

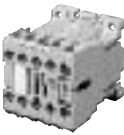






















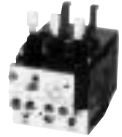






# Contactors SC-M and SC-E series

## Quick reference guide

Contactor	AC operating	SC-M01	SC-M02	SC-E02	SC-E03	SC-E04	SC-E05	SC-E1
	DC operating	SC-M01/G	SC-M02/G	SC-E02/G	SC-E03/G	SC-E04/G	SC-E05/G	SC-E1/G
								
		KK02-292	KK02-292	AF01-12	AF01-11	AF01-10	KK01-105	AF01-8
Rating of 3-phase motor (HP)								
200V		1-1/2	3	2	3	5	5	7 1/2
220-240V		1-1/2	3	2	3	5	7 1/2	10
400-480V		3	5	5	7 1/2	10	15	25
550-600V		3	5	5	7 1/2	10	15	25
Rated operational current (A)								
200V		6.9	11	7.8	11	17.5	17.5	25.3
220-240V		6	9.6	6.8	9.6	15.2	22	28
400-480V		4.8	7.6	7.6	11	14	21	34
550-600V		3.9	6.1	6.1	9	11	17	27
Rated thermal current AC-1 (A)		20	20	20	20	25	32	50
Auxiliary contact		1NO, 1NC	1NO, 1NC	–	–	–	–	–
Dimensions AC operated		45×48×56		43×80×81				54×90×96
W×H×D (mm) DC operated		45×48×68		43×80×108				54×90×121.5
Standard		IEC 60947-1, EN 60947-4-1, VDE 0660, UL 508, CSA C22.2						
<b>Thermal overload relay</b>				<b>TK-E02</b>	<b>TK-E02</b>	<b>TK-E02</b>	<b>TK-E02</b>	<b>TK-E2</b>
								
				KK01-86	KK01-86	KK01-86	KK01-86	KK01-88
Ampere setting range (A)				0.1–0.15	0.1–0.15	0.1–0.15	0.1–0.15	4–6
				0.13–0.2	0.13–0.2	0.13–0.2	0.13–0.2	5–8
				0.15–0.24	0.15–0.24	0.15–0.24	0.15–0.24	6–9
				0.2–0.3	0.2–0.3	0.2–0.3	0.2–0.3	7–11
				0.24–0.36	0.24–0.36	0.24–0.36	0.24–0.36	9–13
				0.3–0.45	0.3–0.45	0.3–0.45	0.3–0.45	12–18
				0.36–0.54	0.36–0.54	0.36–0.54	0.36–0.54	18–26
				0.48–0.72	0.48–0.72	0.48–0.72	0.48–0.72	24–36
				0.64–0.96	0.64–0.96	0.64–0.96	0.64–0.96	
				0.8–1.2	0.8–1.2	0.8–1.2	0.8–1.2	
				0.95–1.45	0.95–1.45	0.95–1.45	0.95–1.45	
				1.4–2.2	1.4–2.2	1.4–2.2	1.4–2.2	
				1.7–2.6	1.7–2.6	1.7–2.6	1.7–2.6	
				2.2–3.4	2.2–3.4	2.2–3.4	2.2–3.4	
				2.8–4.2	2.8–4.2	2.8–4.2	2.8–4.2	
				4–6	4–6	4–6	4–6	
				5–8	5–8	5–8	5–8	
				6–9	6–9	6–9	6–9	
				7–11	7–11	7–11	7–11	
					9–13	9–13	9–13	
						12–18	12–18	
							16–22	
							20–25	
Dimensions W×H×D (mm)				53×60.5×80.5				54×78.5×97
Standard		IEC 60947-1, EN 60947-4-1, VDE 0660, UL 508, CSA C22.2						

# Contactors SC-M and SC-E series

## Quick reference guide

Contactors	AC operating	SC-E2	SC-E2S	SC-E3	SC-E4	SC-E5	SC-E6	SC-E7	
	DC operating	SC-E2/G	SC-E2S/G	SC-E3/G	SC-E4/G				
									
		AF01-7	AF01-6	AF01-5	AF01-4	AF01-3	AF01-2	AF01-1	
Rating of 3-phase motor (HP)									
200V		10	15	20	25	30	40	50	
220-240V		15	20	25	30	30	40	50	
400-480V		30	30	50	50	60	75	100	
550-600V		30	30	50	50	75	100	125	
Rated operational current (A)									
200V		32.2	48.3	63.1	78.2	92	119.6	149.5	
220-240V		42	54	68	80	80	104	130	
400-480V		40	40	65	65	77	96	124	
550-600V		32	32	52	52	77	99	125	
Rated thermal current AC-1 (A)		60	65	100	105	150	150	200	
Auxiliary contact		–	–	–	–	2NO+2NC	2NO+2NC	2NO+2NC	
Dimensions W×H×D (mm)	AC operated	54×90×96			67×112×111		88×155×132	100×169×138	115×175×140
	DC operated	54×90×121.5			67×112×130				
Standard		IEC 60947-1, EN 60947-4-1, VDE 0660, UL 508, CSA C22.2							
<b>Thermal overload relay</b>		<b>TK-E2</b>	<b>TK-E2</b>	<b>TK-E3</b>	<b>TK-E3</b>	<b>TK-E5</b>	<b>TK-E6</b>	<b>TK-E6</b>	
									
		KK01-88	KK01-88	KK01-87	KK01-87	KK01-85	KK01-84	KK01-84	
Ampere setting range (A)									
		4–6	4–6	7–11	7–11	18–26	45–65	45–65	
		5–8	5–8	9–13	9–13	24–36	53–80	53–80	
		6–9	6–9	12–18	12–18	28–40	65–95	65–95	
		7–11	7–11	18–26	18–26	34–50	85–125	85–125	
		9–13	9–13	24–36	24–36	45–65		110–160	
		12–18	12–18	28–40	28–40	65–95			
		18–26	18–26	34–50	34–50	85–105			
		24–36	24–36	45–65	45–65				
		32–42	32–42	48–68	48–68				
			40–50		64–80				
			44–54						
Dimensions W×H×D (mm)		54×78.5×97			68×89.5×107.5		76.5×105×106	100×122×123	
Standard		IEC 60947-1, EN 60947-4-1, VDE 0660, UL 508, CSA C22.2							

# Contactors SC-M and SC-E series

## Quick reference guide

### Available coil

#### AC coil, SC-M01 to SC-M02 and SC-E02 to SC-E4

Code	Coil operating voltage and frequency
24VAC	24V AC 50Hz / 24–26V AC 60Hz
48VAC	48V AC 50Hz / 48–52V AC 60Hz
100VAC	100V AC 50Hz / 100–110V AC 60Hz
110VAC	100–110V AC 50Hz / 110–120V AC 60Hz
120VAC	110–120V AC 50Hz / 120–130V AC 60Hz
200VAC	200V AC 50Hz / 200–220V AC 60Hz
220VAC	200–220V AC 50Hz / 220–240V AC 60Hz
400VAC	380–400V AC 50Hz / 400–440V AC 60Hz
440VAC	415–440V AC 50Hz / 440–480V AC 60Hz
500VAC	480–500V AC 50Hz / 500–550V AC 60Hz

#### DC coil, SC-M01/G to SC-M02/G and SC-E02/G to SC-E4/G

Code	Coil operating voltage
12VDC	12V DC
24VDC	24V DC
48VDC	48V DC
100VDC	100V DC
110VDC	110V DC
200VDC	200V DC

#### Super Magnet Coil, SC-E5 to SC-E7

Code	Coil operating voltage and frequency
24V	24–25V AC 50/60Hz, 24V DC
48V	48–50V AC 50/60Hz, 48V DC
100V	100–127V AC 50/60Hz, 100–120V DC
200V	200–250V AC 50/60Hz, 200–240V DC
400V	380–450V AC 50/60Hz
500V	460–575V AC 50/60Hz

### Coil characteristics

#### AC operation

Frame size	Power consumption (VA)		Power loss (W)		Pick-up voltage (V) *1	Drop-out voltage (V) *1	Operating time (ms)	
	Inrush 50/60 Hz	Sealed 50/60 Hz	50Hz	60Hz			Coil ON → Contact ON	Coil OFF → Contact OFF
M01, M02	32/36	6/6	1.5	1.6	0.8–1.1 X US	0.35–0.55 X US	7–12	6–13
E02 to E05	90/95	9/9	2.7	2.8	0.85–1.1 X US	0.2–0.75 X US	9–20	5–16
E1 to E2S	120/135	12.7/12.4	3.6	3.8	0.85–1.1 X US	0.2–0.75 X US	10–17	6–13
E3, E4	180/190	13.3/13.4	4.5	5	0.85–1.1 X US	0.2–0.75 X US	10–18	8–18
E5	80/95	4/4.6	3.2	3.6	0.85–1.1 X US	0.2–0.75 X US	39–45	27–33
E6, E7	190/230	4.9/5.8	3.4	3.7	0.8–1.1 X US	0.1–0.65 X US	31–37	30–36

Note: \*1 US: Rated coil voltage

#### DC operation

Frame size	Power consumption (VA)		Time constant (ms)	Pick-up voltage (V) *1	Drop-out voltage (V) *1	Operating time (ms)	
	Inrush	Sealed				Coil ON → Contact ON	Coil OFF → Contact OFF
M01/G, M02/G	3	3	35	0.8–1.1 X US	0.2–0.4 X US	24–27	5–8
E02/G to E05/G	7	7	50	0.85–1.1 X US	0.1–0.75 X US	45–49	10–26
E1/G to E2S/G	9	9	60	0.85–1.1 X US	0.1–0.75 X US	40–50	8–17
E3/G, E4/G	12	12	70	0.85–1.1 X US	0.1–0.75 X US	60–70	14–21
E5	20	2.8	1	0.85–1.1 X US	0.1–0.75 X US	35–41	26–32
E6, E7	225	3.2	1	0.8–1.1 X US	0.1–0.65 X US	28–34	27–33

Note: \*1 US: Rated coil voltage

### Auxiliary contact ratings for UL and CSA

Frame size	Rated insulation voltage (V)	Rated thermal current (A)	Making and breaking current (A)					
			AC (rating code A600)			DC (rating code Q300)		
			Voltage	Making	Breaking	Voltage	Making	Breaking
M01, M02 M01/G, M02/G	600	16	120V	60	6	125V	0.55	0.55
			240V	30	3	250V	0.27	0.27
			480V	15	1.5	301-600V	0.1	0.1
			600V	12	1.2			
E02 to E4, E02/G to E4/G	–	–	–	–	–	–	–	–
E5 to E7	600	10	120V	60	6	125V	0.55	0.55
			240V	30	3	250V	0.27	0.27
			480V	15	1.5			
			600V	12	1.2			

# Contactors SC-M and SC-E series

## Ordering information and Characteristics

### Ordering information

Specify the following :

- 1. Part number
- 2. Operating coil voltage code
- 3. Auxiliary contact arrangement (SC-M series only)

**SC-M 01 /G - 24VAC - 1NO**

Product category

Frame size

AC coil operating: None  
DC coil operating: /G

Aux. contact arrangement  
1NO or 1NC required

Operating coil voltage code  
(see page 34)

**SC-E 02 /G - 24VAC**

Product category

Frame size

Operating coil voltage code  
(see page 34)

AC coil operating: None  
DC coil operating: /G