-N6C/3H	225	450	180	50	150	350	M8	ϕ52	ϕ28	10	70	80	8.4	
SW-N7C/3H	280	560	210	55	175	450	M10	ϕ65	ϕ28	10	80	95	12.3	
SW-N8C/3H	335	670	225	85	200	500	M10	ϕ78	ϕ28	0	100	95	18.1	4
SW-N10C/3H	335	670	225	85	200	500	M10	ϕ78	ϕ28	0	100	95	18.8	
SW-N11C/3H	400	800	250	100	250	600	M10	ϕ105	ϕ28	0	150	100	24.6	
SW-N12C/3H	400	800	250	100	250	600	M10	ϕ105	ϕ28	0	150	100	25.1	
SW-N14C/3H	600	950	400	75	500	800	M12	ϕ105	ϕ28	150	150	280	97.0	5

Note: Dimensions of enclosed type contactor SC-03C to SC-N14C are same as those of starters. Contact FUJI for mass.

Reversing standard type contactors and starters

■ Description

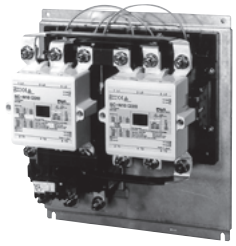
The reversing starter consists of two magnetic contactors and a thermal overload relay. They are suitable for across-the-line starting and reversing of 3-phase squirrel-cage rotor and slip-ring motors.
This starter is provided with a built-in "perfect interlock safety mechanism" which prevents the engagement of forward-reverse contactors simultaneously, as well as electrical interlock.
Where there is a danger of forward–reverse being engaged at the same time, i.e., in the case of power source switching, hoist or machine tool controls, etc. then this type is recommended. The action is simple and positive, and free from trouble in operation.

■ Operating mechanism

When one contactor begins to move the other contactor is locked in position. An arm is used to actuate each contactor so that there is no possibility of double engagement.


KKD06-062
SC-03RM


AF00-247
SW-N6RM/3H


AF00-287
SW-N10RM/3H

■ Ratings of auxiliary contact and coil:

See pages 01/28 and 01/30.

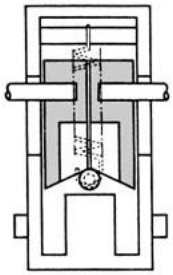
■ Performance data:

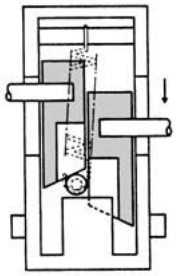
Same as standard open type.
See page 01/30.

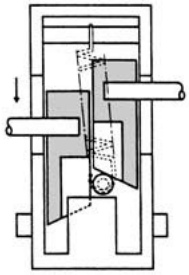
■ Ordering information

Specify the following:
1. Ordering code
2. Overload relay setting range code
3. Operating coil voltage code
4. Auxiliary contact arrangement as shown in the table below.
   Example: (2NO + 2NC) × 2

Mechanism principle (Explanation only)


Both contactors open position


Forward contactor closed position


Reverse contactor closed position

■ Types and ratings

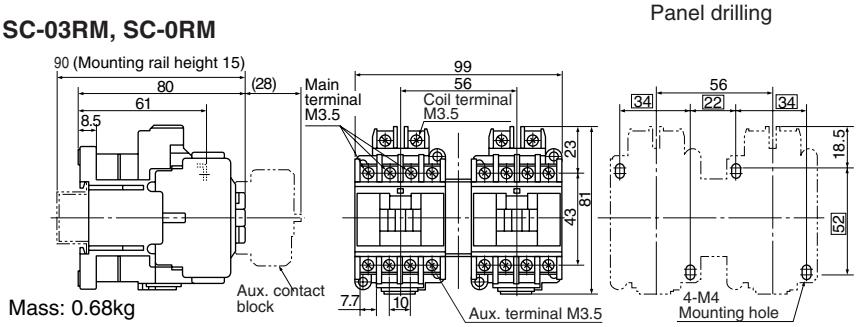
Max. motor capacity (kw)		Rated operation current (A)		Auxiliary contact	Contactor		Starter (3-element)			
					Open Type	Ordering code	Open Type	Ordering code	Enclosed Type	Ordering code
200V 240V	380V 440V	200V 240V	380V 440V							
2.5	4	11	9	1NC×2*1	**SC-03RM**	SC11RA-■01	**SW-03RM/3H**	SC11RAN-■01T□D	**SW-03RMC/3H**	SC11MAN-■01T□D
3.5	5.5	13	12	1NC×2*1	**SC-0RM**	SC13RA-■01	**SW-0RM/3H**	SC13RAN-■01T□D	**SW-0RMC/3H**	SC13MAN-■01T□D
3.5	5.5	13	12	(1NO+1NC)×2*2	**SC-05RM**	SC14RA-■11	**SW-05RM/3H**	SC14RAN-■11T□D	**SW-05RMC/3H**	SC14MAN-■11T□D
4.5	7.5	18	16	1NC×2*1	**SC-4-0RM**	SC18RA-■01	**SW-4-0RM/3H**	SC18RAN-■01T□D	**SW-4-0RMC/3H**	SC18MAN-■01T□D
5.5	11	22	22	1NC×2*1	**SC-4-1RM**	SC19RA-■01	**SW-4-1RM/3H**	SC19RAN-■01T□D	**SW-4-1RMC/3H**	SC19MAN-■01T□D
5.5	11	22	22	(1NO+1NC)×2*3	**SC-5-1RM**	SC20RA-■11	**SW-5-1RM/3H**	SC20RAN-■11T□D	**SW-5-1RMC/3H**	SC20MAN-■11T□D
7.5	15	32	32	(2NO+2NC)×2*3	**SC-N1RM**	SC25BRA-■22	**SW-N1RM/3H**	SC25BRAN-■22T□D	**SW-N1RMC/3H**	SC25BMAN-■22T□D
11	18.5	40	40	(2NO+2NC)×2*3	**SC-N2RM**	SC35BRA-■22	**SW-N2RM/3H**	SC35BRAN-■22T□D	**SW-N2RMC/3H**	SC35BMAN-■22T□D
15	22	50	50	(2NO+2NC)×2*3	**SC-N2SRM**	SC50BRA-■22	**SW-N2SRM/3H**	SC50BRAN-■22T□D	**SW-N2SRMC/3H**	SC50BMAN-■22T□D
18.5	30	65	65	(2NO+2NC)×2*3	**SC-N3RM**	SC65BRA-■22	**SW-N3RM/3H**	SC65BRAN-■22T□D	**SW-N3RMC/3H**	SC65BMAN-■22T□D
22	40	80	80	(2NO+2NC)×2*3	**SC-N4RM**	SC80BRA-■22	**SW-N4RM/3H**	SC80BRAN-■22T□D	**SW-N4RMC/3H**	SC80BMAN-■22T□D
30	55	105	105	(2NO+2NC)×2*3	**SC-N5RM**	SC93BRA-■22	**SW-N5RM/3H**	SC93BRAN-■22T□D	**SW-N5RMC/3H**	SC93BMAN-■22T□D
37	60	125	125	(2NO+2NC)×2*3	**SC-N6RM**	SC1CBRA-■22	**SW-N6RM/3H**	SC1CBRAN-■22T□D	**SW-N6RMC/3H**	SC1CBMAN-■22T□D
45	75	150	150	(2NO+2NC)×2*3	**SC-N7RM**	SC1FBRA-■22	**SW-N7RM/3H**	SC1FBRAN-■22T□D	**SW-N7RMC/3H**	SC1FBMAN-■22T□D
55	90	180	180	(2NO+2NC)×2*3	**SC-N8RM**	SC1JBRA-■22	**SW-N8RM/3H**	SC1JBRAN-■22T□D	**SW-N8RMC/3H**	SC1JBMAN-■22T□D
65	110	220	220	(2NO+2NC)×2*3	**SC-N10RM**	SC2CBRA-■22	**SW-N10RM/3H**	SC2CBRAN-■22T□D	**SW-N10RMC/3H**	SC2CBMAN-■22T□D
90	160	300	300	(2NO+2NC)×2*3	**SC-N11RM**	SC3ABRA-■22	**SW-N11RM/3H**	SC3ABRAN-■22T□D		
120	220	400	400	(2NO+2NC)×2*3	**SC-N12RM**	SC4ABRA-■22	**SW-N12RM/3H**	SC4ABRAN-■22T□D		
180	315	600	600	(2NO+2NC)×2*3	**SC-N14RM**	SC6ABRA-■22	**SW-N14RM/3H**	SC6ABRAN-■22T□D		

Notes: 1. ■ : Coil voltage code. □ : Thermal overload relay ampere setting range code, See page 01/27.
2. *1: Auxiliary contact 1NO×2 is available on request. However, these contactors are not electrically interlocked.
Be sure to arrange electrical interlock circuit externally to avoid short-circuit accidents.
*2: Auxiliary contact 2NC×2 is available on request.
*3: Auxiliary contact (3NO+3NC)×2 is available on request for frame size N1 and above.
Auxiliary contact (4NO+4NC)×2 is available on request for frame size N1 to N3.
3. Contactor with enclosure is available on request.

■ Dimensions, mm

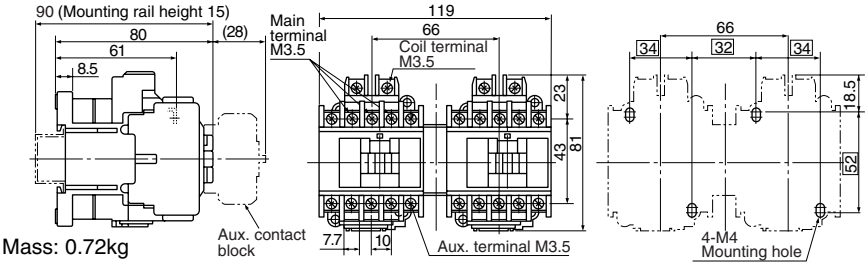
Reversing contactors/Open type

SC-03RM, SC-0RM



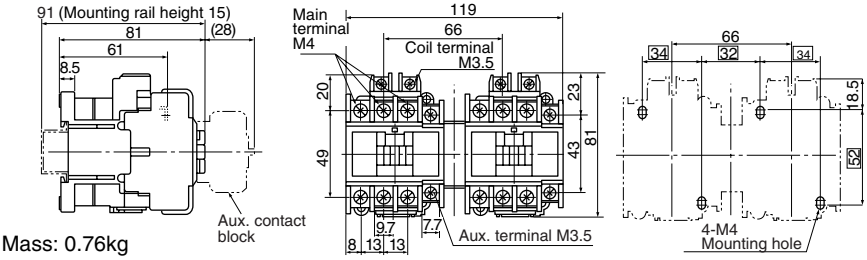
Mass: 0.68kg

SC-05RM



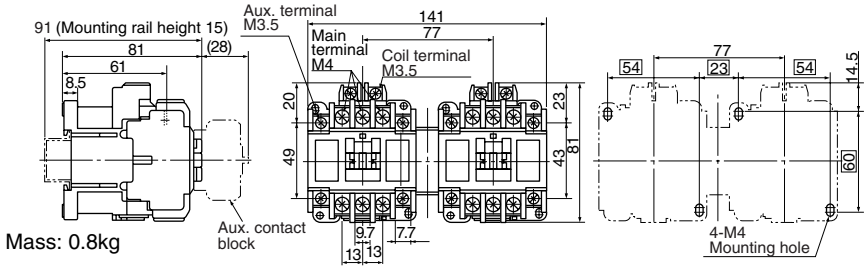
Mass: 0.72kg

SC-4-0RM, SC-4-1RM



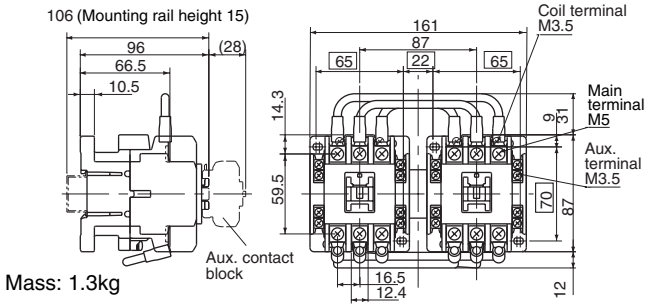
Mass: 0.76kg

SC-5-1RM



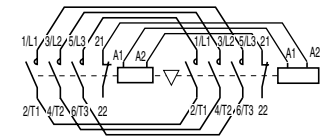
Mass: 0.8kg

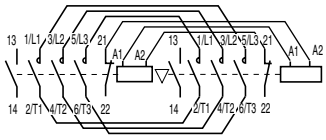
SC-N1RM, SC-N2RM

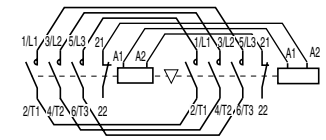


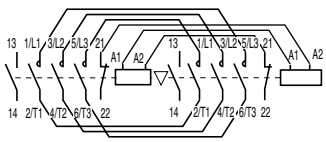
Mass: 1.3kg

■ Wiring diagrams



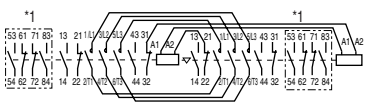






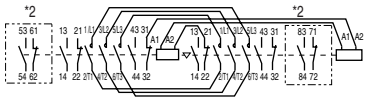
■ Wiring diagrams

SC-N1RM to SC-N3RM



*1 In case of auxiliary contact 4NO+4NC

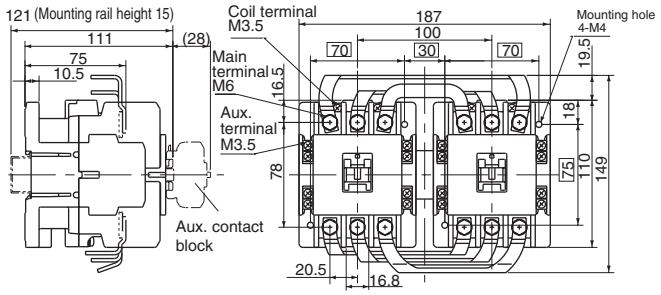
SC-N4RM to SC-N14RM



*2 In case of auxiliary contact 3NO+3NC

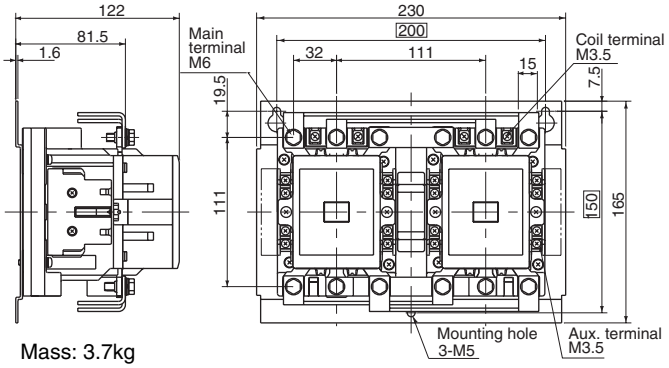
■ **Dimensions, mm**
Reversing contactors/Open type

SC-N2SRM, SC-N3RM



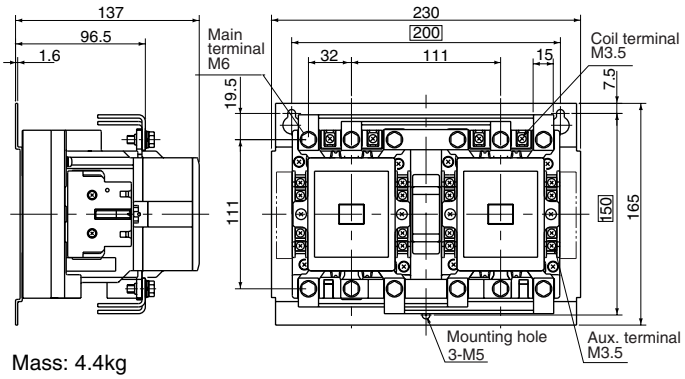
Mass: 2.3kg

SC-N4RM



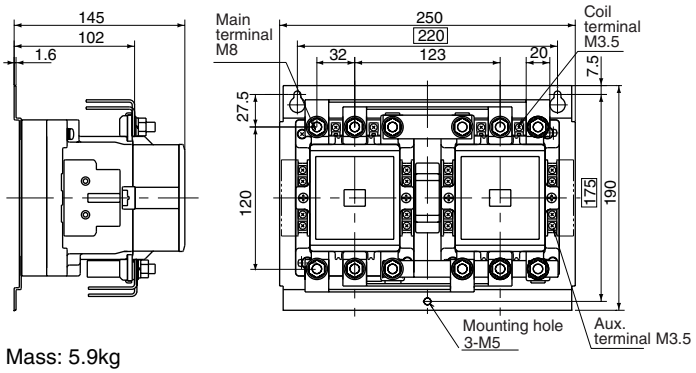
Mass: 3.7kg

SC-N5RM



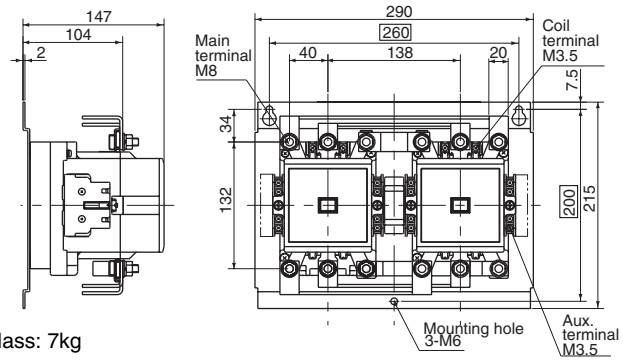
Mass: 4.4kg

SC-N6RM



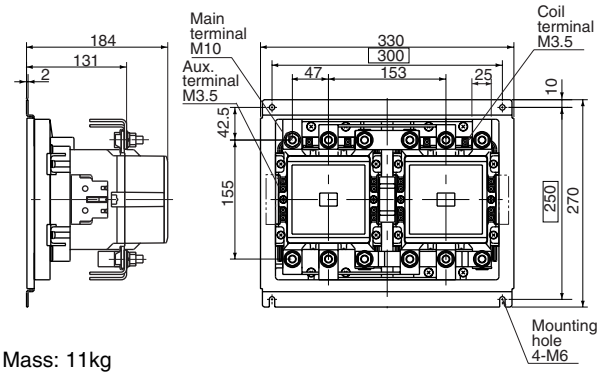
Mass: 5.9kg

SC-N7RM



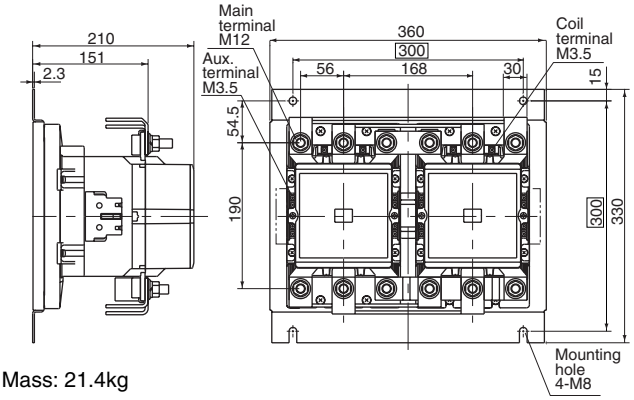
Mass: 7kg

SC-N8RM, SC-N10RM



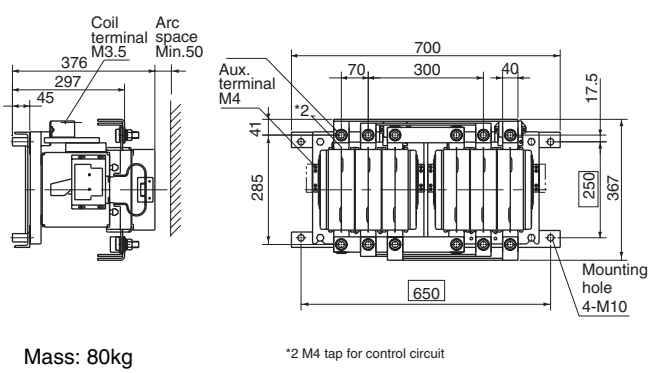
Mass: 11kg

SC-N11RM, SC-N12RM



Mass: 21.4kg

SC-N14RM



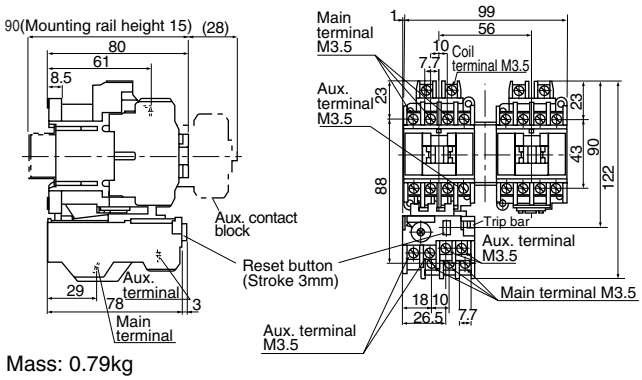
Mass: 80kg

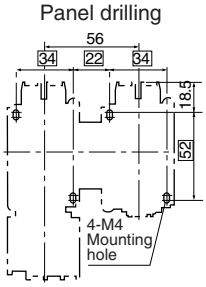
*2 M4 tap for control circuit

■ **Dimensions, mm**

Reversing motor starters/Open type

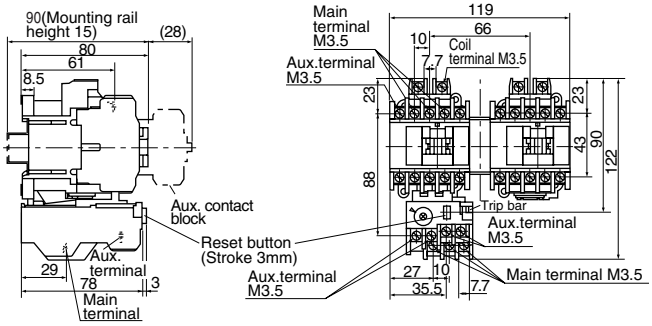
SW-03RM/3H, SW-0RM/3H

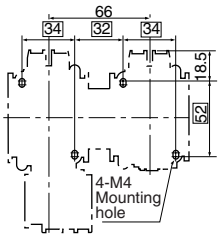




Mass: 0.79kg

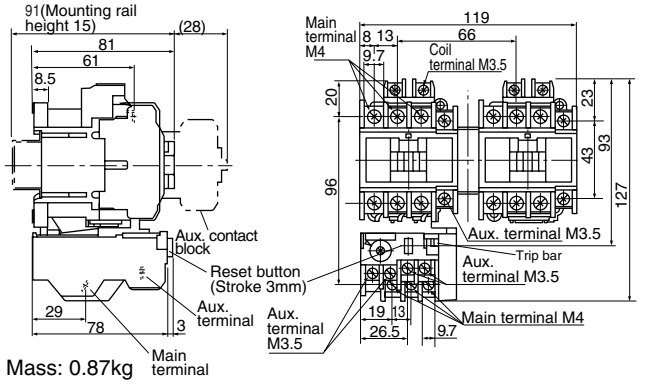
SW-05RM/3H

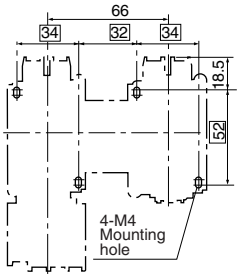




Mass: 0.83kg

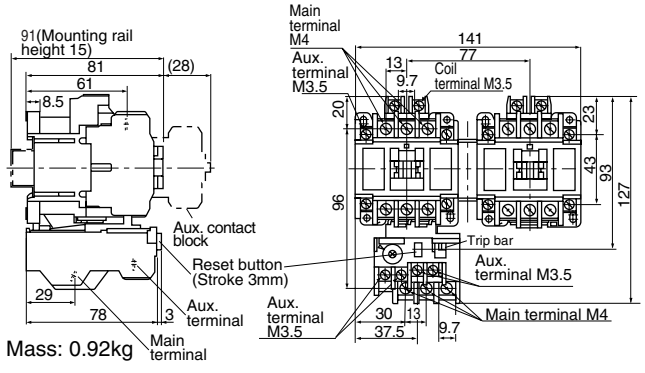
SW-4-0RM/3H, SW-4-1RM/3H

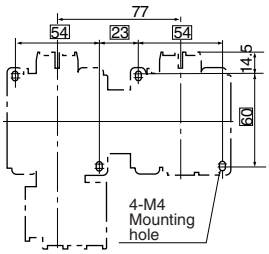




Mass: 0.87kg

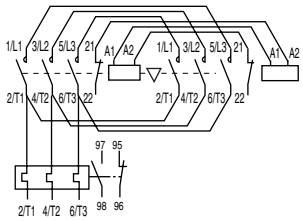
SW-5-1RM/3H

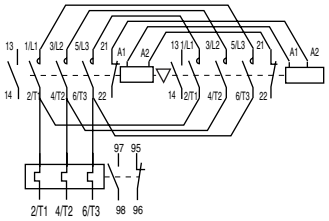


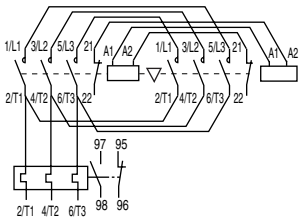


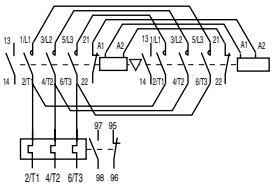
Mass: 0.92kg

■ **Wiring diagrams**



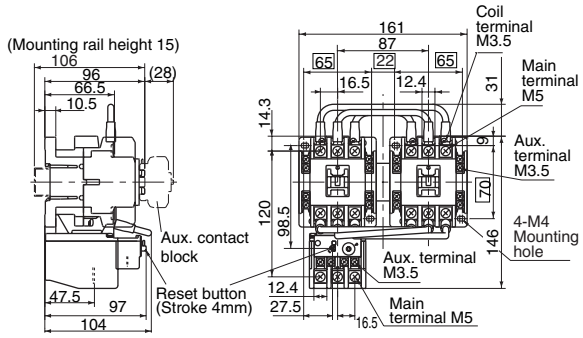






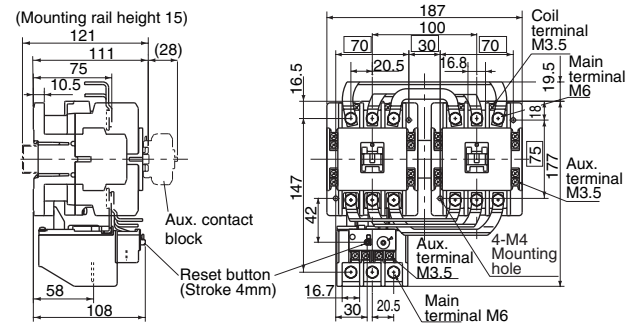
■ **Dimensions, mm**
Reversing motor starters/Open type

SW-N1RM/3H, SW-N2RM/3H



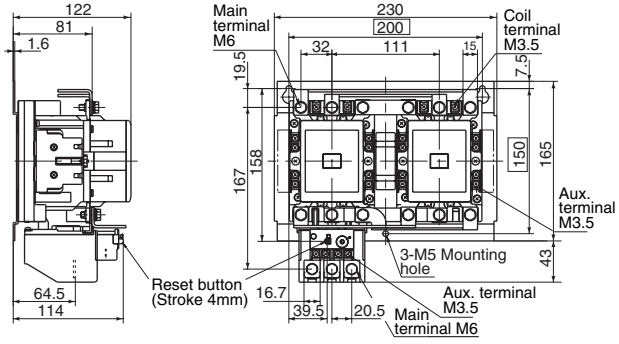
Mass: 1.5kg

SW-N2SRM/3H, SW-N3RM/3H



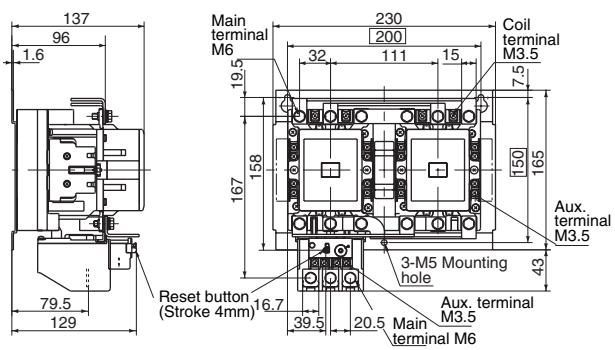
Mass: 2.6kg

SW-N4RM/3H



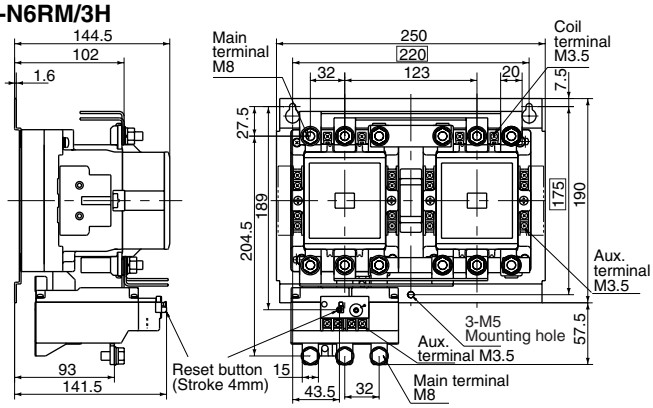
Mass: 4kg

SW-N5RM/3H



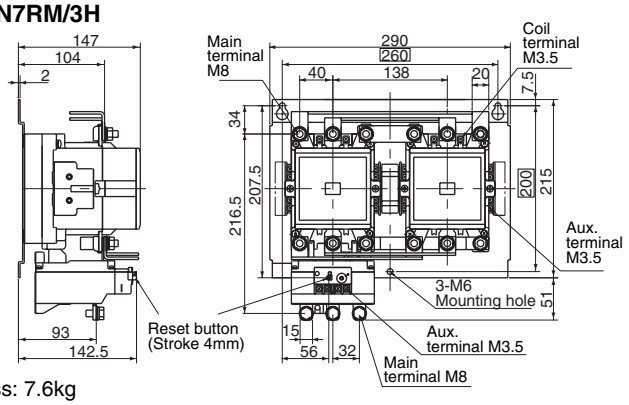
Mass: 4.7kg

SW-N6RM/3H



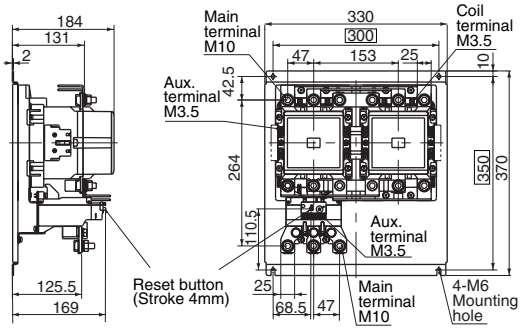
Mass: 6.5kg

SW-N7RM/3H



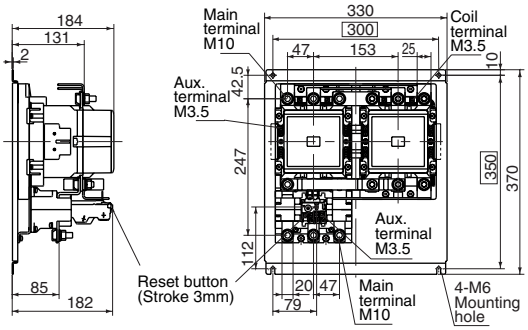
Mass: 7.6kg

SW-N8RM/3H



Mass: 12.2kg

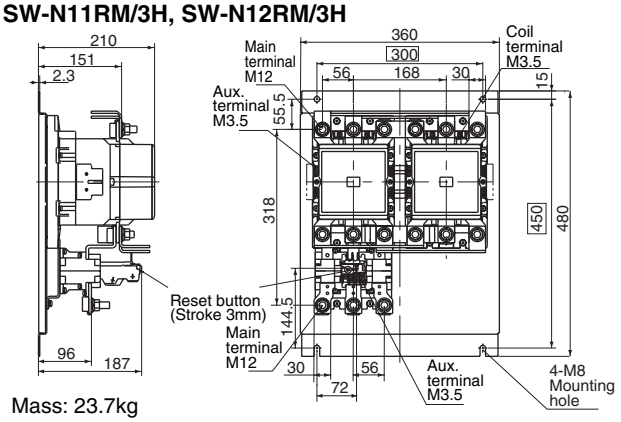
SW-N10RM/3H



Mass: 12.9kg

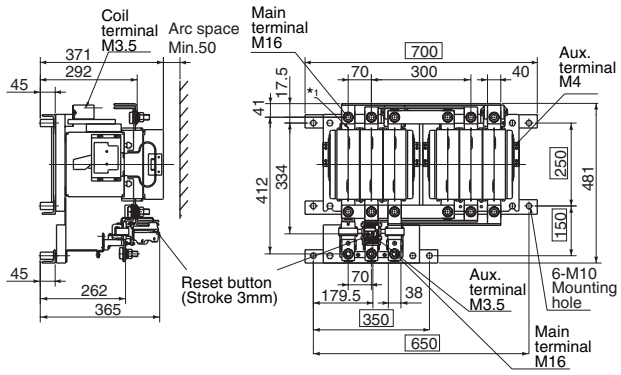
■ **Dimensions, mm**
Reversing motor starters/Open type

SW-N11RM/3H, SW-N12RM/3H



Mass: 23.7kg

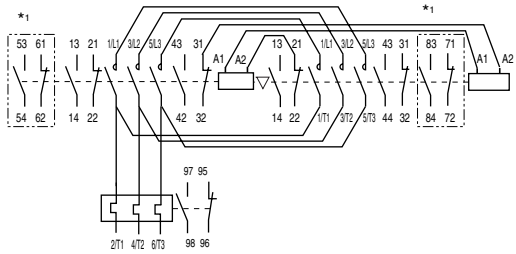
SW-N14RM/3H



Mass: 85kg

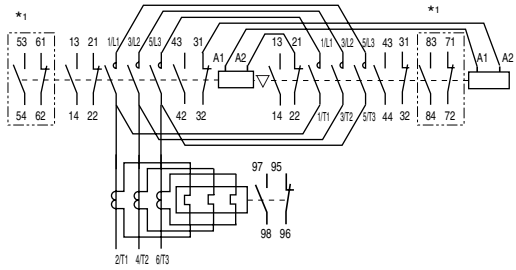
*1 M4 tap for control circuit

■ **Wiring diagrams**
SW-N1RM/3H to SW-N8RM/3H



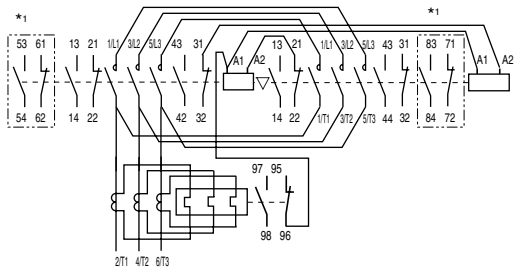
*1 In case of auxiliary contact 3NO+3NC

SW-N10RM/3H to SW-N12RM/3H



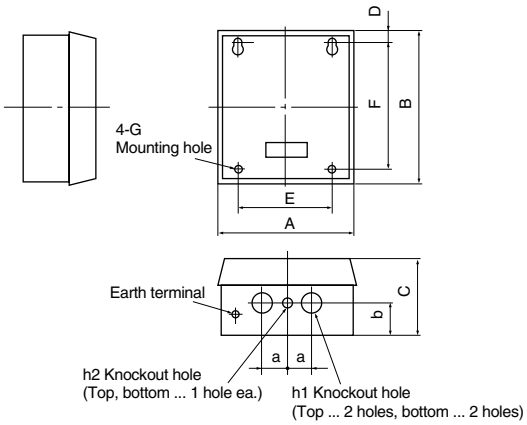
*1 In case of auxiliary contact 3NO+3NC

SW-N14RM/3H



*1 In case of auxiliary contact 3NO+3NC

■ **Dimensions, mm**
Reversing motor starters/Enclosed type



Type	A	B	C	D	E	F	G	h1	h2	a	b	Mass (kg) 3-element
SW-03RMC/3H	192	192	100	16	130	160	4-M6	ϕ22	–	65	65	1.9
SW-0RMC/3H	192	192	100	16	130	160	4-M6	ϕ22	–	65	65	1.9
SW-05RMC/3H	192	192	100	16	130	160	4-M6	ϕ22	–	65	65	1.9
SW-4-0RMC/3H	192	192	100	16	130	160	4-M6	ϕ22	–	65	65	1.95
SW-4-1RMC/3H	192	192	100	16	130	160	4-M6	ϕ22	–	65	65	1.95
SW-5-1RMC/3H	192	192	100	16	130	160	4-M6	ϕ22	–	65	65	2.0
SW-N1RMC/3H	254	250	131	20	185	210	4-M6	ϕ28	–	80	70	3.8
SW-N2RMC/3H	254	250	131	20	185	210	4-M6	ϕ28	–	80	70	3.8
SW-N2SRMC/3H	280	320	145	35	200	250	4-M6	ϕ35	ϕ28	55	70	6.6
SW-N3RMC/3H	280	320	145	35	200	250	4-M6	ϕ35	ϕ28	55	70	6.6
SW-N4RMC/3H	355	400	160	37.5	250	325	4-M8	ϕ43	ϕ28	65	80	10.7
SW-N5RMC/3H	355	400	160	37.5	250	325	4-M8	ϕ43	ϕ28	65	80	11.4
SW-N6RMC/3H	400	450	180	50	300	350	4-M8	ϕ52	ϕ28	85	80	14.3
SW-N7RMC/3H	450	560	210	55	350	450	4-M10	ϕ65	ϕ28	90	95	21.5
SW-N8RMC/3H	500	670	225	85	400	500	4-M10	ϕ78	ϕ28	90	105	29.4
SW-N10RMC/3H	500	670	225	85	400	500	4-M10	ϕ78	ϕ28	90	105	32.4

Notes: • SW-5-1RMC/3H with aux. contact 2×2NO·2NC is not availale.
• Dimensions of enclosed type contactor SC-03RMC to SC-N10RMC/3H are same as those of starters. Contact FUJI for mass.