

## ■ Contactors and Starters

### ● AC operated magnetic contactors

Series	Type		Specification				TÜV license No.	EN/IEC/ others
	Magnetic contactor	Thermal overload relay	3-phase squirrel-cage motor capacity (AC3) <sup>*1</sup>		Continuous current [A]	Auxiliary contact arrangement		
			200-240V	380-440V				
NEW SC Series	SC-03, 03Y <sup>*2</sup>	TR-0N/3, TK-0N	2.5kW 11A	4kW 9A	20	1NO, 1NC	R9151511	EN60947-4-1 IEC60947-4-1
	SC-0, 0Y <sup>*2</sup>	TR-0NY/3, TK-0NY	3.5kW 13A	5.5kW 12A				
	SC-05, 05Y <sup>*2</sup>							
	SC-4-0 <sup>*2</sup>	TR-5-1N/3,	4.5kW 18A	7.5kW 16A	25	1NO, 1NC	R9151513	
	SC-4-1 <sup>*2</sup>	TK-5-1N	5.5kW 22A	11kW 22A				
	SC-5-1, 5-1Y <sup>*2</sup>	TR-5-1NY/3, TK-5-1NY				2NO, 1NO+1NC, 2NC	R9151514	
NEO SC Series	SC-N1 <sup>*2</sup>	TR-N2/3, TK-N2	7.5kW 32A	15kW 32A	50	2NO+2NC (Can be expanded up to 4NO+4NC)	R9950397	
	SC-N2 <sup>*2</sup>		11kW 40A	18.5kW 40A	60			
	SC-N2S <sup>*2</sup>	TR-N3/3, TK-N3	15kW 50A	22kW 50A	80			
	SC-N3 <sup>*2</sup>		18.5kW 65A	30kW 65A	100			
	SC-N4 <sup>*2</sup>		TR-N5/3, TK-N5	22kW 80A	40kW 80A			135
	SC-N5 <sup>*2</sup>		30kW 105A	55kW 105A	150			
	SC-N6 <sup>*2</sup>	TR-N6/3, TK-N6	37kW 125A	60kW 125A				
	SC-N7 <sup>*2</sup>	TR-N7/3, TK-N7	45kW 150A	75kW 150A	200			R9950561
	SC-N8 <sup>*2</sup>	TR-N8/3, TK-N8	55kW 180A	90kW 180A	260			
	SC-N10 <sup>*2</sup>	TR-N10/3, TK-N10	65kW 220A	110kW 220A				
	SC-N11 <sup>*2</sup>	TR-N12/3, TK-12N	90kW 300A	160kW 300A	350			
	SC-N12 <sup>*2</sup>		120kW 400A	220kW 400A	450			
	SC-N14		TR-N14/3, TK-14N	180kW 600A	315kW 600A			660
	SC-N16	-	220kW 800A	440kW 800A	880			

<sup>\*1</sup> Shows rated value under IEC standard.

<sup>\*2</sup> Magnetic contactors are provided with "Positively driven contact". (Conformity with the TÜV standard has been approved.)

● DC operated magnetic contactor

Series	Type Magnetic contactor	Thermal overload relay	Specification			TÜV license No.	EN/IEC/ others	
			3-phase squirrel-cage motor capacity (AC3) <sup>*1</sup>		Continuous current [A]			Auxiliary contact arrangement
			200-240V	380-440V				
NEW SC Series	SC03/G, 03Y/G	TR-0N/3, TK-0N	2.5kW 11A	4kW 9A	20	1NO, 1NC	R9151532	EN60947-4-1 IEC60947-4-1
	SC-0/G, 0Y/G	TR-0NY/3, TK-0NY	3.5kW 13A	5.5kW 12A				
	SC-05/G, 05Y/G					2NO, 1NO+1NC, 2NC	R9151531	
	SC-4-0/G	TR-5-1N/3, TK-5-1N	4.5kW 18A	7.5kW 16A	25	1NO, 1NC	R9051276	
	SC-4-1/G	TR-5-1NY/3, TK-5-1NY	5.5kW 22A	11kW 22A	32	2NO, 1NO+1NC, 2NC	R9151533	
	SC-5-1/G, 5-1Y/G							
NEO SC Series	SC-N1/G	TR-N2/3, TK-N2	7.5kW 32A	15kW 32A	50	2NO+2NC (Can be expanded up to 4NO+4NC)	R9950696	
	SC-N2/G		11kW 40A	18.5kW 40A	60			
	SC-N2S/G	TR-N3/3, TK-N3	15kW 50A	22kW 50A	80			
	SC-N3/G		18.5kW 65A	30kW 65A	100			

<sup>\*1</sup> Shows rated value under IEC standards.

Note 1: SC-N5 to SC-N16 types and SC-N4/SE types are AC/DC operable, conform to EN60947-4-1 and IEC60947-4-1, and TÜV approved.

● SC-M series

- AC operated non-reversing magnetic contactors

Series	Type	Specification						License No.	EN/IEC/others
		3-phase squirrel-cage motor				Continuous current [A]	Auxiliary contact arrangement		
		200-240V	380-440V	500V	600-690V				
SC-M Series	SC-M01	1.5kW 6A	2.2kW 6A	3kW 5A	3kW 3.5A	20	1NO, 1NC	R2018010	EN60947-4-1 IEC60947-4-1
	SC-M02	3kW 9A	4kW 9A	4kW 6.5A	4kW 5A	20	1NO, 1NC		

- DC operated non-reversing magnetic contactors

Series	Type	Specification						License No.	EN/IEC/others
		3-phase squirrel-cage motor				Continuous current [A]	Auxiliary contact arrangement		
		200-240V	380-440V	500V	600-690V				
SC-M Series	SC-M01/G	1.5kW 6A	2.2kW 6A	3kW 5A	3kW 3.5A	20	1NO, 1NC	R2018010	EN60947-4-1 IEC60947-4-1
	SC-M01/G1	1.5kW 6A	2.2kW 6A	3kW 5A	3kW 3.5A	20	1NO, 1NC		
	SC-M01/G2	1.5kW 6A	2.2kW 6A	3kW 5A	3kW 3.5A	20	1NO, 1NC		
	SC-M02/G	3kW 9A	4kW 9A	4kW 6.5A	4kW 5A	20	1NO, 1NC		
	SC-M02/G1	3kW 9A	4kW 9A	4kW 6.5A	4kW 5A	20	1NO, 1NC		
	SC-M02/G2	3kW 9A	4kW 9A	4kW 6.5A	4kW 5A	20	1NO, 1NC		

- AC operated reversing magnetic contactors

Series	Type	Specification						License No.	EN/IEC/others
		3-phase squirrel-cage motor				Continuous current [A]	Auxiliary contact arrangement		
		200-240V	380-440V	500V	600-690V				
SC-M Series	SC-M01RM	1.5kW 6A	2.2kW 6A	3kW 5A	3kW 3.5A	20	1NO, 1NC	R2018010	EN60947-4-1 IEC60947-4-1
	SC-M02RM	3kW 9A	4kW 9A	4kW 6.5A	4kW 5A	20	1NO, 1NC		

- DC operated reversing magnetic contactors

Series	Type	Specification						License No.	EN/IEC/others
		3-phase squirrel-cage motor				Continuous current [A]	Auxiliary contact arrangement		
		200-240V	380-440V	500V	600-690V				
SC-M Series	SC-M01/GRM	1.5kW 6A	2.2kW 6A	3kW 5A	3kW 3.5A	20	1NO, 1NC	R2018010	EN60947-4-1 IEC60947-4-1
	SC-M01/G1RM	1.5kW 6A	2.2kW 6A	3kW 5A	3kW 3.5A	20	1NO, 1NC		
	SC-M01/G2RM	1.5kW 6A	2.2kW 6A	3kW 5A	3kW 3.5A	20	1NO, 1NC		
	SC-M02/GRM	3kW 9A	4kW 9A	4kW 6.5A	4kW 5A	20	1NO, 1NC		
	SC-M02/G1RM	3kW 9A	4kW 9A	4kW 6.5A	4kW 5A	20	1NO, 1NC		
	SC-M02/G2RM	3kW 9A	4kW 9A	4kW 6.5A	4kW 5A	20	1NO, 1NC		

- 2E thermal overload relays

Series	Type	No. of heat elements	Power consumption [VA/poles]	Auxiliary contact arrangement	AC-15	DC-13	Continuous current [A]	License No.	EN/IEC/others
TK-M Series	TK-M0	3	2.3	1NC	220V 3A 440V 2A 5550V 0.6A	48V 0.2A 110V 0.2A 220V 0.1A	6	R2018010	EN60947-4-1 IEC60947-4-1

- Auxiliary contact blocks (applicable to SC-M Series)

Type	Auxiliary contact arrangement	Mounting	Operational current [A]				Continuous current [A]	License No.	EN/IEC/others
			Ind. load						
			100-120V	200-220V	380-440V	500-600V			
SZ-MA40	4NO	Front mounting	6 (1.2) <sup>*1</sup>	6 (0.6) <sup>*2</sup>	3	1	16	R2018010	EN60947-4-1 IEC60947-4-1
SZ-MA31	3NO+1NC								
SZ-MA22	2NO+2NC								
SZ-MA13	1NO+3NC								
SZ-MA04	4NC								
SZ-MA20	2NO								
SZ-MA11	1NO+1NC								
SZ-MA02	2NC	Side mounting							
SZ-MAS10	1NO								
SZ-MAS01	1NC								

\*1 The value in parentheses ( ) indicates the rating at DC-13 (coil rating: 110VDC).

\*2 The value in parentheses ( ) indicates the rating at DC-13 (coil rating: 220VDC).

● SC-E Series

- AC operated non-reversing magnetic contactors

Series	Type	Specification					License No.	EN/IEC/others
		3-phase squirrel-cage motor				Continuous current [A]		
		200-240V	380-440V	500-550V	600-690V			
SC-E Series	SC-E02	2.2kW 9A	4kW 9A	4kW 7A	4kW 5A	20	R50013402	EN60947-4-1 IEC60947-4-1
	SC-E03	3kW 12A	5.5kW 12A	5.5kW 9A	5.5kW 7A	20		
	SC-E04	4kW 18A	7.5kW 18A	7.5kW 13A	7.5kW 9A	20		
	SC-E05	5.5kW 25A	11kW 25A	11kW 17A	7.5kW 9A	32		
	SC-E1	7.5kW 32A	15kW 24A	15kW 24A	11kW 15A	50		
	SC-E2	11kW 40A	18.5kW 40A	18.5kW 29A	15kW 19A	60		
	SC-E2S	15kW 50A	22kW 50A	25kW 38A	22kW 26A	65		
	SC-E3	18.5kW 68A	30kW 65A	37kW 60A	30kW 38A	100		
	SC-E4	22kW 80A	40kW 80A	37kW 60A	37kW 44A	105		
	SC-E5	30kW 105A	55kW 105A	55kW 85A	55kW 64A	150		
SC-E6	37kW 125A	60kW 125A	60kW 90A	60kW 72A	150			
SC-E7	45kW 150A	75kW 150A	75kW 120A	90kW 103A	200			

- DC operated non-reversing magnetic contactors

Series	Type	Specification					License No.	EN/IEC/others
		3-phase squirrel-cage motor				Continuous current [A]		
		200-240V	380-440V	500-550V	600-690V			
SC-E Series	SC-E02/G	2.2kW 9A	4kW 9A	4kW 7A	4kW 5A	20	R50013402	EN60947-4-1 IEC60947-4-1
	SC-E03/G	3kW 12A	5.5kW 12A	5.5kW 9A	5.5kW 7A	20		
	SC-E04/G	4kW 18A	7.5kW 18A	7.5kW 13A	7.5kW 9A	20		
	SC-E05/G	5.5kW 25A	11kW 25A	11kW 17A	7.5kW 9A	32		
	SC-E1/G	7.5kW 32A	15kW 24A	15kW 24A	11kW 15A	50		
	SC-E2/G	11kW 40A	18.5kW 40A	18.5kW 29A	15kW 19A	60		
	SC-E2S/G	15kW 50A	22kW 50A	25kW 38A	22kW 26A	65		
	SC-E3/G	18.5kW 68A	30kW 65A	37kW 60A	30kW 38A	100		
	SC-E4/G	22kW 80A	40kW 80A	37kW 60A	37kW 44A	105		
	SC-E5	30kW 105A	55kW 105A	55kW 85A	55kW 64A	150		
SC-E6	37kW 125A	60kW 125A	60kW 90A	60kW 72A	150			
SC-E7	45kW 150A	75kW 150A	75kW 120A	90kW 103A	200			

- 2E thermal overload relays

Series	Type	Applicable magnetic contactor types	Power consumption [VA/poles]	Auxiliary contact arrangement	AC voltage (AC-15)	DC voltage (DC-13)	Continuous current [A]	License No.	EN/IEC/others
TK-E Series	TK-E02	SC-E02, E03, E04, E05	1.8	1NO+1NC	24V 3A (0.3A) 120V 2.5A (0.3A) 440V 1A (0.3A) 600V 0.6A (0.3A)	24V 1.1A (0.3A) 120V 0.6A 240V 0.14A	5	R2150072	EN60947-4-1 IEC60947-4-11
	TK-E2	SC-E1, E2, E2S	3.8	1NO+1NC	24V 3A (0.5A) 120V 2.5A (0.5A)	24V 1.1A (0.3A) 120V 0.6A	5		
	TK-E3	SC-E3, E4	6.6	1NO+1NC	440V 1A (0.5A) 600V 0.6A (0.5A)	240V 0.14A	5		
	TK-E5	SC-E5	6.6	1NO+1NC			5		
	TK-E6	SC-E6, E7	8	1NO+1NC			5		

- DC operated magnetic contactors (control circuit: 24VDC/1.2W)

Series	Type	Motor capacity [kW]		Operational current [A]				Continuous current [A]	License No.	EN/IEC/others
		3-phase squirrel-cage (AC-3)		3-phase squirrel-cage (AC-3)		Resistive load (AC-1)				
		200-240V	380-440V	200-240V	380-440V	200-240V	380-440V			
SC-M Series	SC-M01/G1	1	2	6	6	20	20	20	R2018010	EN60947-4-1
	SC-M02/G1	1.7	3.4	9	9	20	20	20		

- DC operated magnetic contactors (control circuit: 24VDC/2W)

Series	Type	Motor capacity [kW]		Operational current [A]				Continuous current [A]	License No.	EN/IEC/others
		3-phase squirrel-cage (AC-3)		3-phase squirrel-cage (AC-3)		Resistive load (AC-1)				
		200-240V	380-440V	200-240V	380-440V	200-240V	380-440V			
SC-M Series	SC-M01/G2	1	2	6	6	20	20	20	R2018010	EN60947-4-1
	SC-M02/G2	1.7	3.4	9	9	20	20	20		

- 2E thermal overload relay (Trip class 10A)

Applicable magnetic contactor	Type	License No.	EN/IEC/others
SC-□	TK-M0	R2018010	EN60947-4-1

- Auxiliary contact block for magnetic contactor

Type	License No.	EN/IEC/others
SZ-MA□	R2018010	EN60947-4-1

● SC-E Series non-reversing magnetic contactors

- AC operated magnetic contactors

Series	Type	Motor capacity [kW]		Operational current [A]				Continuous current [A]	License No.	EN/IEC/others
		3-phase squirrel-cage (AC-3)		3-phase squirrel-cage (AC-3)		Resistive load (AC-1)				
		220-240V	380-440V	220-240V	380-440V	220-240V	380-440V			
SC-E Series	SC-E02	2.2	4	9	9	20	20	20	R50013402	EN60947-4-1
	SC-E03	3	5.5	12	12	20	20	20		
	SC-E04	4	7.5	18	18	25	25	25		
	SC-E05	5.5	11	25	25	32	32	32	R2150072	EN60947-4-1
	SC-E1	7.5	15	32	32	50	50	50		
	SC-E2	11	18.5	40	40	60	60	60		
	SC-E2S	15	22	50	50	65	65	65		
	SC-E3	18.5	30	68	65	100	100	100		
	SC-E4	22	40	80	80	105	105	105		
	SC-E5	30	55	105	105	150	150	150		
	SC-E6	37	60	125	125	150	150	150		
	SC-E7	45	75	150	150	200	200	200		

- DC operated magnetic contactors

Series	Type	Motor capacity [kW]		Operational current [A]				Continuous current [A]	License No.	EN/IEC/others
		3-phase squirrel-cage (AC-3)		3-phase squirrel-cage (AC-3)		Resistive load (AC-1)				
		220-240V	380-440V	220-240V	380-440V	220-240V	380-440V			
SC-E Series	SC-E02/G	2.2	4	9	9	20	20	20	R50013402	EN60947-4-1
	SC-E03/G	3	5.5	12	12	20	20	20		
	SC-E04/G	4	7.5	18	18	25	25	25		
	SC-E05/G	5.5	11	25	25	32	32	32	R2150072	EN60947-4-1
	SC-E1/G	7.5	15	32	32	50	50	50		
	SC-E2/G	11	18.5	40	40	60	60	60		
	SC-E2S/G	15	22	50	50	65	65	65		
	SC-E3/G	18.5	30	68	65	100	100	100		
	SC-E4/G	22	40	80	80	105	105	105		
	SC-E5	30	55	105	105	150	150	150		
	SC-E6	37	60	125	125	150	150	150		
	SC-E7	45	75	150	150	200	200	200		

- Thermal overload relays

Series	Type	Applicable magnetic contactor	License No.	EN/IEC/others
TK Series	TK-E02	SC-E02, E03, E04, E05	R50013402	EN60947-4-1
	TK-E2	SC-E1, E2, E2S	R2150072	EN60947-4-1
	TK-E3	SC-E3, E4		
	TK-E5	SC-E5		
	TK-E6	SC-E6, E7		

● SJ series DC operated high-sensitivity contactor

Type	Specification				TÜV license No.	EN/IEC/others
Magnetic contactor	3-phase squirrel-cage motor capacity (AC3) *1		Continuous current [A]	Auxiliary contact arrangement		
	200-240V	380-440V				
SJ-0AG	2.2kW 8.7A	-	15	1NO, 1NC	R9151519	EN60947-4-1
SJ-0G	2.2kW 8.7A	2.2kW 5A	15	1NO, 1NC		IEC947-4-1
SJ-1SG	4.5kW 18A	4kW 9A	25	2NO, 1NO+1NC	R9351099	

\*1 Shows rated value under IEC standard.

Note: SJ-0G/UL and SJ-1SG/UL types also conform to EN60947-4-1, IEC947-4-1, and TÜV approved.

● FC series magnetic contactor

Type		Rated capacity [kW]		Rated operating current [A]		Continuous current [A]	License No.	EN/IEC/others
		3-phase squirrel-cage motor (AC3)		3-phase squirrel-cage motor (AC3)				
		200-240V	380-440V	200-240V	380-440V			
FC Series	FC-0	3	2.5	12	6	20	J9950193	EN60947-1 EN60947-4-1 EN60947-5-1
	FC-0S	3.5	4.5	15	10	20		
	FC-1	5.5	5.5	20	13	30		
	FC-1S	7.5	7.5	27	18	30		
	FC-2S	11	11	40	20	45		
	FC-3	15	18.5	52	40	60		
	FC-4	18.5	30	65	65	80		