SASSIN

Better Electric, Better Life

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Specifications and technical date are subject to change without notice. Please contact us for any relevant information on ordering.

SASSIN V 28.3 PRODUCT CATALOG

SASSIN

Industrial Control Electrics





Company Profile

As one of the leading enterprises in the low voltage electrics field in China, Sassin International Electric Shanghai Co., Ltd is committed to offering professional solutions of low voltage electric and smart electricity for different fields customers from the countries and regions around the world, to satisfy worldwide customers' requirements on utilizing energy more safely and conveniently, help customers to constantly improve efficiency of production and energy, and reducing their impact on the environment.

Sassin focuses on the global market, driving the company development with technical R&D. Sassin is committed to researching and developing different low electric products to satisfy the different requirements from customers all over the world. With the trend of intelligent electricity, Sassin has developed the smart electric devices and Smart Power Management System - SPMS to protect the safety of life and property, make the electricity management easily and remotely in any time at any place, and improve the power efficiency. In order to achieve the quick R&D, Sassin has set up the Test Center including a 10kA Short Circuit Breaking Laboratory, the Test Center has been certified by the CNAS (China National Accreditation Service for Conformity Assessment).

Quality is company's life. Sassin is always sparing no effort to promote the construction of quality management system and improve it. For this purpose, Sassin implemented the Total Quality Management System, and oriented by market and customers, to drive the employees and suppliers focusing on the continuous improvement of product quality. Sassin has been certified by the ISO9001 Quality Management System and ISO14001 Environment Management System.

Corporate Culture - Value System

Vision

Better Electric, Better Life.

Mission

Make Electric Safe, Simple, Smart.

Value

Confidence, Faith, Credit.

Catalog Classification

V 28.1 Power Distribution Electrics

Air Circuit Breakers / Moulded Case Circuit Breakers / Automatic Transfer Switches / Fuses



V 28.2 Modular DIN Rail Devices

MCB / Residual Current Devices / Surge Protective Devices / Switching Devices / Distribution Boxes



V 28.3 Industrial Control and Protection

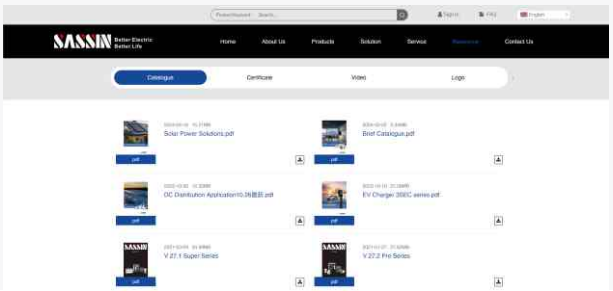
Contactors / Starters / Thermal Overload Relays / Motor Protection Circuit Breakers

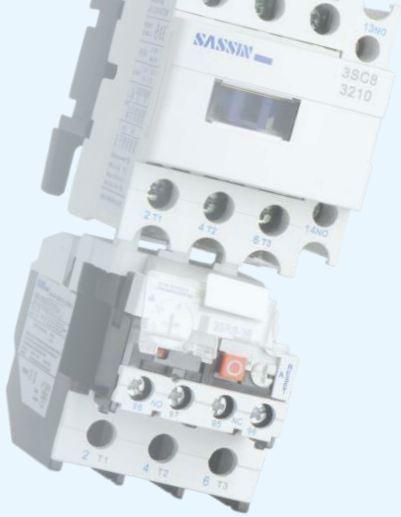


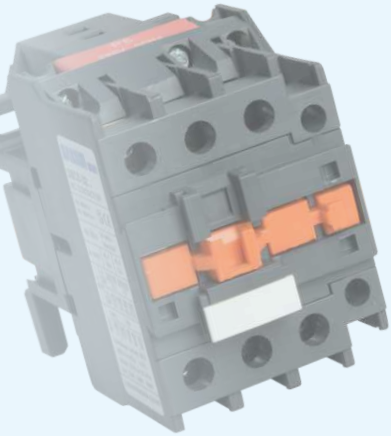
Online Catalog

All catalogs can be downloaded as PDF files from SASSIN website.

www.sassin.com











Industrial Control and Protection

Contactors

P 1-3 3SC8-K, mini contactors, up to 5.5 kW
P 4-7 3SC8, contactors, up to 45 kW
P 8-10 VC51, contactors, up to 45 kW
P 11-14 Additional Components for Contadors
P 15-19 3SC8-F, contactors, up to 400 kW
P 20-21 3SC19, contactors for capacitor switching

Thermal Overload Relays

P 22-23 3SR8-K, from 0.11 to 14 A
P 24-26 3SR8, from 0.1 to 93 A
P 27-29 VTR51, from 0.1 to 93 A
P 30-31 3SR8-F, from 30 to 630 A

Starters

P 32-33 3SQ1 & VQ51, direct-on-line (DOL) starters
P 34-35 3SQ8 & VXQ51, star-delta startors

Motor Protection Circuit Breakers

P 36-39 3SM18, from 0.1 to 80 A

Contents

Applications and functions for AC contactor

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.



Instruction of type code

- For contactor

C8 K 06 10 P5

- P5: Coil code
- 10: Quantity of contact
  - 01: 3NO+1NC
  - 10: 3NO+1NO
  - 004: 4NO
  - 008: 2NO+2NC
- 06: Rated operational current in category AC-3 at 400V: 06, 09, 12
- K: Model code
- C8: Series code





- For auxiliary contactor

C8 A1 / N02

- N02: Code of auxiliary contact
  - N02: 2NC
  - N11: 1NO+1NC
  - N20: 2NO
  - N04: 4NC
  - N13: 1NO+3NC
  - N22: 2NO+2NC
  - N31: 3NO+1NC
  - N40: 4NO
- A1: Model code
- C8: Series code

3

Technical specifications for type 3SC8-K

Type		3SC8-K0610, 3SC8-K0601, 3SC8-K06004, 3SC8-K06008	3SC8-K0910, 3SC8-K0901, 3SC8-K09004, 3SC8-K09008	3SC8-K1210, 3SC8-K1201, 3SC8-K12004, 3SC8-K12008
Standard		IEC 60947-4-1		
Number of contacts		3NO+1NO, 3NO+1NC, 4NO, 2NO+2NC		
Rated conventional thermal current Ith (A)	AC-1	20		
Rated operational voltage Ue (V)		690		
Rated insulation voltage Ui (V)		690		
Rated impulse withstand voltage Uimp (kV)		6		
Rated frequency (Hz)		50/60		
Rated operational current (A)	AC-3 380/400 V	6	9	12
	AC-4 380/400 V	2.6	3.5	5
Number of poles		3,4	3,4	3,4
Rated operational power in category AC-3 (KW)	220/230/240 V	1.5	2.2	3
	380/400 V	2.2	4	5.5
	660/690 V	3	4	5.5
Rated making capacity (A)		110	110	114
Rated breaking capacity (A)	380 V	100	100	100
	690 V	70	70	70
Short-circuit protection (A)	gG fuse U ≤ 440 V	25		
Average impedance per pole (mW)		3		
Add-on auxiliary contact blocks	Front	3SC8-A1/KN		
	Side	-		
	Front time delay	-		
	Front dust and damp protected	-		
Reversing contactor type		3SC8-KN		
Associated thermal overload relays	3 Pins/5 Pins	3SR8-K		
Operation cycles(times/hour)	Electrical AC-3	1200		
	Electrical AC-4	300		
	Mechanical	3600		
Electrical life (× 10^4 times)	AC-3	100	120	
	AC-4	20		
Mechanical life (× 10^4 times)		1000		
Matching fuse model		RT16-16	RT16-20	
Tightening torque (N·m)		0.8		
Connection				
Screw clamp terminals	solid conductor (mm^2)	Max. 1×4+1×2.5		
	Flexible conductor without cable end (mm^2)	Max. 2×2.5		
	Flexible conductor with cable end (mm^2)	Max. 1×1.5+1×2.5		
Degree of protection		IP20		
Ambient air temperature (°C)		-5 to +40, max. 95 % humidity		
Storage temperature (°C)		-40 ~ +75		
Maximum operating altitude (meters)		2000		
Flame resistance	Conforming to UL 94	V1		

Technical specifications for auxiliary contact incorporated in the contactor type 3SC8-K

- Standard: IEC 60947-5-1
- Number of auxiliary contact: 2, 4
- Mounting type: Front
- Conventional heating current (A): 10
- Rated operational voltage Ue (V): Up to 690
- Rated insulation voltage Ui (V): 690
- Conventional thermal current Ith (A): 10
- Minimum switching capacity Im (mA): 5
- Short circuit protection (A): 10
- Rated making capacity (A): 110

Coil voltage of contactor 3SC8-K

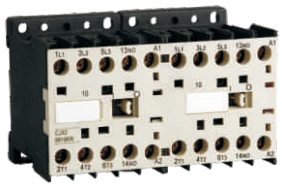
Coil voltage Us (V)	12	20	24	32	36	42	48	60	100	110	115	120	127	208	220	230	240	265	380	400	415	440	480	500	550	600	550/600 600/660	660/690
50 Hz	J5	-	B5	C5	-	D5	E5	-	-	F5	FE5	G5	FC5	LE5	M5	P5	U5	-	Q5	V5	N5	R5	T5	S5	SC5	X5	-	Y5
60 Hz	-	-	B6	-	-	-	E6	-	-	F6	-	-	-	-	M6	-	U6	-	Q6	-	-	R6	-	-	-	-	-	Y6
50/60 Hz	J7	Z7	B7	C7	CC7	D7	E7	EE7	K7	F7	FE7	-	FC7	-	M7	P7	U7	W7	Q7	V7	N7	R7	-	S7	-	-	X7	Y7

Selection and ordering data

3

	Rated operational current in category AC-3 400 V (A)	Number of poles		Instantaneous auxiliary contacts		230 V 50 Hz Please contact us for other coil voltage	
						Type code	Order code
3SC8-K contactor	6	3	-	-	1	C8 K0601P5	**11373**
		3	-	1	-	C8 K0610P5	**11374**
	9	3	-	-	1	C8 K0901P5	**11377**
		3	-	1	-	C8 K0910P5	**11378**
	12	3	-	-	1	C8 K1201P5	**11381**
		3	-	1	-	C8 K1210P5	**11382**
	6	4	-	-	-	C8 K06004P5	**11375**
		2	2	-	-	C8 K06008P5	**11376**
	9	4	-	-	-	C8 K09004P5	**11379**
		2	2	-	-	C8 K09008P5	**11380**
	12	4	-	-	-	C8 K12004P5	**11383**
		2	2	-	-	C8 K12008P5	**11384**
3SC8-KN reversing contactors	6	3	-	-	1	C8 KN0601P5	**15576**
		3	-	1	-	C8 KN0610P5	**15697**
		4	-	-	-	C8 KN06004P5	**15703**
	9	3	-	-	1	C8 KN0901P5	**15577**
		3	-	1	-	C8 KN0910P5	**15698**
		4	-	-	-	C8 KN09004P5	**15704**
	12	3	-	-	1	C8 KN1201P5	**15578**
		3	-	1	-	C8 KN1210P5	**15699**
		4	-	-	-	C8 KN12004P5	**15705**





3SC8-A1/KN

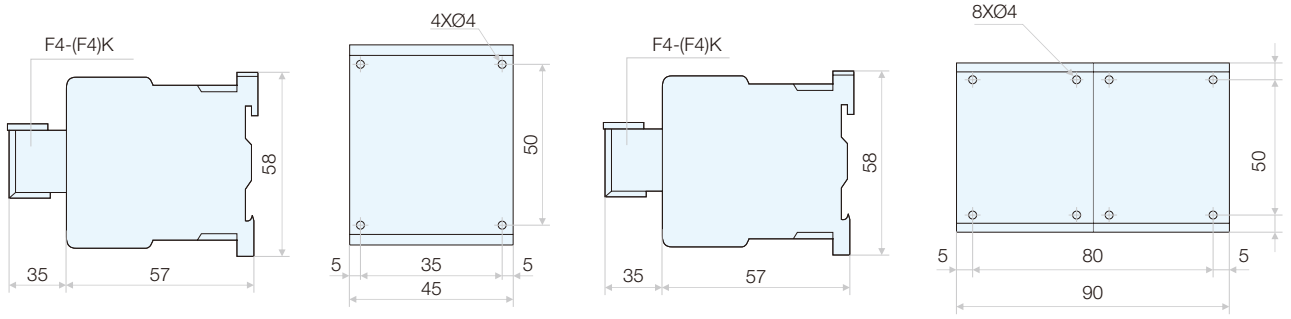
	Auxiliary contacts		Type code	Order code
	0	2	C8K A1/N02	**33032**
	1	1	C8K A1/N11	**33033**
	2	0	C8K A1/N20	**33034**
	0	4	C8K A1/N04	**33035**
	1	3	C8K A1/N13	**33036**
	2	2	C8K A1/N22	**33037**
	3	1	C8K A1/N31	**33038**
	4	0	C8K A1/N40	**33039**





Outline and installation dimensions

unit in mm



3

Applications and functions for AC contactor 3SC8

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.



Instruction of type code

C8 09 10 P7

- P7: Coil code
- 10: Quantity of contact
  - 10: 3 NO + 1 NO (Ie ≤ 32A)
  - 01: 3 NO + 1 NC (Ie ≤ 32A)
  - 11: 3 NO + 1 NO + 1 NC
  - 004: 4 NO (40 ... 95 A)
  - 008: 2 NO + 2 NC (40 ... 95 A)
- 09: Rated working current in category AC-3 at 400 V AC (A): 09, 12, 18, 25, 32, 40, 50, 65, 80, 95
- C8: Series code

Technical specifications for type 3SC8

Type			3SC8-09	3SC8-12	3SC8-18	3SC8-25	3SC8-32	3SC8-40	3SC8-50	3SC8-65	3SC8-80	3SC8-95
Standard			IEC 60947-4-1									
Number of poles			3, 4	3, 4	3	3, 4	3	3, 4	3, 4	3, 4	3, 4	3, 4
Rated operational current Ie (A)	380 V	In AC-3	9	12	18	25	32	40	50	65	80	95
		In AC-4	3.5	5	7.7	8.5	12	18.5	24	28	37	44
	660 V	In AC-3	6.6	8.9	12	18	21	34	39	42	49	55
		In AC-4	1.5	2	3.8	4.4	7.5	9	12	14	17.3	21.3
	440 V	In AC-1	20	25	32	40	50	60	80	80	110	125
Rated operational voltage Ue (V)		Up to	690									
Frequency limits of the operational current (time/h)			25-400									
Rated conventional thermal current Ith (A)			25	25	32	40	50	60	80	80	125	125
Rated insulation voltage Ui (V)			690									
Rated impulse withstand voltage Uimp (kV)			8									
Rated frequency (Hz)			50/60									
Rated making capacity (A)	400 V		10 × Ie AC-3 or 12 × Ie AC-4									
Rated breaking capacity (A)	400 V		8 × I e AC-3 or 10 × Ie AC-4									
Rated operational power in category AC-3 (kw)	220/230/240 V		2.2	3	4	5.5	7.5	11	15	18.5	22	25
	380/400 V		4	5.5	7.5	11	15	18.5	22	30	37	45
	660/690 V		5.5	7.5	10	15	18.5	30	33	37	45	45
Fuse protection against short-circuit (A)	Without thermal overload relay, Gg fuse Type 1		20	25	32	40	50	63	80	80	125	160
	Type 2		20	20	25	32	40	50	63	80	150	150
	With thermal overload relay		See specification and ordering data of 3SR8, for aM or gG fuse ratings corresponding to the associated thermal overload relay									
Average impedance per pole (mΩ)			2.5	2.5	2.5	2	2	1.5	1.5	1.5	0.8	0.8
Add-on auxiliary contact blocks	Front		3SC8-A1 and 3SC8-A1D									
	Side		3SC8-A1C									
	Front time delay		3SC8-A2									
	Front dust and damp protected		■									
Reversing contactor type			3SC8-DN									
Associated thermal overload relays			3SR8-25				3SR8-36	3SR8-93				
Operation cycles (times/hour)	Electrical AC-3		1200	1200	1200	1200	600	600	600	600	600	600
	Electrical AC-4		300	300	300	300	300	300	300	300	300	300
	Mechanical		3600	3600	3600	3600	3600	3600	3600	3600	3600	3600
Electrical life (× 10^3 times)	AC-3		1000	1000	1000	1000	800	800	600	600	600	600
	AC-4		200	200	200	200	200	150	150	150	100	100
Mechanical life (× 10^6 times)			10	10	10	10	8	8	8	8	6	6
Matching fuse model			RT16-20	RT16-20	RT16-32	RT16-40	RT16-50	RT16-63	RT16-80	RT16-80	RT16-100	RT16-125
Tightening torque (N · m) Connection			1.2	1.2	1.7	2.0	2.5	5	5	5	9	9
Cabling cross section (CU)	Flexible cable with cold-pressed 2 socket (mm^2)		1/2.5	1/2.5	1/4	1/4	1.5/4	2.5/10	2.5/10	2.5/10	4/16	4/16
	Flexible cable without cold-pressed 2 socket (mm^2)		1/4	1/4	1.5/6	1.5/6	2.5/10	2.5/16	2.5/16	2.5/16	4/25	4/25
	Inflexible 2 cable (mm^2)		1/4	1.5/4	1.5/6	1.5/6	1.5/10	2.5/25	2.5/25	2.5/25	4/50	4/50
Screw size			M3.5	M3.5	M3.5	M4	M4	M8	M8	M8	M10	M10
Degree of protection			IP20									
Ambient air temperature (°C)			-5 to +40, max. 95 % humidity									
Storage temperature (°C)			-40 ~ +75									
Maximum operating altitude (meters)			2000									
Flame resistance	Conforming to UL 94		V1									

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Selection and ordering data

	Rated operational power AC-3 220/230 V (kW)	380/400 V (kW)	660/690 V (kW)	Rated operational current AC-3 380/400 V (A)	Main contact		Rated control circuit voltage V 50/60 Hz	Auxiliary contact		Type code	Order code
	2.2	4	5.5	9	3	0	230	1	0	C8N 0910P7	**27432**
					3	0		0	1	C8N 0901P7	**27431**
					3	0		1	1	C8N 0911P7	**27433**
					4	0		0	0	C8N 09004P7	**27451**
					2	2		0	0	C8N 09008P7	**27452**
	3	5.5	7.5	12	3	0	230	1	0	C8N 1210P7	**27435**
					3	0		0	1	C8N 1201P7	**27434**
					3	0		1	1	C8N 1211P7	**27436**
					4	0		0	0	C8N 12004P7	**27453**
					2	2		0	0	C8N 12008P7	**27454**
	4	7.5	10	18	3	0	230	1	0	C8N 1810P7	**27438**
					3	0		0	1	C8N 1801P7	**27437**
					3	0		1	1	C8N 1811P7	**27439**
	5.5	11	15	25	3	0	230	1	0	C8N 2510P7	**27441**
					3	0		0	1	C8N 2501P7	**27440**
					3	0		1	1	C8N 2511P7	**27442**
					4	0		0	0	C8N 25004P7	**27455**
					2	2		0	0	C8N 25008P7	**27456**
	7.5	15	18.5	32	3	0	230	1	0	C8N 3210P7	**27444**
					3	0		0	1	C8N 3201P7	**27443**
					3	0		1	1	C8N 3211P7	**27445**
	11	18.5	30	40	3	0	230	1	1	C8N 4011P7	**27446**
					4	0		0	0	C8N 40004P7	**27457**
					2	2		0	0	C8N 40008P7	**27458**
	15	22	33	50	3	0	230	1	1	C8N 5011P7	**27447**
					4	0		0	0	C8N 50004P7	**27459**
					2	2		0	0	C8N 50008P7	**27460**
	18.5	30	37	65	3	0	230	1	1	C8N 6511P7	**27448**
					4	0		0	0	C8N 65004P7	**27461**
					2	2		0	0	C8N 65008P7	**27462**
	22	37	45	80	3	0	230	1	1	C8N 8011P7	**27449**
					4	0		0	0	C8N 80004P7	**27463**
					2	2		0	0	C8N 80008P7	**27464**
	25	45	45	95	3	0	230	1	1	C8N 9511P7	**27450**
					4	0		0	0	C8N 95004P7	**27465**
					2	2		0	0	C8N 95008P7	**27466**

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor".

3SC8-DN reversing contactors

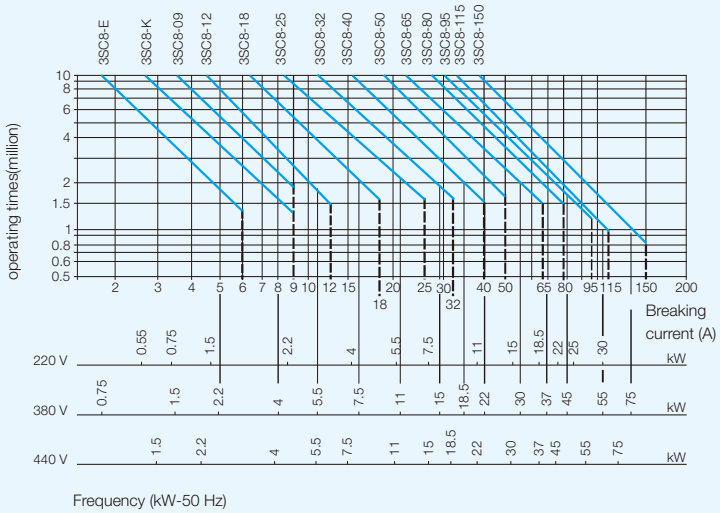
	Rated operational power AC-3 220/230 V (kW)	380/400 V (kW)	660/690 V (kW)	Rated operational current AC-3 380/400 V (A)	Rated control circuit voltage V 50 Hz	Type code	Order code
	2.2	4	5.5	9	230	C8 DN09P7	**38450**
	3	5.5	7.5	12	230	C8 DN12P7	**38451**
	4	7.5	10	18	230	C8 DN18P7	**38452**
	5.5	11	15	25	230	C8 DN25P7	**38453**
	7.5	15	18.5	32	230	C8 DN32P7	**38454**
	11	18.5	30	40	230	C8 DN40P7	**38455**
	15	22	33	50	230	C8 DN50P7	**38456**
	18.5	30	37	65	230	C8 DN65P7	**38457**
	22	37	45	80	230	C8 DN80P7	**38458**
	25	45	45	95	230	C8 DN95P7	**38459**

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor".

Electrical life curve for AC contactor 3SC8

For breaking control when AC-3 type work. (Ue ≤ 440 V)
The breaking current is equal to rated making current.

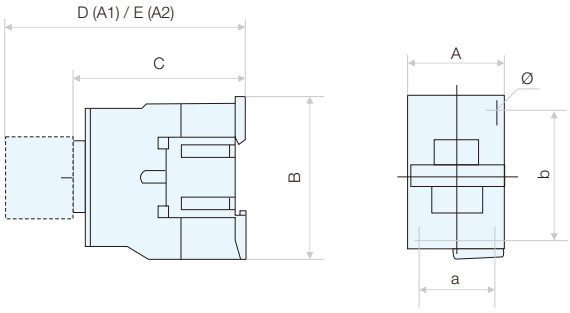
Notes:
Asynchronous, P = 5.5 kW,
Ue = 400 V, Ie = 11 A, Ic = Ie = 11 A
motor or asynchronous, P = 5.5 kW,
Ue = 415 V, Ie = 11 A, Ic = Ie = 11 A
For 30 million electrical life.



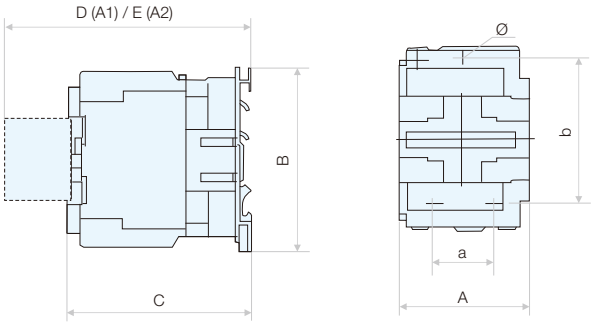
Outline and installation dimensions

unit in mm

3SC8-09...32



3SC8-40...95



Type		A max	B max	C max	D max	E max	a	b	Ø
3	3SC8-09...12	47	76	82	113	133	34/35	50/60	2-Ø4.5
	3SC8-18	47	76	87	118	138	34/35	50/60	2-Ø4.5
	3SC8-25	57	86	95	126	146	40	48	2-Ø4.5
	3SC8-32	57	86	100	131	151	40	48	2-Ø4.5
	3SC8-40...65	77	129	116	145	165	40	100/110	3-Ø6.5
	3SC8-80...95	87	129	127	156	176	40	100/110	3-Ø6.5
4	3SC8-09...12	47	76	82	113	133	34/35	50/60	2-Ø4.5
	3SC8-25	57	86	95	126	146	40	48	2-Ø4.5
	3SC8-40...65	86	129	116 (129)	145	165	40	100/110	3-Ø6.5
	3SC8-80...95	97	129	127 (140)	156	176	40	100/110	3-Ø6.5

Notes: The dimensions in brackets are for 008 (4P) type

Applications and functions

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolating, capacitor switching and lighting.



Technical specifications for type VC51

Type			VC51-09	VC51-12	VC51-18	VC51-25	VC51-32	VC51-40	VC51-50	VC51-65	VC51-80	VC51-95
Standard			IEC 60947-4-1									
Number of poles			3, 4	3, 4	3	3, 4	3	3, 4	3, 4	3, 4	3, 4	3, 4
Rated operational current Ie (A)	380 V	In AC-3	9	12	18	25	32	40	50	65	80	95
		In AC-4	3.5	5	7.7	8.5	12	18.5	24	28	37	44
	660 V	In AC-3	6.6	8.9	12	18	21	34	39	42	49	55
		In AC-4	1.5	2	3.8	4.4	7.5	9	12	14	17.3	21.3
	440 V	In AC-1	20	25	32	40	50	60	80	80	110	125
Rated operational voltage Ue (V)		Up to	690									
Frequency limits of the operational current (time/h)			25-400									
Rated conventional thermal current Ith (A)			25	25	32	40	50	60	80	80	125	125
Rated insulation voltage Ui (V)			690									
Rated impulse withstand voltage Uimp (kV)			8									
Rated frequency (Hz)			50/60									
Rated making capacity (A)	400 V		10 x Ie AC-3 or 12 x Ie AC-4									
Rated breaking capacity (A)	400 V		8 x I e AC-3 or 10 x Ie AC-4									
Rated operational power in category AC-3 (kw)	220/230/240 V		2.2	3	4	5.5	7.5	11	15	18.5	22	25
	380/400 V		4	5.5	7.5	11	15	18.5	22	30	37	45
	660/690 V		5.5	7.5	10	15	18.5	30	33	37	45	45
Fuse protection against short-circuit (A)	Without thermal overload relay, Gg fuse	Type 1	20	25	32	40	50	63	80	80	125	160
	Type 2		20	20	25	32	40	50	63	80	150	150
	With thermal overload relay		See specification and ordering data of VTR51, for aM or gG fuse ratings corresponding to the associated thermal overload relay									
Average impedance per pole (mΩ)			2.5	2.5	2.5	2	2	1.5	1.5	1.5	0.8	0.8
Add-on auxiliary contact blocks	Front		VC51-A1 and VC51-A1D									
	Side		VC51-A1C									
	Front time delay		VC51-A2, VC51-A3									
	Front dust and damp protected		■									
Reversing contactor type			VC51DN									
Associated thermal overload relays			VTR51-25				VTR51-36	VTR51-93				
Operation cycles (times/hour)	Electrical AC-3		1200	1200	1200	1200	600	600	600	600	600	600
	Electrical AC-4		300	300	300	300	300	300	300	300	300	300
	Mechanical		3600	3600	3600	3600	3600	3600	3600	3600	3600	3600
Electrical life (X 10^3 times)	AC-3		1000	1000	1000	1000	800	800	600	600	600	600
	AC-4		200	200	200	200	200	150	150	150	100	100
Mechanical life (X 10^6 times)			10	10	10	10	8	8	8	8	6	6
Matching fuse model			RT16-20	RT16-20	RT16-32	RT16-40	RT16-50	RT16-63	RT16-80	RT16-80	RT16-100	RT16-125
Tightening torque (N · m) Connection			1.2	1.2	1.7	2.0	2.5	5	5	5	9	9
Cabling cross section (CU)	Flexible cable with cold-pressed 2 socket (mm^2)		1/2.5	1/2.5	1/4	1/4	1.5/4	2.5/10	2.5/10	2.5/10	4/16	4/16
	Flexible cable without cold-pressed 2 socket (mm^2)		1/4	1/4	1.5/6	1.5/6	2.5/10	2.5/16	2.5/16	2.5/16	4/25	4/25
	Inflexible 2 cable (mm^2)		1/4	1.5/4	1.5/6	1.5/6	1.5/10	2.5/25	2.5/25	2.5/25	4/50	4/50
Screw size			M3.5	M3.5	M3.5	M4	M4	M8	M8	M8	M10	M10
Degree of protection			IP20									
Ambient air temperature (°C)			-5 to +40, max. 95 % humidity									
Storage temperature (°C)			-40 ~ +75									
Maximum operating altitude (meters)			2000									
Flame resistance	Conforming to UL 94		V1									

Selection and ordering data

AC contactors VC51, 2.2 to 45 kW



Rated operational power AC-3 220/230 V (kW)	Rated operational power AC-3 380/400 V (kW)	Rated operational power AC-3 660/690 V (kW)	Rated operational current AC-3 380/400 V (A)	Main contact		Rated control circuit voltage V 50 Hz	Auxiliary contact		Type code	Order code
2.2	4	5.5	9	3	0	220	1	0	VC51-0910M5	**35306**
				3	0		0	1	VC51-0901M5	**15200**
				3	0		1	1	VC51-0911M5	**15201**
				4	0		0	0	VC51-09004M5	**17600**
				2	2		0	0	VC51-09008M5	**17601**
3	5.5	7.5	12	3	0	220	1	0	VC51-1210M5	**35308**
				3	0		0	1	VC51-1201M5	**15202**
				3	0		1	1	VC51-1211M5	**15203**
				4	0		0	0	VC51-12004M5	**17602**
				2	2		0	0	VC51-12008M5	**17603**
4	7.5	10	18	3	0	220	1	0	VC51-1810M5	**35310**
				3	0		0	1	VC51-1801M5	**15204**
				3	0		1	1	VC51-1811M5	**15205**
5.5	11	15	25	3	0	220	1	0	VC51-2510M5	**15206**
				3	0		0	1	VC51-2501M5	**38854**
				3	0		1	1	VC51-2511M5	**38855**
				4	0		0	0	VC51-25004M5	**17604**
				2	2		0	0	VC51-25008M5	**17605**
7.5	15	18.5	32	3	0	220	1	0	VC51-3210M5	**38856**
				3	0		0	1	VC51-3201M5	**38857**
				3	0		1	1	VC51-3211M5	**38858**
11	18.5	30	40	3	0	220	1	1	VC51-4011M5	**38859**
				4	0		0	0	VC51-40004M5	**17606**
				2	2		0	0	VC51-40008M5	**17607**
15	22	33	50	3	0	220	1	1	VC51-5011M5	**38860**
				4	0		0	0	VC51-50004M5	**17608**
				2	2		0	0	VC51-50008M5	**17609**
18.5	30	37	65	3	0	220	1	1	VC51-6511M5	**38861**
				4	0		0	0	VC51-65004M5	**17610**
				2	2		0	0	VC51-65008M5	**17611**
22	37	45	80	3	0	220	1	1	VC51-8011M5	**38862**
				4	0		0	0	VC51-80004M5	**17612**
				2	2		0	0	VC51-80008M5	**17613**
25	45	45	95	3	0	220	1	1	VC51-9511M5	**38863**
				4	0		0	0	VC51-95004M5	**17614**
				2	2		0	0	VC51-95008M5	**17615**

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor".

VC51DN reversing contactors

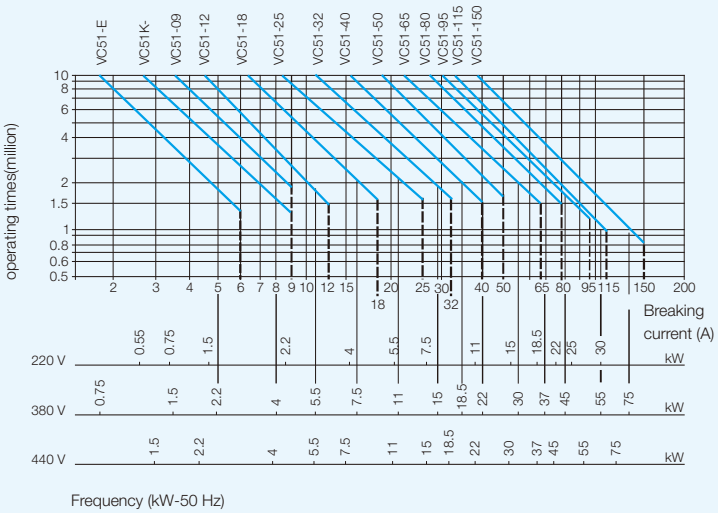
Rated operational power AC-3 220/230 V (kW)	Rated operational power AC-3 380/400 V (kW)	Rated operational power AC-3 660/690 V (kW)	Rated operational current AC-3 380/400 V (A)	Rated control circuit voltage V 50 Hz	Type code	Order code
2.2	4	5.5	9	230	VC51DN-09P7	**17616**
3	5.5	7.5	12	230	VC51DN-12P7	**17616**
4	7.5	10	18	230	VC51DN-18P7	**35276**
5.5	11	15	25	230	VC51DN-25P7	**35277**
7.5	15	18.5	32	230	VC51DN-32P7	**35278**
11	18.5	30	40	230	VC51DN-40P7	**35279**
15	22	33	50	230	VC51DN-50P7	**15961**
18.5	30	37	65	230	VC51DN-65P7	**15962**
22	37	45	80	230	VC51DN-80P7	**15963**
25	45	45	95	230	VC51DN-95P7	**15964**

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor".

Electrical life curve for AC contactor VC51

For breaking control when AC-3 type work. (Ue ≤ 440 V)
The breaking current is equal to rated making current.

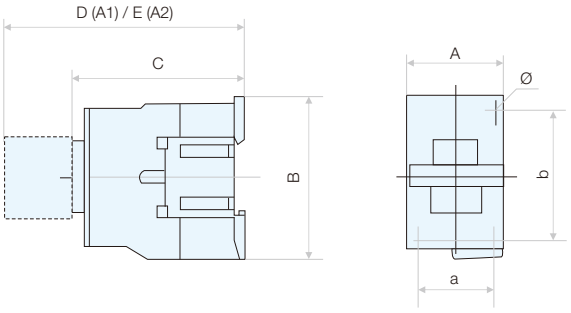
Notes:
Asynchronous, P = 5.5 kW,
Ue = 400 V, Ie = 11 A, Ic = Ie = 11 A
motor or asynchronous, P = 5.5 kW,
Ue = 415 V, Ie = 11 A, Ic = Ie = 11 A
For 30 million electrical life.



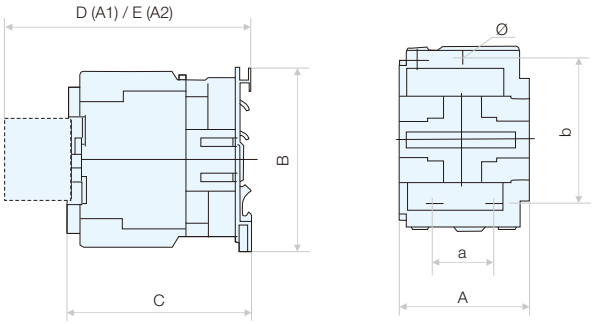
Outline and installation dimensions

unit in mm

VC51-09...32



VC51-40...95



Type		A max	B max	C max	D max	E max	a	b	Ø
3	VC51-09...12	47	76	82	113	133	34/35	50/60	2-Ø4.5
	VC51-18	47	76	87	118	138	34/35	50/60	2-Ø4.5
	VC51-25	57	86	95	126	146	40	48	2-Ø4.5
	VC51-32	57	86	100	131	151	40	48	2-Ø4.5
	VC51-40...65	77	129	116	145	165	40	100/110	3-Ø6.5
	VC51-80...95	87	129	127	156	176	40	100/110	3-Ø6.5
4	VC51-09...12	47	76	82	113	133	34/35	50/60	2-Ø4.5
	VC51-25	57	86	95	126	146	40	48	2-Ø4.5
	VC51-40...65	86	129	116 (129)	145	165	40	100/110	3-Ø6.5
	VC51-80...95	97	129	127 (140)	156	176	40	100/110	3-Ø6.5

Notes: The dimensions in brackets are for 008 (4P) type

Derivative products of AC contactor

Suitable for 3SC8 & PC61 & VC51


Contactor


Time-delay auxiliary contact


Contactor


Contactor


Mechanical interlock


Reversing contactor


Contactor


Thermal relay


DOL Starter


Contactor


Auxiliary block


Capacitor Switching Contactor


Contactor


Time-delay auxiliary contact


Auxiliary contact block


Star-delta starter

Technical specifications for auxiliary contacts incorporated in the contactor 3SC8 & PC61 & VC51

- Standard: IEC 60947-5-1
- Number of auxiliary contacts: 2, 4
- Mounting type: Front, side
- Conventional heating current (A): 10
- Rated operational voltage Ue (V): Up to 690
- Rated insulation voltage Ui (V): 690
- Conventional thermal current Ith (A): 10
- Minimum switching capacity Imin (mA): 5
- Short circuit protection (A): gG fuse: 10 A
- Rated making capacity (A): 140

Technical specifications for time delay contact incorporated in the contactor 3SC8 & PC61 & VC51

- Standard: IEC 60255-5
- Number of contacts: 2
- Mounting type: Front
- Delay time type: making time delay, breaking time delay
- Timing ranges: 0.1-3, 0.1-30, 10-180
- Repeat accuracy: ± 3 % (10 ms minimum)
- Reset time
  - During time delay period (ms): 150
  - After time delay period (ms): 50
- Conventional heating current (A): 10
- Rated operational voltage Ue (V): Up to 690
- Rated insulation voltage Ui (V): 250
- Conventional thermal current Ith (A): 10

Coil voltage of contactor 3SC8 & PC61 & VC51

Coil voltage Us (V)	12	20	24	32	36	42	48	60	100	110	115	120	127	208	220	230	240	265	380	400	415	440	480	500	550	600	550/600 600/660	660/690
50 Hz	J5	-	B5	C5	-	D5	E5	-	-	F5	FE5	G5	FC5	LE5	M5	P5	U5	-	Q5	V5	N5	R5	T5	S5	SC5	X5	-	Y5
60 Hz	-	-	B6	-	-	-	E6	-	-	F6	-	-	-	-	M6	-	U6	-	Q6	-	-	R6	-	-	-	-	-	Y6
50/60 Hz	J7	Z7	B7	C7	CC7	D7	E7	EE7	K7	F7	FE7	-	FC7	-	M7	P7	U7	W7	Q7	V7	N7	R7	-	S7	-	-	X7	Y7

Technical specifications for coil incorporated in contactor 3SC8 & PC61 & VC51

Type			3SC8-09/ PC61-09/ VC51-09	3SC8-12/ PC61-12/ VC51-12	3SC8-18/ PC61-18/ VC51-18	3SC8-25/ PC61-25/ VC51-25	3SC8-32/ PC61-32/ VC51-32	3SC8-40/ PC61-40/ VC51-40	3SC8-50/ PC61-50/ VC51-50	3SC8-65/ PC61-65/ VC51-65	3SC8-80/ PC61-80/ VC51-80	3SC8-95/ PC61-95/ VC51-95
Coil consumption	Pick-up (VA)		70	70	70	100	100	245	245	245	245	245
	Holding (VA)	50 Hz, 60 Hz	9.0	9.0	9.0	10	10	30	30	30	30	30
		50/60 Hz	10	10	10	11	11	32	32	32	32	32
	Power (W)		2~3.5	2~3.5	2~3.5	3~4	3~4	6~10	6~10	6~10	6~10	6~10

Selection and ordering data

Coil for contactor 3SC8

	Standard control circuit voltage (V AC)	Rated frequency (Hz)	Voltage code	Type code	Order code
3SC8X-D2	Suitable for contactors with auxiliary contact 01; 10; 004; 008				
for AC contactor 3SC8-9...18	24	50/60	B7	C8X-D2B7	**17359**
	110	50/60	F7	C8X-D2F7	**32043**
	230	50/60	P7	C8X-D2P7	**32049**
	Suitable for contactors with auxiliary contact 11				
	24	50/60	B7	C8X-D2NB7	**14101**
	110	50/60	F7	C8X-D2NF7	**14103**
	230	50/60	P7	C8X-D2NP7	**14106**
3SC8X-D4	Suitable for contactors with auxiliary contact 01; 10; 004; 008				
for AC contactor 3SC8-25...32	24	50/60	B7	C8X-D4B7	**17360**
	110	50/60	F7	C8X-D4F7	**32044**
	230	50/60	P7	C8X-D4P7	**32050**
	Suitable for contactors with auxiliary contact 11				
	24	50/60	B7	C8X-D4NB7	**14111**
	110	50/60	F7	C8X-D4NF7	**14113**
	230	50/60	P7	C8X-D4NP7	**14116**
3SC8X-D6	Suitable for contactors with auxiliary contact 11				
for AC contactor 3SC8-40...95	24	50/60	B7	C8X-D6NB7	**17361**
	110	50/60	F7	C8X-D6NF7	**32045**
	230	50/60	P7	C8X-D6NP7	**32051**

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor".

Coil for contactor VC51

	Standard control circuit voltage (V AC)	Rated frequency (Hz)	Voltage code	Type code	Order code
VC51-D2	Suitable for contactors with auxiliary contact 01; 10; 004; 008				
for AC contactor VC51-9...18	24	50/60	B7	VC51-D2-B7	**38219**
	110	50/60	F7	VC51-D2-F7	**38220**
	230	50/60	P7	VC51-D2-P7	**38221**
	Suitable for contactors with auxiliary contact 11				
	24	50/60	B7	VC51-D2N-B7	**38222**
	110	50/60	F7	VC51-D2N-F7	**38223**
	230	50/60	P7	VC51-D2N-P7	**38224**
VC51-D4	Suitable for contactors with auxiliary contact 01; 10; 004; 008				
for AC contactor VC51-25...32	24	50/60	B7	VC51-D4-B7	**38225**
	110	50/60	F7	VC51-D4-F7	**38226**
	230	50/60	P7	VC51-D4-P7	**38227**
	Suitable for contactors with auxiliary contact 11				
	24	50/60	B7	VC51-D4N-B7	**38228**
	110	50/60	F7	VC51-D4N-F7	**38229**
	230	50/60	P7	VC51-D4N-P7	**38230**
VC51-D6	Suitable for contactors with auxiliary contact 11			VC51-D6N-B7	**38231**
for AC contactor VC51-40...95	24	50/60	B7	VC51-D6N-F7	**38232**
	110	50/60	F7	VC51-D6N-P7	**38233**
	230	50/60	P7		

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor".

3

Auxiliary contact

Suitable for 3SC8 & PC61 & VC51

- Instruction of type code

C8 A1 02

- 02: Code of auxiliary contact
  - 02: 2NC
  - 11: 1NO+1NC
  - 20: 2NO
  - 04: 4NC
  - 13: 1NO+3NC
  - 22: 2NO+2NC
  - 31: 3NO+1NC
  - 40: 4NO
- A1: Model code
  - A1: Front type
  - A1C: Side type
  - A1D: Front type
- C8: Series code

Time-delay auxiliary contact

Suitable for 3SC8 & PC61 & VC51

- Instruction of type code

C8 A2 T0

- T0: Delay scope
  - T0: 0.1-3 s (A2)
  - T2: 0.1-30 s (A2)
  - T4: 10-180 s (A2)
  - R0: 0.1-3 s (A3)
  - R2: 0.1-30 s (A3)
  - R4: 10-180 s (A3)
- A2: Delay type
  - A2: Making time-delay
  - A3: Breaking time-delay
- C8: Series code

Selection and ordering data

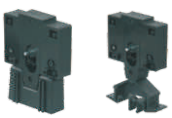
Auxiliary contact blocks

	Mounting type	Auxiliary contacts ↓	Auxiliary contacts ↑	Type code	Order code
	Front	0	2	C8 A1/02	**29578**
		1	1	C8 A1/11	**29579**
		2	0	C8 A1/20	**29580**
	Front	0	4	C8 A1/04	**29581**
		1	3	C8 A1/13	**29582**
		2	2	C8 A1/22	**29583**
		3	1	C8 A1/31	**29584**
		4	0	C8 A1/40	**29585**
	Front	1	0	C8 A1D/10	**29587**
		0	1	C8 A1D/01	**29588**
	Side	1	1	C8 A1C	**29586**

Time-delay auxiliary contact

	Delay type	Auxiliary contacts ↓	Auxiliary contacts ↑	Delay scope	Type code	Order code
	making time-delay	1	1	0.1~3 s	C8 A2/T0	**29589**
				0.1~30 s	C8 A2/T2	**29590**
				10~180 s	C8 A2/T4	**29591**
	breaking time-delay			0.1~3 s	C8 A3/R0	**29592**
				0.1~30 s	C8 A3/R2	**29593**
				10~180 s	C8 A3/R4	**29594**

Mechanical interlock

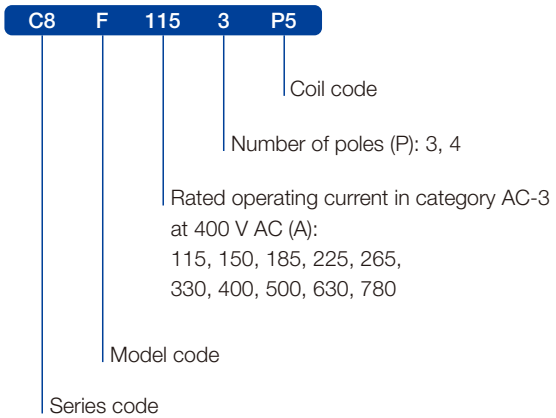
	Matched contactor	Type code	Order code
	3SC8-09...32	3SC8-A4X	**29595**
	3SC8-40...95	3SC8-A4D	**29596**

Applications and functions for AC contactor 3SC8-F

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.



Instruction of type code



Technical specifications for contactor 3SC8-F

Model		3SC8-F115	3SC8-F150	3SC8-F185	3SC8-F225	3SC8-F265	3SC8-F330	3SC8-F400	3SC8-F500	3SC8-F630	3SC8-F780
Standard		IEC 60947-4-1									
Number of poles		3, 4	3, 4	3, 4	3, 4	3	3	3, 4	3, 4	3, 4	3, 4
Rated operational current Ie (A)	In AC-3	115	150	185	225	265	330	400	500	630	780
	In AC-1	200	250	275	315	350	400	500	700	1000	1600
Rated operational voltage Ue (V)	Up to	1000									
Frequency limits of the operational current (time/h)		16-200									
Rated conventional thermal current Ith (A)		200	250	275	315	350	400	500	700	1000	1600
Rated insulation voltage Ui (V)		1000									
Rated impulse withstand voltage Uimp (kV)		8									
Rated frequency (Hz)		50/60									
Rated making capacity (A)		10 × In AC-3 or 12 × In AC-4									
Rated breaking capacity (A)	400 V	8 × In AC-3 or 10 × In AC-4									
Rated operational power in category AC-3 (kw)	220/230/240 V	30	40	55	68	75	100	129	147	200	220
	380/400 V	55	75	90	100	132	160	200	250	335	400
	660/690 V	80	100	120	129	180	220	280	355	450	475
Short-circuit protection by fuse (A)	Motor circuit (type aM)	125	160	200	250	315	400	400	500	630	-
	With thermal overload relay (type gG)	200	200	315	315	500	500	630	800	800	-
	gG fuses	200	250	315	315	400	500	500	800	1000	
Average impedance per pole (mW)		0.37	0.35	0.33	0.32	0.3	0.28	0.26	0.18	0.12	0.1
Add-on auxiliary contact blocks	Front	identical to those used on 3SC8 contactors									
	Side	-									
	Front time delay	identical to those used on 3SC8 contactors									
	Front dust and damp protected	-									
Reversing contactor type		3SC8-FN									
Associated thermal overload relays		3SR8-F53					3SR8-F73				
Operation cycles (times/hour)	In AC-3	1200	1200	600	600	600	600	600	600	600	600
Electrical life (× 10^6 times)		1.2	1.2	1	1	0.8	0.8	0.8	0.8	0.8	0.8
Mechanical life (× 10^6 times)		10	10	6	6	6	6	6	6	6	6
Matching fuse model		RT16-1	RT16-1	RT16-2	RT16-2	RT16-2	RT16-3	RT16-3	RT16-4	RT16-4	RT16-4
Tightening torque (N·m) Connection		0.8	0.8	0.8	1.2	1.2	1.2	1.2	1.2	4	4
Cabling cross section CU (mm^2)		95	120	150	185	240	240	2 x 150	2 x 240	240	300
Screw size		M6	M8	M8	M10	M10	M10	M10	M12	M12	M4
Degree of protection		IP20									
Ambient air temperature (°C)		-5 to +40, max. 95 % humidity									
Storage temperature (°C)		-40 ~ +70									
Maximum operating altitude (meters)		2000									
Flame resistance	Conforming to UL 94	V1									

Selection and ordering data

3SC8-F contactor

Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3 220 V 230 V (KW)	380 V 400 V (KW)	415 V 440 V (KW)	Poles	230 V 50 Hz Please contact us for other coil voltage Type code	Order code
115	200	30	55	59	3	C8 F1153P5	**12093**
					4	C8 F1154P5	**12103**
150	220	40	75	80	3	C8 F1503P5	**12094**
					4	C8 F1504P5	**12104**
185	275	55	90	100	3	C8 F1853P5	**12095**
					4	C8 F1854P5	**12105**
225	315	63	110	110	3	C8 F2253P5	**12096**
					4	C8 F2254P5	**12106**
265	350	75	132	140	3	C8 F2653P5	**12097**
					4	C8 F2654P5	**12107**
330	400	100	165	180	3	C8 F3303P5	**12098**
					4	C8 F3304P5	**12108**
400	500	115	200	220	3	C8 F4003P5	**12099**
					4	C8 F4004P5	**12109**
500	700	147	250	280	3	C8 F5003P5	**12100**
					4	C8 F5004P5	**12110**
630	1000	200	335	375	3	C8 F6303P5	**12101**
					4	C8 F6304P5	**12111**
780	1500	220	400	425	3	C8 F7803P5	**12102**
					4	C8 F7804P5	**12112**

3SC8-FN reversing contactors

Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3 220 V 230 V (KW)	380 V 400 V (KW)	415 V 440 V (KW)	Poles	230 V 50 Hz Please contact us for other coil voltage Type code	Order code
115	200	30	55	60	3	C8 FN115P5	**15718**
					4	C8 FN1154P5	**15719**
150	250	40	75	80	3	C8 FN150P5	**15720**
					4	C8 FN1504P5	**15721**
185	275	55	90	100	3	C8 FN185P5	**15722**
					4	C8 FN1854P5	**15723**
225	315	63	110	120	3	C8 FN225P5	**15724**
					4	C8 FN2254P5	**15725**
265	350	75	132	140	3	C8 FN265P5	**15726**
					4	C8 FN2654P5	**15727**
330	400	100	165	180	3	C8 FN330P5	**15728**
					4	C8 FN3304P5	**15729**
400	500	115	200	220	3	C8 FN400P5	**15730**
					4	C8 FN4004P5	**15731**
500	700	147	250	280	3	C8 FN500P5	**15732**
					4	C8 FN5004P5	**15733**
630	1000	200	335	375	3	C8 FN630P5	**15734**
					4	C8 FN6304P5	**15735**
780	1500	220	400	425	3	C8 FN780P5	**15736**
					4	C8 FN7804P5	**15737**

Selection and ordering data

Coil for contactor 3SC8-F

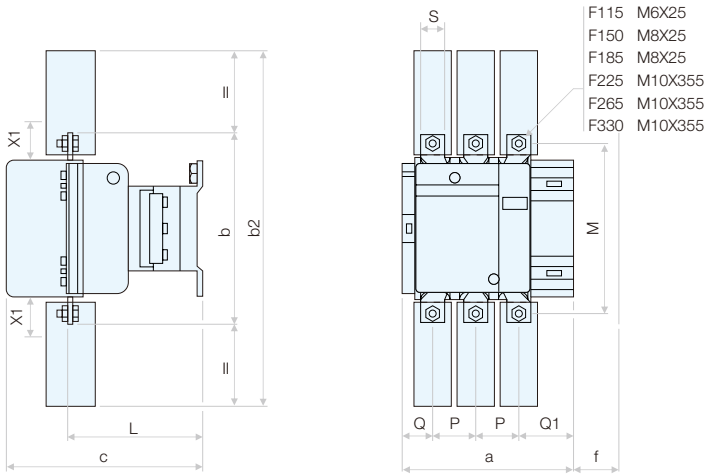
	Standard control circuit voltage (V AC)	Rated frequency (Hz)	Voltage code	Type code	Order code
3SC8X-FF for AC contactor 3SC8-F115...150 	230	50/60	P7	C8X-FFP7	**32002**
	240	50/60	U7	C8X-FFU7	**32003**
	380	50/60	Q7	C8X-FFQ7	**32004**
	440	50/60	R7	C8X-FFR7	**32006**
3SC8X-FG for AC contactor 3SC8-F185...225 	230	50/60	P7	C8X-FGP7	**32008**
	240	50/60	U7	C8X-FGU7	**32009**
	380	50/60	Q7	C8X-FGQ7	**32010**
	440	50/60	R7	C8X-FGR7	**32012**
3SC8X-FH for AC contactor 3SC8-F265...330 	230	50/60	P7	C8X-FHP7	**32014**
	240	50/60	U7	C8X-FHU7	**32015**
	380	50/60	Q7	C8X-FHQ7	**32016**
	440	50/60	R7	C8X-FHR7	**32018**
3SC8X-FJ for AC contactor 3SC8-F400 	230	50/60	P7	C8X-FJP7	**32020**
	240	50/60	U7	C8X-FJU7	**32021**
	380	50/60	Q7	C8X-FJQ7	**32022**
	440	50/60	R7	C8X-FJR7	**32024**
3SC8X-FK for AC contactor 3SC8-F500 	230	50/60	P7	C8X-FKP7	**32026**
	240	50/60	U7	C8X-FKU7	**32027**
	380	50/60	Q7	C8X-FKQ7	**32028**
	440	50/60	R7	C8X-FKR7	**32030**
3SC8X-FL for AC contactor 3SC8-F630 	230	50/60	P7	C8X-FLP7	**32032**
	240	50/60	U7	C8X-FLU7	**32033**
	380	50/60	Q7	C8X-FLQ7	**32034**
	440	50/60	R7	C8X-FLR7	**32036**
3SC8X-FX for AC contactor 3SC8-F780 	230	50/60	P7	C8X-FXP7	**32038**
	240	50/60	U7	C8X-FXU7	**32039**
	380	50/60	Q7	C8X-FXQ7	**32040**
	440	50/60	R7	C8X-FXR7	**32042**

3

Outline and installation dimensions (Series 3SC8-F)

unit in mm

3SC8-F115...330

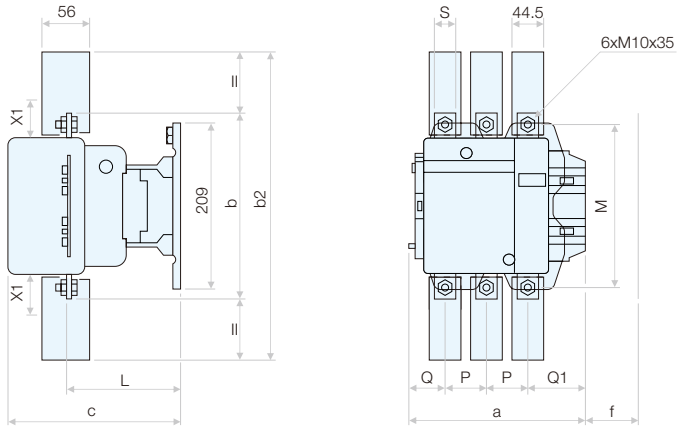


3SC8-F		a	b	b1	b2	c	f	G	G1	J	J1	L	M	P	Q	Q1	S	1	Y	Z
115	3P	163.5	162	137	265	171	131	106	80	106	120	107	147	37	29.5	60	20	26	44	13.5
	4P	200.5	162	137	265	171	131	143	80	106	120	107	147	37	29.5	60	20	26	44	13.5
150	3P	163.5	170	137	301	171	131	106	80	106	120	107	150	40	26	57.5	20	34	44	13.5
	4P	200.5	170	137	301	171	131	143	80	106	120	107	150	40	26	55.5	20	34	44	13.5
185	3P	168.5	174	137	305	181	130	111	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
	4P	208.5	174	137	305	181	130	151	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
225	3P	168.5	197	137	364	181	130	111	80	106	120	113.5	172	48	21	51.5	25	44.5	44	13.5
	4P	208.5	197	137	364	181	130	151	80	106	120	113.5	172	48	17	47.5	25	44.5	44	13.5
265	3P	201.5	203	145	375	213	147	142	96	106	120	141	178	48	39	66.5	25	44.5	38	21.5
	4P	244.5	203	145	375	213	147	190	96	106	120	141	178	48	34	66.5	25	44.5	38	21.5
330	3P	213	206	145	375	219	147	154.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5
	4P	261	206	145	375	219	147	202.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5

f = minimum distance required for coil removal

unit in mm

3SC8-F400...500

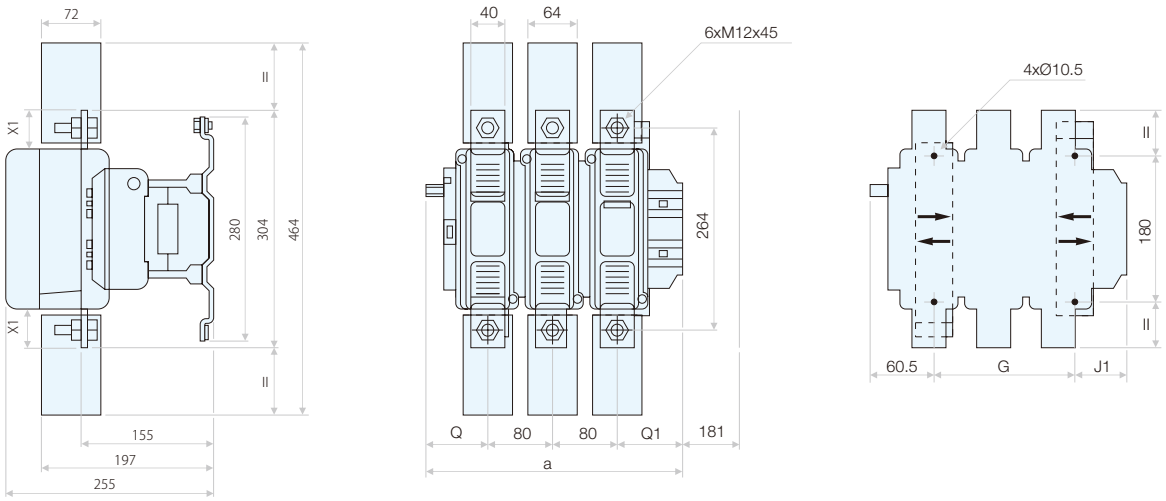


3SC8-F		a	b	b2	c	f	G*	G min.	G max.	G1*	G1 min.	G1 max.	J	L	M	P	Q	Q1	S
400	2P	213	206	375	219	119	80	66	102	170	156	192	19.5	145	181	48	69	96	25
	3P	213	206	375	219	119	80	66	102	170	156	192	19.5	145	181	48	43	74	25
	4P	261	206	375	219	119	80	66	150	170	156	240	67.5	145	181	48	43	74	25
500	2P	233	238	400	232	141	80	66	120	170	156	210	39.5	146	208	55	76	102	30
	3P	233	238	400	232	141	80	66	120	170	156	210	39.5	146	208	55	46	77	30
	4P	288	288	400	232	141	140	66	175	230	156	265	34.5	146	208	55	46	77	30

Outline and installation dimensions (Series 3SC8-F)

unit in mm

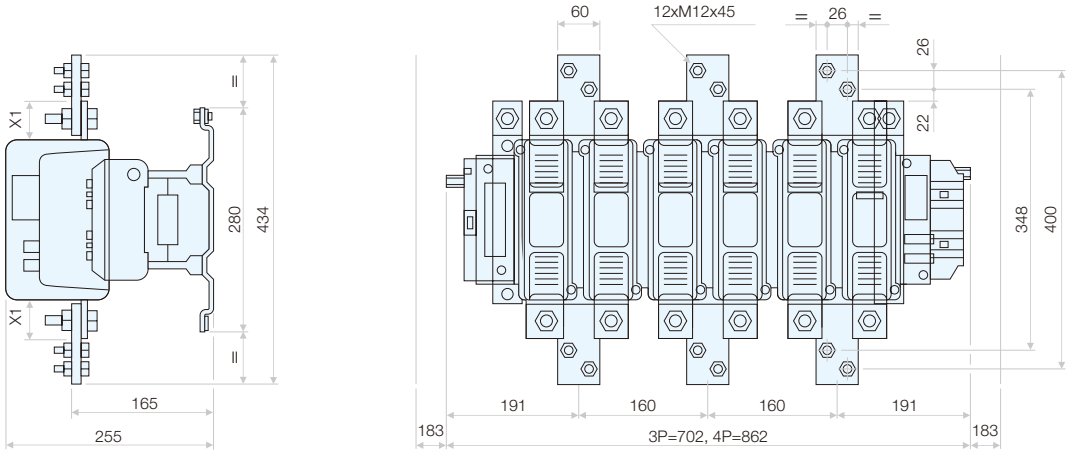
3SC8-F630...800



3SC8-F		a	G	G min.	G max.	J1	Q	Q1
630	2P	309	180	100	195	68.5	102	127
630, 800	3P	309	180	100	195	68.5	60	89
630	4P	309	240	150	275	68.5	60	89

unit in mm

3SC8-F780



Capacitor Switching Contactors
Series 3SC19

Applications and functions

- Switching parallel connection capacitance from low voltage reactive power compensating equipments
- Reducing efficiently the impact to capacitor and restraining over-voltage when switching ON/OFF with special flow-cut equipment



Instruction of type code

C19 25 11 P5

- C19 — Series code
- 25 — Rated thermal current
- 11 — Quantity of auxiliary contact
  - 11: 1NO+1NC
  - 02: 2NC
  - 20: 2NO
- P5 — Coil code

Technical specifications

Type			3SC19-25	3SC19-32	3SC19-43	3SC19-50	3SC19-63	3SC19-80	3SC19-95	3SC19-125
Rated insulating voltage Ui		V	690	690	690	690	690	690	690	690
Rated conventional thermal current Ith		A	25	32	43	50	63	80	95	125
Controllable power AC-6b	220/230 V	Kvar	6	8.5	10	12	15	22	23	25
	380/400 V	Kvar	12	16	20	25	30	37	45	50
	660/690 V	Kvar	12	16	20	25	30	37	45	50
Rated current of capacitor	400 V	A	17.3	23	29	36	43	53	65	72
Rated working current 1.3Ie		A	22.5	30	37.7	47	56	69	85	94
Restrained surge capacity			≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie
Coil consumed power	Starting	VA	70	100	100	245	245	245	245	245
	Holding	VA	9	10	10	30	30	30	30	30
Auxiliary contact type	2NO		√	√	√	-	-	-	-	-
	2NC		√	√	√	-	-	-	-	-
	1NO + 1NC		√	√	√	-	-	-	-	-
	2NO + 1NC		-	-	-	√	√	√	√	√
	1NO + 2NC		-	-	-	√	√	√	√	√
Mechanical life	10^4	times	300	300	300	100	100	100	80	80
Electrical life	10^4	times	10	10	10	6	6	6	6	6
Operating frequency		times/h	120	120	120	120	120	120	120	120
Pollution grade			3	3	3	3	3	3	3	3
Installation category			3	3	3	3	3	3	3	3
Installation type	screws		√	√	√	√	√	√	√	√
	35mm DIN-rail		√	√	√	√	√	√	√	√
	75mm DIN-rail		-	-	-	-	√	√	√	√
Ambient air temperature		℃	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
Altitude	max.	meter	2000	2000	2000	2000	2000	2000	2000	2000
Coil sectional area (mm^2)			4	6	10	10	16	25	35	50
Tightening torque (N·m)			1.7	2.0	2.5	5	5	5	9	9

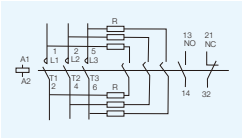
Selection and ordering data



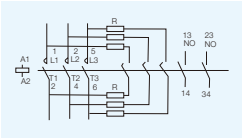


Rated conventional thermal current Ith (A)	Controllable power 220 V 230 V (KW)	380 V 400 V (KW)	660 V 690 V (KW)	Auxiliary contact		230 V AC 50Hz Please contact us for other coil specifications Type code	Order code
25	6	12	12	1	1	C19 2511 P5	**27308**
				0	2	C19 2502 P5	**27309**
				2	0	C19 2520 P5	**27310**
32	8.5	16	16	1	1	C19 3211 P5	**27311**
				0	2	C19 3202 P5	**27312**
				2	0	C19 3220 P5	**27313**
43	10	20	20	1	1	C19 4311 P5	**27314**
				0	2	C19 4302 P5	**27315**
				2	0	C19 4320 P5	**27316**
50	12	25	25	1	2	C19 5012 P5	**27317**
				2	1	C19 5021 P5	**27318**
63	15	30	30	1	2	C19 6312 P5	**27319**
				2	1	C19 6321 P5	**27320**
80	22	37	37	1	2	C19 8012P5	**27321**
				2	1	C19 8021P5	**27322**
95	23	45	45	1	2	C19 9512 P5	**25496**
				2	1	C19 9521 P5	**25686**
125	25	50	50	1	2	C19 12512 P5	**27323**
				2	1	C19 12521 P5	**27324**

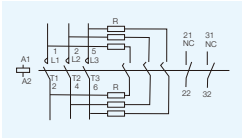
Terminal and electric diagram



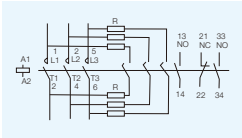
3SC19-2511
3SC19-3211
3SC19-4311



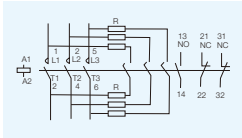
3SC19-2520
3SC19-3220
3SC19-4320



3SC19-2502
3SC19-3202
3SC19-4302



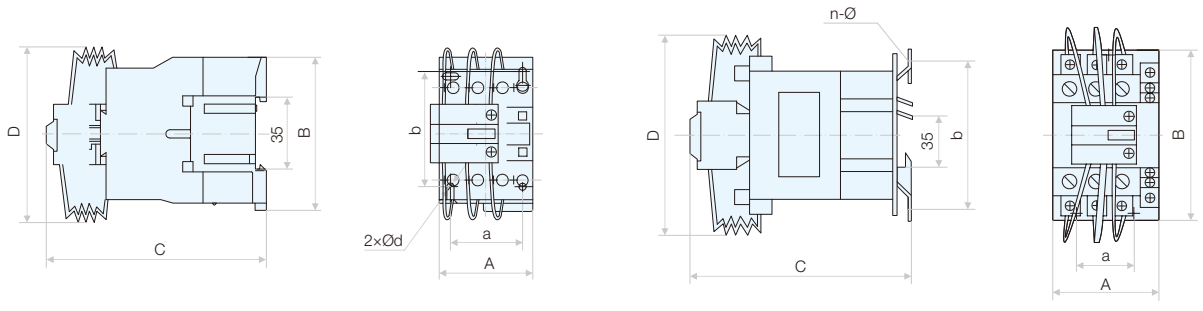
3SC19-5021
3SC19-6321
3SC19-8021
3SC19-9521
3SC19-12521



3SC19-5012
3SC19-6312
3SC19-8012
3SC19-9512
3SC19-12512

Outline and installation dimensions

unit in mm



Type	Outline dimensions A	B	C	D	Installation dimensions a	b	C
3SC19-25	47	76	124	100	34/35	50/60	2-Ø4.5
3SC19-32	57	86	132	110	40	50/60	2-Ø4.5
3SC19-43	57	86	136	110	40	50/60	2-Ø4.5
3SC19-50	77	129	152	155	40	100/110	3-Ø6.5
3SC19-63	77	129	152	155	40	100/110	3-Ø6.5
3SC19-80	77	129	152	155	40	100/110	3-Ø6.5
3SC19-95	87	129	162	165	40	100/110	3-Ø6.5
3SC19-125	87	129	162	165	40	100/110	3-Ø6.5

Thermal Overload Relays
Series 3SR8-K

Applications and functions for thermal relay

- Overload protection and phase-failure protection.
- Implementing short-circuit protection by means of a fuse or circuit breaker.
- Used for the protection of motors.



Instruction of type code

R8 K 0301 3

- 3: Number of pins, 5: 5 pins
- 0301: Code of setting current range
- K: Model code
- R8: Series code

Techinical specifications for assembled thermal relay of type 3SC8-K

- Standard: IEC 60947-4-1
- Tripping class: 10 A
- Number of connecting pin: 5
- Rated operational voltage Ue (V): up to 690
- Rated insulation voltage Ui (V): 690
- Rated impulse withstand voltage Uimp (kV): 6
- Rated current range In (A):
  0.1-0.16, 0.16-0.25, 0.25-0.4, 0.4-0.63, 0.63-1, 1-1.6, 1.6-2.5, 2.5-4, 4-6, 5.5-8, 7-10, 9-13
- Signalling: Trip indicator
- Tightening torque (N·m): 0.8
- Degree of protection: IP20
- Ambient air temperature (ºC): -5 to +40, max. 95 % humidity
- Storage temperature (ºC): -40 ~ +75
- Maximum operating altitude (meters): 2000
- Flame resistance: V1
- Mounting: directly under the contactor

Selection and ordering data

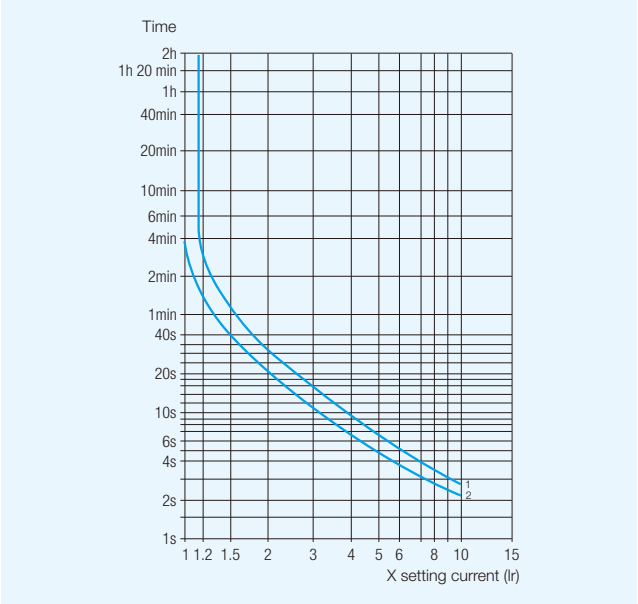
3SR8-K thermal relay matched with contactor 3SC8-K

	Current setting range (A)	Fuses to be used with selected relay aM Type (A)	gG Type (A)	Type code	Order code
3SR8-K 5 Pins 	0.1-0.16	0.25	0.5	R8 K0301	**15594**
	0.16-0.25	0.25	0.5	R8 K0302	**15595**
	0.25-0.4	0.5	1	R8 K0303	**15596**
	0.4-0.63	1	1.6	R8 K0304	**15597**
	0.63-1	1	2	R8 K0305	**15598**
	1-1.6	2	6	R8 K0306	**15599**
	1.6-2.5	4	8	R8 K0307	**15600**
	2.5-4	4	10	R8 K0308	**15601**
	4-6	6	16	R8 K0310	**15602**
	5.5-8	8	20	R8 K0312	**15603**
	7-10	10	25	R8 K0314	**15604**
	9-13	16	32	R8 K0316	**15605**

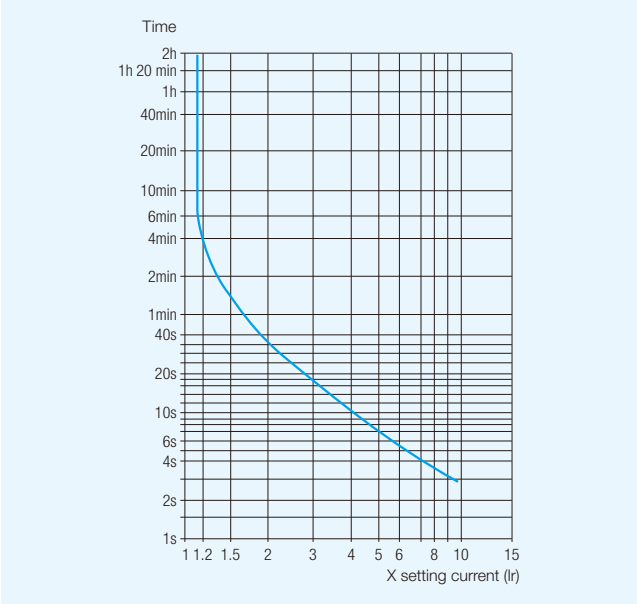
Tripping curve of thermal relay 3SR8-K

Average operating time related to multiples of the current setting (Class 10 A)

Balanced 3-phase operation, from cold state



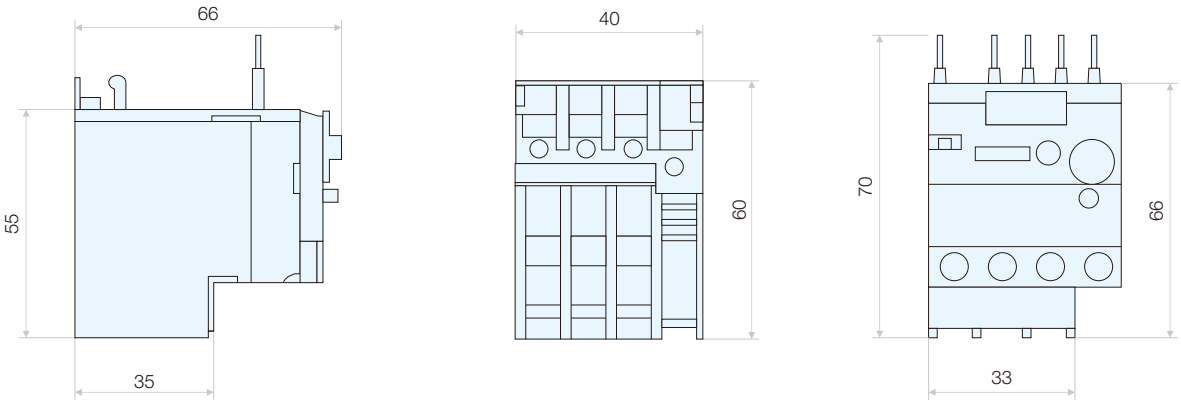
Balanced operation with 2 phases only, from cold state



1 Setting: at lower end of scale
2 Setting: at upper end of scale

Outline and installation dimensions (3SC8-K, 3SR8-K)

unit in mm



Applications and functions for thermal relay 3SR8

- Protecting the loads from overload and phase failure
- Implementing short-circuit protection by means of a fuse or circuit breaker.
- Used for the protection of motors.



Instruction of type code

R8 25 0.16

Max. setting current range (A):

0.16: 0.1-0.16	10: 7-10
0.25: 0.16-0.25	13: 9-13
0.4: 0.25-0.4	18: 12-18
0.63: 0.4-0.63	25: 17-25
1: 0.63-1	32: 23-32
1.6: 1-1.6	36: 28-36
2: 1.25-2	40: 30-40
2.5: 1.6-2.5	50: 37-50
4: 2.5-4	65: 48-65
6: 4-6	70: 55-70
8: 5.5-8	80: 63-80
	93: 80-93

Rated frame current (A): 25, 36, 93

Series code

Technical specifications for assembled thermal relay of type 3SR8

Type	3SR8-D13	3SR8-D23	3SR8-D33
Standard	IEC 60947-4-1		
Tripping class	10 A		
Rated working current Ie (A)	25	36	93
Setting range (A)	0.1-25	23-36	23-93
Rated insulation voltage Ui (V)	690		
Rated impulse withstand voltage Uimp (kV)	6		
Signalling Trip indicator	Trip indicator		
Tightening torque (N·m)	0.8		
Degree of protection	IP20		
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity		
Storage temperature (°C)	-40 ~ +75		
Maximum operating altitude (meters)	2000		
Flame resistance	V1		
Mounting	Directly under the contactor		

Selection and ordering data

Series 3SR8

	Rated frame current (A)	Current setting range (A)	Matched fuse type aM (A)	Matched fuse type gG (A)	Matched AC contactor	Type code	Order code
	25	0.1~0.16	0.25	2	3SC8-09	R8 25/0.16	**22875**
		0.16~0.25	0.25	2	3SC8-09	R8 25/0.25	**22876**
		0.25~0.4	1	2	3SC8-09	R8 25/0.40	**22877**
		0.4~0.63	1	2	3SC8-09	R8 25/0.63	**22878**
		0.63~1	2	4	3SC8-09	R8 25/1	**22879**
		1~1.6	2	4	3SC8-09	R8 25/1.6	**22880**
		1.25~2	4	6	3SC8-09	R8 25/2	**22881**
		1.6~2.5	4	6	3SC8-09	R8 25/2.5	**22882**
		2.5~4	6	10	3SC8-09	R8 25/4	**22883**
		4~6	8	16	3SC8-09	R8 25/6	**22884**
		5.5~8	12	20	3SC8-09	R8 25/8	**22885**
		7~10	12	20	3SC8-12	R8 25/10	**22886**
		9~13	16	25	3SC8-12	R8 25/13	**22887**
		12~18	20	35	3SC8-18	R8 25/18	**22888**
		17~25	25	50	3SC8-25	R8 25/25	**22889**
	36	23~32	40	63	3SC8-32	R8 36/32	**22890**
		28~36	40	80	3SC8-32	R8 36/36	**22891**
	93	23~32	40	63	3SC8-40	R8 93/32	**22892**
		30~40	40	100	3SC8-40	R8 93/40	**22893**
		37~50	63	100	3SC8-50	R8 93/50	**22894**
		48~65	63	100	3SC8-65	R8 93/65	**22895**
		55~70	80	125	3SC8-80	R8 93/70	**22896**
		63~80	80	125	3SC8-80	R8 93/80	**22897**
		80~93	100	160	3SC8-95	R8 93/93	**22898**

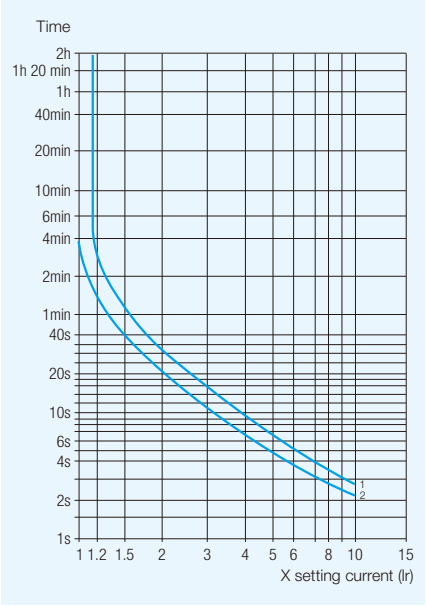
Mounting block

	Matechd relay	Type code	Order code
	R8 25	C8 A7D1064	**15971**
	R8 36	C8 A7D2064	**15972**
	R8 93	C8 A7D3064	**15973**

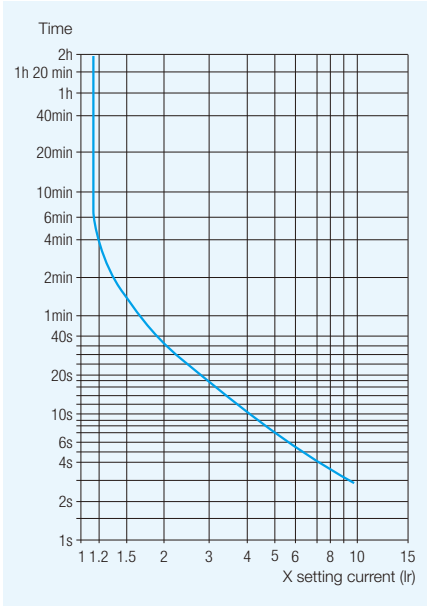
Action characterisitics for thermal relay 3SR8

Average operating time related to multiples of the current setting (Class 10 A)

Balanced 3-phase operation, from cold state

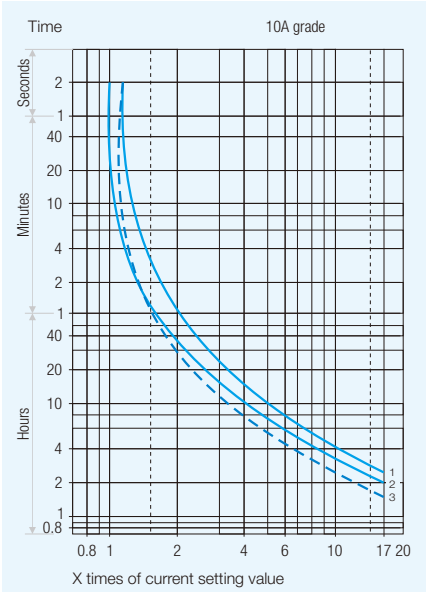


Balanced operation with 2 phases only, from cold state



1 Setting: at lower end of scale
2 Setting: at upper end of scale

Tripping curve for thermal relay 3SR8

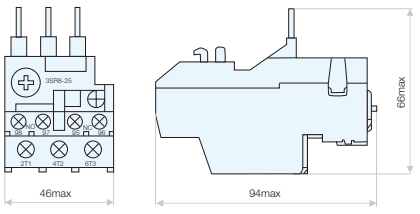


1. Equilibrium running, 3 phase, start from cold state
2. Equilibrium running, 2 phase, start from cold state
3. Equilibrium running, 3 phase, after long period of setting current (hot state)

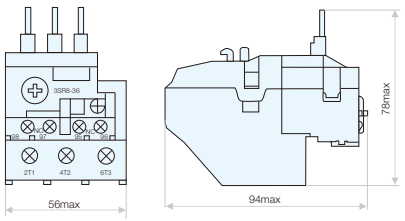
Outline and installation dimensions

unit in mm

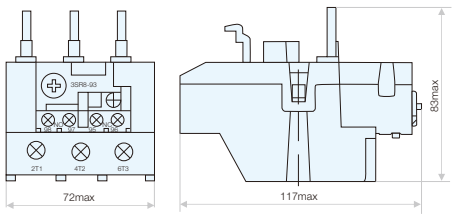
3SR8-25



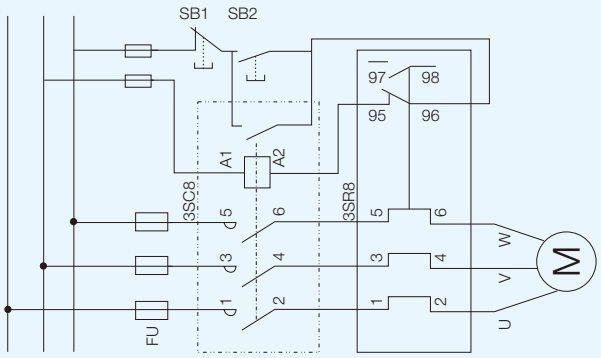
3SR8-36



3SR8-93



Operating principle diagram of overload relay



FU - fuse
3SC8 - AC contactor
3SR8 - thermal relay
SB1 - stop button
SB2 - start button

Applications and functions

- Protecting the loads from overload and phase failure
- Implementing short-circuit protection by means of a fuse or circuit breaker.
- Used for the protection of motors.



Technical specifications

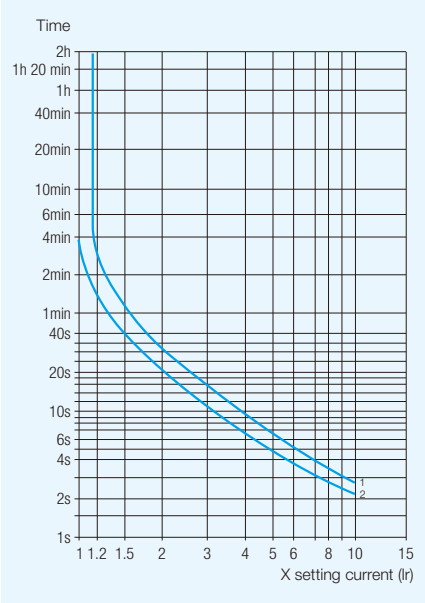
Type	VTR51-25	VTR51-36	VTR51-93
Standard	IEC 60947-4-1		
Tripping class	10 A		
Rated working current Ie (A)	25	36	93
Setting range (A)	0.1-0.16, 0.16-0.25, 0.25-0.4, 0.4-0.63, 0.63-1, 1-1.6, 1.25-2, 1.6-2.5, 2.5-4, 4-6, 5.5-8, 7-10, 9-13, 12-18, 17-25	23-32, 28-36,	23-32, 30-40, 37-50, 48-65, 55-70, 63-80, 80-93
Rated insulation voltage Ui (V)	690		
Rated impulse withstand voltage Uimp (kV)	6		
Signalling Trip indicator	Trip indicator		
Tightening torque (N·m)	0.8		
Degree of protection	IP20		
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity		
Storage temperature (°C)	-40 ~ +75		
Maximum operating altitude (meters)	2000		
Flame resistance	V1		
Mounting	Directly under the contactor		

3

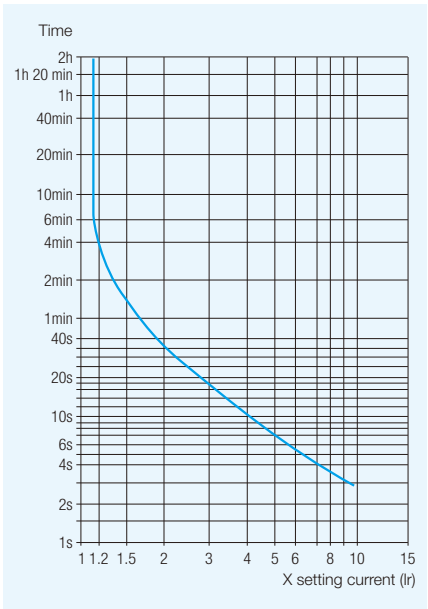
Operating characterisitics

Average operating time related to multiples of the current setting (Class 10 A)

Balanced 3-phase operation, from cold state

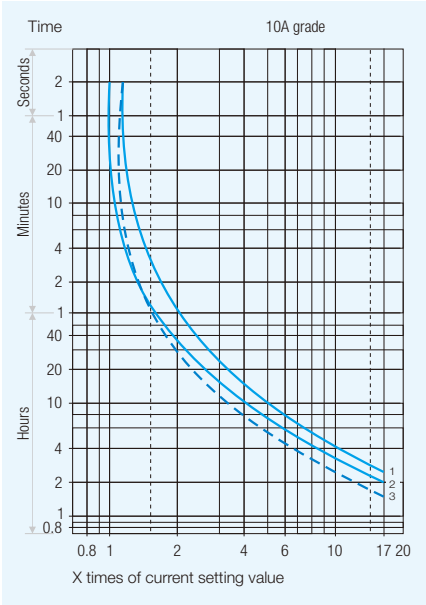


Balanced operation with 2 phases only, from cold state



1 Setting: at lower end of scale
2 Setting: at upper end of scale

Tripping curve

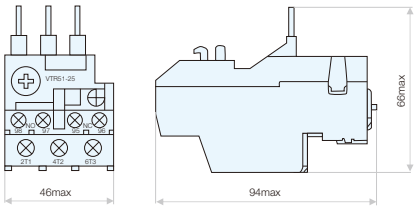


1. Equilibrium running, 3 phase, start from cold state
2. Equilibrium running, 2 phase, start from cold state
3. Equilibrium running, 3 phase, after long period of setting current (hot state)

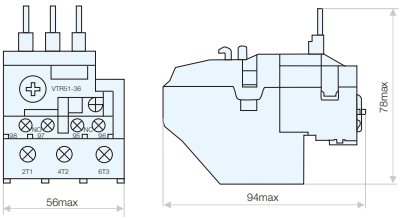
Outline and installation dimensions

unit in mm

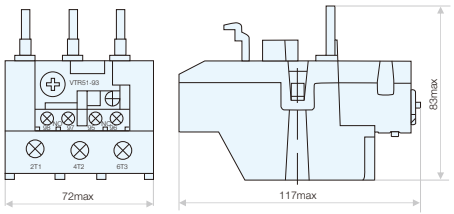
VTR51-25



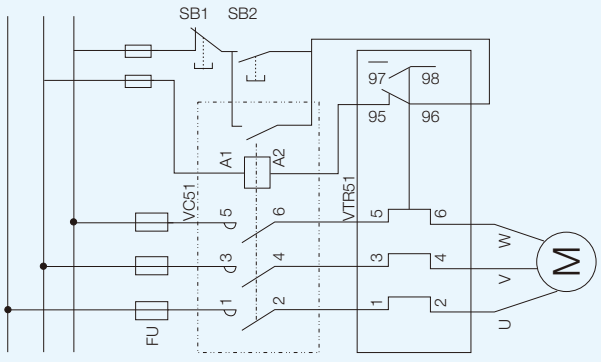
VTR51-36



VTR51-93



Operating principle diagram



FU - fuse
VC51 - AC contactor
VTR51 - thermal relay
SB1 - stop button
SB2 - start button

Selection and ordering data

VTR51

Type	For contactor	Current setting range (A)	Fuses to be used with selected relay aM (A)	gG (A)	Type code	Order code
VTR51-25	VC51-09	0.1~0.16	0.25	2	VTR51-25-0.16	**15965**
		0.16~0.25	0.25	2	VTR51-25-0.25	**15966**
		0.25~0.4	1	2	VTR51-25-0.4	**15967**
		0.4~0.63	1	2	VTR51-25-0.63	**15968**
		0.63~1	2	4	VTR51-25-1	**15969**
		1~1.6	2	4	VTR51-25-1.6	**15970**
		1.25~2	4	6	VTR51-25-2	**14914**
		1.6~2.5	4	6	VTR51-25-2.5	**14915**
		2.5~4	6	10	VTR51-25-4	**14916**
		4~6	8	16	VTR51-25-6	**14917**
		5.5~8	12	20	VTR51-25-8	**14918**
	VC51-12	7~10	12	20	VTR51-25-10	**14919**
		9~13	16	25	VTR51-25-13	**14920**
	VC51-18	12~18	20	35	VTR51-25-18	**14921**
	VC51-25	17~25	25	50	VTR51-25-25	**14922**
VTR51-36	VC51-32	23~32	40	63	VTR51-36-32	**14923**
		28~36	40	80	VTR51-36-36	**14924**
VTR51-93	VC51-40	23~32	40	63	VTR51-93-32	**14925**
		30~40	40	100	VTR51-93-40	**14926**
	VC51-50	37~50	63	100	VTR51-93-50	**14927**
	VC51-65	48~65	63	100	VTR51-93-65	**14928**
	VC51-80	55~70	80	125	VTR51-93-70	**14929**
		63~80	80	125	VTR51-93-80	**36059**
	VC51-95	80~93	100	160	VTR51-93-93	**36060**

Terminal block adapter for mounting a relay



For relays	Type code	Order code
VTR51-25	VTR51-A71	**36061**
VTR51-36	VTR51-A72	**36062**
VTR51-93	VTR51-A73	**36063**

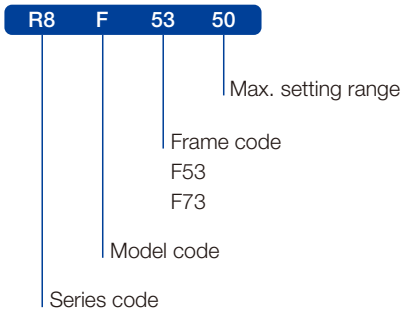
Thermal Overload Relays
Series 3SR8-F

Applications and functions for thermal relay 3SR8-F

- Protecting the loads from overload and phase failure
- Implementing short-circuit protection by means of fuse or circuit breaker.
- Used for the protection of motors.



Instruction of type code



Techinical specifications for thermal relay 3SR8-F

Type	3SR8-F53	3SR8-F73
Standard	IEC 60947-4-1	
Tripping class	10 A, 20 A	
Rated operational voltage Ue (V)	1000	
Rated working current Ie (A)	220	630
Setting range (A)	30-220	200-630
Reset	Manual on front of relay	
Rated insulation voltage Ui (V)	1000	
Rated impulse withstand voltage Uimp (kV)	6	
Tightening torque (N·m)	0.8	
Degree of protection	IP20	
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity	
Storage temperature (°C)	-40 ~ +75	
Maximum operating altitude (meters)	2000	
Flame resistance	V1	

Selection and ordering data

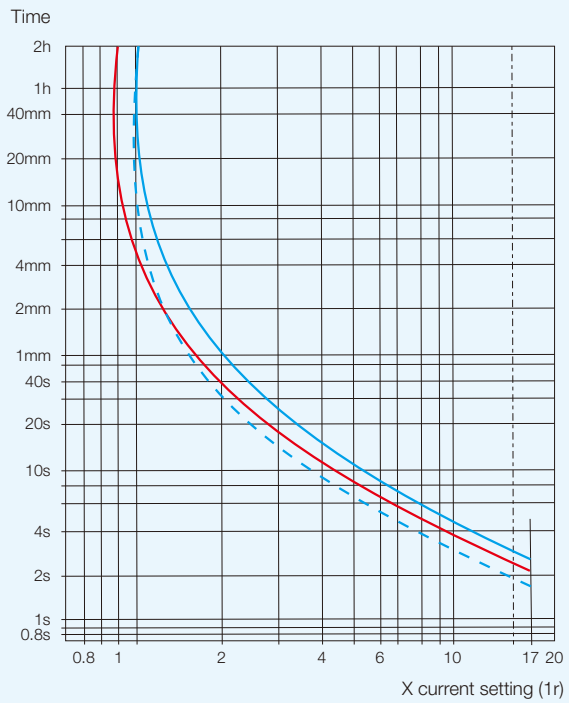
3SR8-F thermal relay matched with contactor 3SC8-F





Current setting range	Fuses to be used with selected relay maximum rating		Matched contactor		
	aM Type	gG Type			
(A)	(A)	(A)		Type code	Order code
30-50	50	80	3SC8-F115…F185	R8 F53/50	**15710**
48-80	80	125	3SC8-F115…F185	R8 F53/80	**15711**
60-100	100	200	3SC8-F115…F185	R8 F53/100	**15712**
90-150	160	250	3SC8-F115…F185	R8 F53/150	**15713**
132-220	250	315	3SC8-F225…F265	R8 F53/220	**15714**
200-330	400	500	3SC8-F225…F500	R8 F73/330	**15715**
300-500	500	800	3SC8-F225…F500	R8 F73/500	**15716**
380-630	630	800	3SC8-F400…F630	R8 F73/630	**15717**

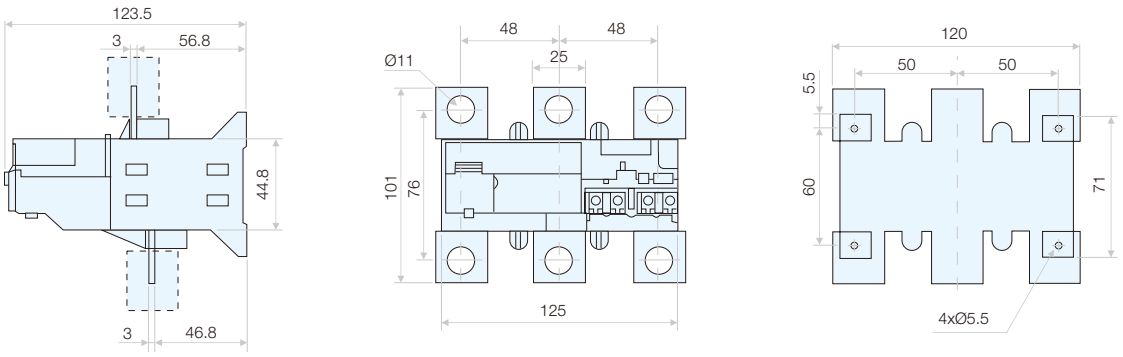
Tripping curve for thermal relay 3SR8-F



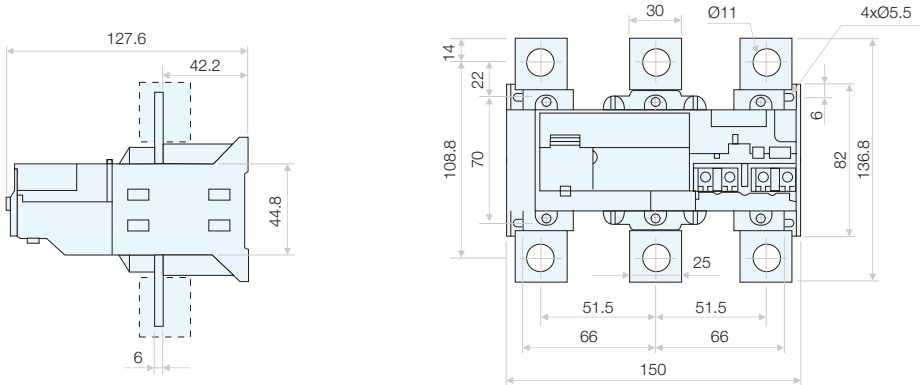
Outline and installation dimensions (Series 3SR8-F)

unit in mm

3SR8-F53



3SR8-F73



Enclosed Direct-on-line (DOL) Staters
Series 3SQ1 & VQ51

Applications and functions

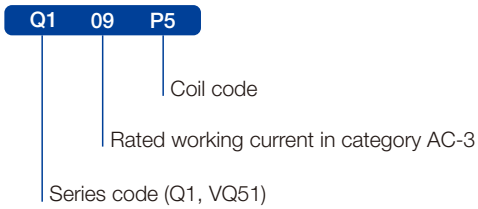
- Controlling the direct start and halt of the electromotor
- Protecting the motor from overload and phase failure
- Used in remote making and breaking circuit and frequently starting and controlling motor.



Technical specifications

- Standards: IEC 60947-4-1, IEC 60439-1
- Rated working current (A): 09, 12, 18, 25, 32, 40, 50, 65, 80, 95
- Rated operational voltage Ue (V): 690
- Rated insulation voltage Ui (V): 690
- Rated impulse withstand voltage Uimp (kV): 8
- Rated frequency (Hz): 50/60
- Control (2 pushbuttons mounted on enclosure cover): 1 green Start button "I"; 1 red Stop/Reset button "O"
- Enclosure:
  - 3SQ1(VQ51)-09/12/18 Double insulated, degree of protection IP65;
  - 3SQ1(VQ51)-25/32 Double insulated, degree of protection IP55;
  - 3SQ1(VQ51)-40/50/65/80/95 Metal, degree of protection IP65
- Electrical life (× 10^5 times): 5
- Mechanical life (× 10^5 times): 50
- The model of matched AC contactor: 3SC8, VC51
- The model of matched thermal relay: 3SR8, VTR51
- Ambient air temperature (ºC): -5 to +40, max. 95 % humidity
- Storage temperature (ºC): -40 ~ +75
- Maximum operating altitude (meters): 2000

Instruction of type code



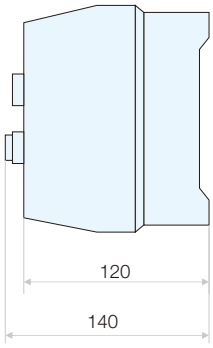
Selection and ordering data

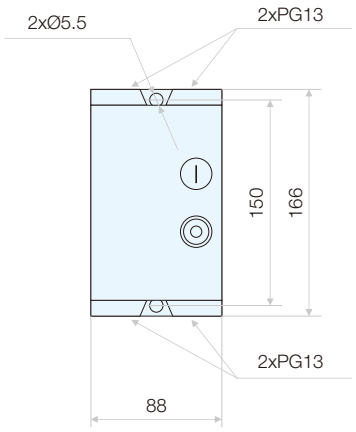
	Standard power ratings of 3 phase motors 50-60 Hz in category AC-3			Rated working current in category AC-3, 380 V	Conventional thermal current Ith	Type code of matched contactor	Type code of matched thermal relay	230 V 50 Hz Please contact us for other coil voltage	
	220 V 230 V (KW)	380 V 400 V (KW)	660 V 690 V (KW)	(A)	(A)			Type code	Order code
	2.2	4	5.5	9	20	C809	R8 D13	Q1 09P5	**25606**
	3	5.5	7.5	12	20	C812	R8 D13	Q1 12P5	**25607**
	4	7.5	9	18	32	C818	R8 D13	Q1 18P5	**25608**
	5.5	11	15	25	40	C825	R8 D13	Q1 25P5	**25609**
	7.5	15	18.5	32	50	C832	R8 D13	Q1 32P5	**25610**
	11	18.5	30	40	60	C840	R8 D33	Q1 40P5	**25611**
	15	22	33	50	80	C850	R8 D33	Q1 50P5	**25612**
	18.5	30	37	65	80	C865	R8 D33	Q1 65P5	**25613**
	22	37	45	80	110	C880	R8 D33	Q1 80P5	**25614**
	25	45	45	95	125	C895	R8 D33	Q1 95P5	**25615**
	2.2	4	5.5	9	20	VC5109	VTR51 D13	VQ51-09P5	**38199**
	3	5.5	7.5	12	20	VC5112	VTR51 D13	VQ51-12P5	**38200**
	4	7.5	9	18	32	VC5118	VTR51 D13	VQ51-18P5	**38201**
	5.5	11	15	25	40	VC5125	VTR51 D13	VQ51-25P5	**38202**
	7.5	15	18.5	32	50	VC5132	VTR51 D13	VQ51-32P5	**38203**
	11	18.5	30	40	60	VC5140	VTR51 D33	VQ51-40P5	**38204**
	15	22	33	50	80	VC5150	VTR51 D33	VQ51-50P5	**38205**
	18.5	30	37	65	80	VC5165	VTR51 D33	VQ51-65P5	**38206**
	22	37	45	80	110	VC5180	VTR51 D33	VQ51-80P5	**38207**
	25	45	45	95	125	VC5195	VTR51 D33	VQ51-95P5	**38208**

Outline and installation dimensions

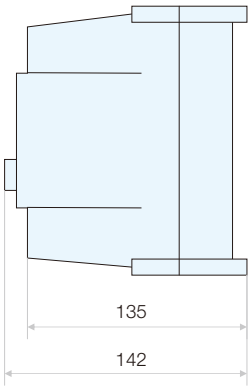
unit in mm

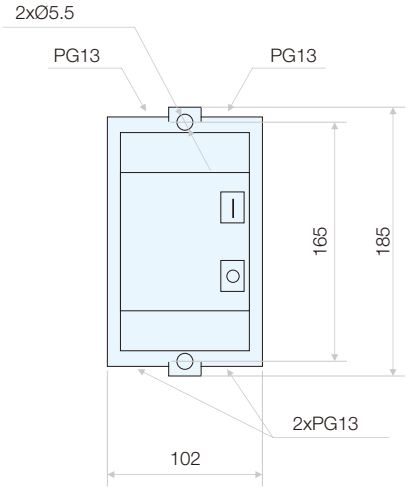
3SQ1(VQ51)-09/12/18



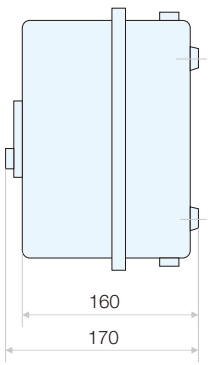


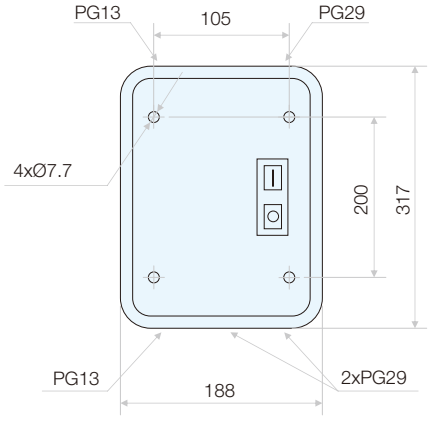
3SQ1(VQ51)-25/32





3SQ1(VQ51)-40/50/65/80/95





Star-delta Starters
Series 3SQ8-D & VXQ51

Applications and functions

- For startup of motor that has heavy duty and current used is high
- Reducing the starting current and starting torque when motor starts up
- Smaller circuit breakers and thinner 3-phase line wires can be installed to supply power to the motor

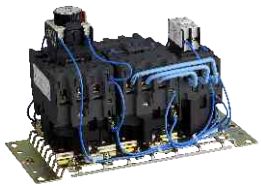


Instruction of type code

Q8 09 P5

- P5: Coil code
- 09: Rated thermal current (A): 9, 12, 18, 32, 40, 50, 65, 80, 95
- Q8: Series code (Q8 & VXQ51)

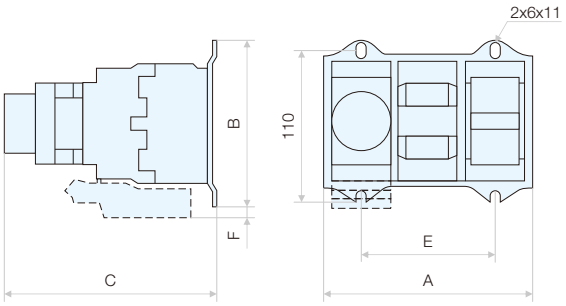
Selection and ordering data

	Rated operating current 380V AC-3 (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3 220 V 230 V (KW)	380 V 400 V (KW)	415 V (KW)	445 V (KW)	Type code of matched contactor	230 V 50 Hz Please contact us for other coil voltage Type code	Order code
	9	4	7.5	7.5	7.5	C809	Q8 D093P5	**12981**
	12	5.5	11	11	11	C812	Q8 D123P5	**12982**
	18	7.5	15	15	18.5	C818	Q8 D183P5	**12983**
	25	11	18.5	18.5	22	C825	Q8 D253P5	**12984**
	32	15	25	25	30	C832	Q8 D323P5	**12985**
	40	18.5	33	33	37	C840	Q8 D403P5	**12986**
	50	25	45	45	59	C850	Q8 D503P5	**12987**
	65	30	55	55	59	C865	Q8 D653P5	**12988**
	80	37	63	63	75	C880	Q8 D803P5	**12989**
	95	45	80	80	80	C895	Q8 D953P5	**12990**
	9	4	7.5	7.5	7.5	VC5109	VXQ51-09P5	**38209**
	12	5.5	11	11	11	VC5112	VXQ51-12P5	**38210**
	18	7.5	15	15	18.5	VC5118	VXQ51-18P5	**38211**
	25	11	18.5	18.5	22	VC5125	VXQ51-25P5	**38212**
	32	15	25	25	30	VC5132	VXQ51-32P5	**38213**
	40	18.5	33	33	37	VC5140	VXQ51-40P5	**38214**
	50	25	45	45	59	VC5150	VXQ51-50P5	**38215**
	65	30	55	55	59	VC5165	VXQ51-65P5	**38216**
	80	37	63	63	75	VC5180	VXQ51-80P5	**38217**
	95	45	80	80	80	VC5195	VXQ51-95P5	**38218**

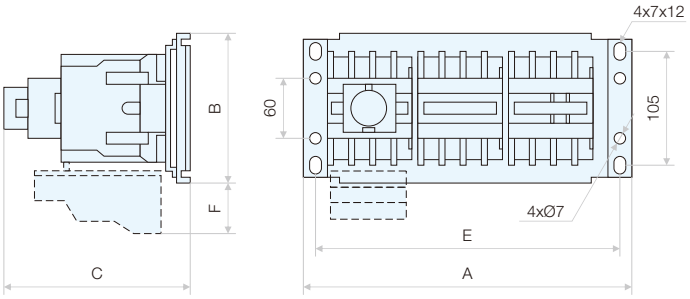
Outline and installation dimensions

unit in mm

3SQ8(VXQ51)-09~32



3SQ8(VXQ51)-40~95



Model	A	B	C	E	F
3SQ8(VXQ51)-09~18	135	124	153	90±0.5	22
3SQ8(VXQ51)-25~32	166	124	165	90±0.5	35
3SQ8(VXQ51)-40~65	285	143	178	267±1.0	50
3SQ8(VXQ51)-80~95	315	143	187	297±1.0	80

Motor Protection Circuit Breakers
Series 3SM18

Applications and functions

- Providing motor overload protection and short-circuit protection.



Instruction of type code

M18 2 M 0.16

- **0.16** — Max. setting current range
  - 0.1-0.16 0.16-0.25
  - 0.25-0.4 0.4-0.63
  - 0.63-1 1-1.6
  - 1.6-2.5 2.5-4
  - 4-6.3 6-10
  - 9-14 13-18
  - 17-23 20-25
  - 24-32 25-40
  - 40-63 56-80
- **M** — Pushbutton type
- **2** — Frame code
  - 2: 0.16~32A
  - 3: 40~80A
- **M18** — Series code

Technical specifications

Type			3SM18-25~32																3SM18-63~80	
Standards			IEC 60947-2, IEC 60947-4-1																	
Utilization category	according to IEC 60947-2		A																	
	according to IEC 60947-4-1		AC-3																	
Rated insulation voltage Ui (V)			690																	
Rated operational voltage Ue (V)			230/240, 400/415, 440, 500, 660/690																	
Rated impulse withstand voltage Uimp (kA)			8																	
Rated range of setting current (A)			0.1-0.16	0.16-0.25	0.25-0.4	0.4-0.63	0.63-1	1-1.6	1.6-2.5	2.5-4	4-6.3	6-10	9-14	13-18	17-23	20-25	24-32	25-40	40-63	56-80
Rated current of release (A)			0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	10	14	18	23	25	32	40	63	80
Rated frequency (Hz)			50/60																	
Rated ultimate short-circuit breaking capacity Icu (kA)	230/240 V		100	100	100	100	100	100	100	100	100	100	100	100	50	50	100	100	100	100
	400/415 V		100	100	100	100	100	100	100	100	100	100	15	15	15	15	35	35	35	35
	440 V		100	100	100	100	100	100	100	100	100	100	8	8	6	6	-	25	25	25
	500 V		100	100	100	100	100	100	100	100	100	100	6	6	4	4	-	8	8	8
	660/690 V		100	100	100	100	100	100	3	3	3	3	3	3	3	3	-	4	4	4
Rated service short-ciurcuit breaking capacity Ics (kA)	230/240 V		100	100	100	100	100	100	100	100	100	100	100	100	50	50	75	75	75	75
	400/415 V		100	100	100	100	100	100	100	100	100	100	7.5	6	7.5	6	17.5	17.5	17.5	17.5
	440 V		100	100	100	100	100	100	100	100	100	100	4	4	3	3	-	12.5	12.5	12.5
	500 V		100	100	100	100	100	100	100	100	100	100	4.5	4.5	3	3	-	4	4	4
	660/690 V		100	100	100	100	100	100	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	-	2	2	2
Arcing distance (mm)			40	40	40	40	40	40	40	40	40	40	40	40	40	40	50	50	50	50
Standard rated power of three-phase (kW)	230/240 V		-	-	-	-	-	-	0.37	0.75	1.1	2.2	3	4	5.5	5.5	5.5	11	15	22
	400 V		-	-	-	-	-	0.37	0.75	1.5	2.2	4	5.5	7.5	11	11	11	18.5	30	40
	500 V		-	-	-	-	-	-	0.75	1.5	2.2	4	5.5	9	11	11	11	22	33	45
	440 V		-	-	-	-	0.37	0.55	1.1	1.5	3	4	7.5	9	11	11	-	22	33	45
	500 V		-	-	-	-	0.37	0.75	1.1	2.2	3.7	5.5	7.5	9	11	11	-	25	40	55
	660/690 V		-	-	-	0.37	0.55	1.1	1.5	3	4	7.5	9	11	15	15	-	33	55	63
Current setting value of instantaneous eletromagnetic release Ir (A)			1.5	2.4	5	8	13	22.5	33.5	51	78	138	170	223	327	327	327	480	756	960
Current rating off use-link of back-up fuse, which is only needed in case of Icc>Icu (Icc: prospective short-circuit breaking current)	230/240 V	aM A	●	●	●	●	●	●	●	●	●	●	●	●	80	80	●	●	●	●
		gl/gG A	●	●	●	●	●	●	●	●	●	●	●	●	100	100	●	●	●	●
	400/415 V	aM A	●	●	●	●	●	●	●	●	●	●	63	63	63	63	●	250	315	315
		gl/gG A	●	●	●	●	●	●	●	●	●	●	80	80	80	80	●	315	400	400
	440 V	aM A	●	●	●	●	●	●	●	●	50	50	50	50	50	50	-	250	315	315
		gl/gG A	●	●	●	●	●	●	●	●	63	63	63	63	63	63	-	315	400	400
	500 V	aM A	●	●	●	●	●	●	●	●	50	50	50	50	50	50	-	160	200	200
		gl/gG A	●	●	●	●	●	●	●	●	63	63	63	63	63	63	-	200	250	250
● Fuse is not required	500 V	aM A	●	●	●	●	●	●	16	25	32	32	40	40	40	40	-	160	200	200
		gl/gG A	●	●	●	●	●	●	20	32	40	40	50	50	50	50	-	200	250	250
Add-on auxiliary contact blocks	Front mounting		1NO+1NC, 2NO															-		
	Side mounting		1NO+1NC, 2NO															-		
Shunt release			●															-		
Under voltage release			●															-		
Auxiliary alarm			1NO+1NO, 1NO+1NC, 1NC+1NO, 1NC+1NC															-		
Enclosure			●															-		
Electrical life in AC-3 (times)			10000																	
Mechanical life (times)			20000																	
Tightening torque (N·m)			1.7																	
Degree of protection			IP20; IP65 with enclosure																	
Ambient air temperature (°C)			-5 to +40, max. 95 % humidity																	
Storage temperature (°C)			-40 ~ +75																	
Maximum operating altitude (meters)			2000																	

Selection and ordering data

3SM18





Setting range of thermal trips (A)	Rated current of release (A)	Type code	Order code
0.1-0.16	0.16	M18 2M0.16	**12730**
0.16-0.25	0.25	M18 2M0.25	**12731**
0.25-0.4	0.4	M18 2M0.4	**12732**
0.4-0.63	0.63	M18 2M0.63	**12733**
0.63-1	1	M18 2M1.0	**12734**
1-1.6	1.6	M18 2M1.6	**12735**
1.6-2.5	2.5	M18 2M2.5	**12736**
2.5-4	4	M18 2M4.0	**12737**
4-6.3	6.3	M18 2M6.3	**12738**
6-10	10	M18 2M10	**12739**
9-14	14	M18 2M14	**12740**
13-18	18	M18 2M18	**12741**
17-23	23	M18 2M23	**12742**
20-25	25	M18 2M25	**12743**
24-32	32	M18 2M32	**12744**
25-40	40	M18 3/40	**12767**
40-63	63	M18 3/63	**12768**
56-80	80	M18 3/80	**12769**

3SM18 with enclosure



Setting range of thermal trips (A)	Rated current of release (A)	Type code	Order code
0.1-0.16	0.16	M18 4M0.16	**12770**
0.16-0.25	0.25	M18 4M0.25	**12771**
0.25-0.4	0.4	M18 4M0.4	**12772**
0.4-0.63	0.63	M18 4M0.63	**12773**
0.63-1	1	M18 4M1.0	**12774**
1-1.6	1.6	M18 4M1.6	**12775**
1.6-2.5	2.5	M18 4M2.5	**12776**
2.5-4	4	M18 4M4.0	**12777**
4-6.3	6.3	M18 4M6.3	**12778**
6-10	10	M18 4M10	**12779**
9-14	14	M18 4M14	**12780**
13-18	18	M18 4M18	**12781**
17-23	23	M18 4M23	**12782**
20-25	25	M18 4M25	**12783**
24-32	32	M18 4M32	**12784**

3SM18-2-AV Under-voltage release



Rated operational voltage Ue (V)	Voltage range of operation	Frequency (HZ)	Type code	Order code
110-127	35%-70% Ue	50/60	AU115	**12790**
220-240	35%-70% Ue	50/60	AU225	**12791**
380-415	35%-70% Ue	50/60	AU385	**12792**

3SM18-2-AS Shunt release



Rated operational voltage Ue (V)	Voltage range of operation	Frequency (HZ)	Type code	Order code
110-127	70%-110% Ue	50/60	AS115	**12793**
220-240	70%-110% Ue	50/60	AS225	**12794**
380-415	70%-110% Ue	50/60	AS385	**12795**

Selection and ordering data

3SM18-2-AN11 Auxiliary contact



Mounting type	Contact position	Conventional thermal current Ith (A)	Type code	Order code
Top	1NO+1NC	2.5	AE11	**12786**
Top	2NO	2.5	AE20	**12787**
Side	1NO+1NC	6	AN11	**12788**
Side	2NO	6	AN20	**12789**

3SM18-2-AD Auxiliary Alarm



Contact position	Conventional thermal current Ith (A)	Type code	Order code
1NO+1NO	6	AD1010	**12796**
1NO+1NC	6	AD1001	**12797**
1NC+1NO	6	AD0110	**12798**
1NC+1NC	6	AD0101	**12799**

Enclosure

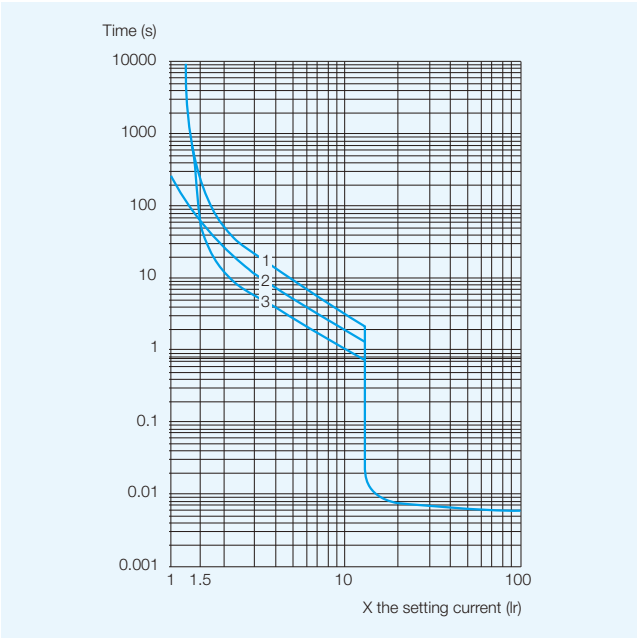


Type	Type code	Order code
3SM18-2B	M18 2B	**12785**

Tripping Curve

Average operating times at 20 °C related to multiples of the setting current

1: 3 poles from cold state; 2: 2 poles from cold state; 3: 3 poles from hot state



Outline and installation dimensions

unit in mm

