

INDUSTRIAL PRODUCTS



The image displays a variety of MAXGE industrial electrical components. On the left, there is a white three-pole relay. Next to it is a blue manual reset circuit breaker. To the right of that is a white thermal relay. In the center is a large white contactor with multiple terminals. To its right is a smaller white thermal relay. Further right is a black contactor. On the far right is a large white digital multimeter with a red display and a green button, and a smaller black digital multimeter with a red display and a green button.

Committed to becoming a world-class manufacturer of intelligent electric

<https://www.maxge.com>



Intelligence beyond vision

ABOUT US

MAXGE Electric Technology Co., Ltd. is located at the foot of the beautiful Mogan Mountain – Deqing, Zhejiang. At present, the company occupies a modern workshop of more than 80,000 square meters. MAXGE concentrates all its energy on focusing the electric field through deep development.

MAXGE is equipped with automatic production lines, intelligent product quality inspection and other hardware equipment. Besides, there are abundant series of products such as ACB, MCCB, MCB, RCCB, RCBO, distribution box, and AC contactor, which are the cornerstone of high and low voltage power distribution series, photovoltaic series, automatic product series, intelligent electric series and others. With courage of innovation, its products quickly stood out from the fiercely competitive electric market, and the self-owned brand "MAXGE" successfully entered the international market. Among them, the main products ALPHA+ series and SIGMA+ series are exported to more than 60 countries and regions such as the European Union, America, the Middle East, Africa, and Southeast Asia. At the same time, it has a number of branches in Hong Kong, the Netherlands, the UK, Spain, etc.

Through a widespread sales network and excellent technical team, MAXGE is dedicated to providing high value-added products and high-quality services for our customers.



THE BRAND CULTURE OF MAXGE

■ Brand Interpretation

Chinese Name: Mei Gao
Mei: Pursue perfection
Gao: Ascend to virtue
English Name: MAXGE
MAX: Maximum
GE: Global Electric

■ Corporate Vision

Committed to becoming a world-class manufacturer of intelligent electric

■ Corporate Mission

Making electricity safe green smart

■ Corporate Values

Customer Focused
Altruism & Win-win
Truth-seeking & Innovation

■ Brand Slogans

Intelligence beyond vision

■ Product Concept

Safe and Reliable
Energy Saving
Artificial Intelligence

■ Corporate Spirit

Co-creation and Shared-benefits
Cooperation and Struggle
Devotion and Speciality
Pragmatism and Efficiency





R&D CENTER

Smart Manufacturing

Smart Electric

Smart Life



MAXGE
Intelligence beyond vision

Injection Moulding Workshop



Stamping Workshop



Spot Welding Workshop



MCB Automatic Workshop

Intelligent
Manufacturing
Industry 4.0



RCCB Automatic Workshop



MCCB Automatic Workshop



CONTENTS



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SGC1-K/EC Series

Mini Contactor

Technical data

Standard	IEC60947-4-1	
Electric ratings	Up to 12A(SGC1-K Series) / 9A(SGC1-EC Series), 690V	
Approvals	CE	
Operation range	Pick-up voltage	(85%~110%)U _c
	Pick-out voltage	(20%~75%)U _c
Rated insulation voltage U _i (V)	690	
Rated impulse withstand voltage U _{imp} (kA)	6	
Rated frequency(Hz)	50/60	
Utilization category	AC-3, AC-4	
Degree of protection	IP 20	
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

1.SGC1-K Type



Model	Number of poles		Instantaneous auxiliary contacts		Type
SGC1-K0610	3	-	1	-	3P+NO
SGC1-K0601	3	-	-	1	3P+NC
SGC1-K06004	4	-	-	-	4NO
SGC1-K06008	2	2	-	-	2NO+2NC
SGC1-K0910	3	-	1	-	3P+NO
SGC1-K0901	3	-	-	1	3P+NC
SGC1-K09004	4	-	-	-	4NO
SGC1-K09008	2	2	-	-	2NO+2NC
SGC1-K1210	3	-	1	-	3P+NO
SGC1-K1201	3	-	-	1	3P+NC
SGC1-K12004	4	-	-	-	4NO
SGC1-K12008	2	2	-	-	2NO+2NC

2.SGC1-EC Type



Model	Number of poles		Instantaneous auxiliary contacts		Type
SGC1-EC0610	3	-	1	-	3P+NO
SGC1-EC0601	3	-	-	1	3P+NC
SGC1-EC06008	2	2	-	-	2NO+2NC
SGC1-EC0910	3	-	1	-	3P+NO
SGC1-EC0901	3	-	-	1	3P+NC
SGC1-EC09008	2	2	-	-	2NO+2NC

3.Front Auxiliary Contact Blocks



Model	Mounting type	Auxiliary Contacts	
SGC1-KN02	Top	0	2
SGC1-KN11	Top	1	1
SGC1-KN20	Top	2	0
SGC1-KN22	Top	2	2
SGC1-KN40	Top	4	0
SGC1-KN04	Top	0	4
SGC1-KN13	Top	1	3
SGC1-KN31	Top	3	1

1.SGC1-K Series Mini Contactors

Type		SGC1-K0610	SGC1-K0910	SGC1-K1210
		SGC1-K0601	SGC1-K0901	SGC1-K1201
		SGC1-K06004	SGC1-K09004	SGC1-K12004
		SGC1-K06008	SGC1-K09008	SGC1-K12008
Number of contacts		3P+NO, 3P+NC, 4NO, 2NO+2NC		
Rated conventional thermal current Ith(A) AC1		20		
Rated operational current(A)	AC3 380/400V	6	9	12
	AC4 380/400V	2.6	3.5	5
Number of poles		3,4	3,4	3,4
Connecting max. current(A)	380V	60	90	120
	660V	72	108	144
Breaking max. current(A)	380V	48	72	96
	660V	60	90	120
Rated operational power in category AC-3(KW)	220/230/240V	1.5	2.2	3
	380/400V	2.2	4	5.5
	660/690V	3	4	5.5
Average impedance per pole(mW)		3		
Operation cycles(times/hour)	Electrical AC-3	1200	1200	1200
	Electrical AC-4	300	300	300
	Mechanical	3600	3600	3600
Electrical life(X 10 ⁴ times)	AC-3	100	120	
	AC-4	20		
Mechanical life(X 10 ⁴ times)		1000		
Matching fuse model		RT16-16	RT16-20	RT16-20
Tightening torque(N.m)		0.8		
Screw clamp terminals	Solid conductor(MM2)	Max.1X4+1X2.5		
	Flexible conductor without cable end(MM2)	Max.2X2.5		
	Flexible conductor with cable end(MM2)	Max.1X1.5+1X2.5		

2.SGC1-EC Series Mini Contactors

Type	SGC1-EC0610		SGC1-EC0910
	SGC1-EC0601		SGC1-EC0901
	SGC1-EC06008		SGC1-EC09008
Number of contacts		3P+NO, 3P+NC, 2NO+2NC	
Rated conventional thermal current Ith(A) AC1		16	
Rated operational current(A)	AC3 380/400V	6	9
	AC4 380/400V	2.6	3.5
Number of poles		3,4	3,4
Connecting max. current(A)	380V	60	90
	660V	72	108
Breaking max. current(A)	380V	48	72
	660V	60	90
Rated operational power in category AC-3(KW)	220/230/240V	1.5	2.2
	380/400V	2.2	4
	660/690V	3	4
Average impedance per pole(mW)		3	
Operation cycles(times/hour)	Electrical AC-3	1200	
	Electrical AC-4	300	
Electrical life(X 10 ⁴ times)	AC-3	100	
	AC-4	20	
Mechanical life(X 10 ⁴ times)		1000	
Matching fuse model		NT00 -16	
Wire(mm ²)		1.5	

SGC1-D Series AC Contactor

Technical data

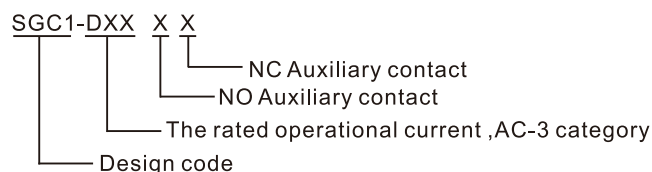
Standard	IEC60947-4-1	
Electric ratings	Up to 95A, 690V	
Approvals	SEMKO, CE, CB, TUV	
Operation range	Pick-up voltage	(85%~110%) U_c
	Drop-out voltage	(20%~75%) U_c
Rated insulation voltage $U_i(V)$		690
Rated impulse withstand voltage $U_{imp}(kV)$		6
Rated frequency(Hz)		50/60
Utilization category		AC-3, AC-4
Degree of protection		IP20
Ambient air temperature($^{\circ}C$)		-5 to +40, max. 95% humidity
Storage temperature($^{\circ}C$)		-40~+75
Maximum operating altitude (meters)		≤ 2000
Flame resistance		V1



1.Selection and ordering data

	Rated Operational current in category AC-3 400V (A)	Number of poles		Instantaneous auxiliary contacts		Standard control circuit voltages (VAC)	Rated frequency (Hz)	Type	Model
	9	3	-	1	-	380/400	50/60	3NO+NO	SGC1-D0910
		3	-	-	1	380/400	50/60	3NO+NC	SGC1-D0901
		4	-	-	-	380/400	50/60	4NO	SGC1-D09004
		2	2	-	-	380/400	50/60	2NO+2NC	SGC1-D09008
	12	3	-	1	-	380/400	50/60	3NO+NO	SGC1-D1210
		3	-	-	1	380/400	50/60	3NO+NC	SGC1-D1201
		4	-	-	-	380/400	50/60	4NO	SGC1-D12004
		2	2	-	-	380/400	50/60	2NO+2NC	SGC1-D12008
	18	3	-	1	-	380/400	50/60	3NO+NO	SGC1-D1810
		3	-	-	1	380/400	50/60	3NO+NC	SGC1-D1801
	25	3	-	1	-	380/400	50/60	3NO+NO	SGC1-D2510
		3	-	-	1	380/400	50/60	3NO+NC	SGC1-D2501
		4	-	-	-	380/400	50/60	4NO	SGC1-D25004
		2	2	-	-	380/400	50/60	2NO+2NC	SGC1-D25008
	32	3	-	1	-	380/400	50/60	3NO+NO	SGC1-D3210
		3	-	-	1	380/400	50/60	3NO+NC	SGC1-D3201
	40	3	-	1	1	380/400	50/60	3NO+NO+NC	SGC1-D4011
		4	-	-	-	380/400	50/60	4NO	SGC1-D40004
		2	2	-	-	380/400	50/60	2NO+2NC	SGC1-D40008
	50	3	-	1	1	380/400	50/60	3NO+NO+NC	SGC1-D5011
		4	-	-	-	380/400	50/60	4NO	SGC1-D50004
		2	2	-	-	380/400	50/60	2NO+2NC	SGC1-D50008
	65	3	-	1	1	380/400	50/60	3NO+NO+NC	SGC1-D6511
		4	-	-	-	380/400	50/60	4NO	SGC1-D65004
		2	2	-	-	380/400	50/60	2NO+2NC	SGC1-D65008
	80	3	-	1	1	380/400	50/60	3NO+NO+NC	SGC1-D8011
		4	-	-	-	380/400	50/60	4NO	SGC1-D80004
		2	2	-	-	380/400	50/60	2NO+2NC	SGC1-D80008
	95	3	-	1	1	380/400	50/60	3NO+NO+NC	SGC1-D9511
		4	-	-	-	380/400	50/60	4NO	SGC1-D95004
		2	2	-	-	380/400	50/60	2NO+2NC	SGC1-D95008

2.Model explanation:



3.Refer to other coil voltage listed as followings:

Coil voltage(V)	24	36	48	110	127	220	230	240	380	415	440	480	500	600	660
50Hz	B5	C5	E5	F5	G5	M5	P5	U5	Q5	N5	R5	T5	S5	-	Y5
60Hz	B6	-	E6	F6	G6	M6	P6	U6	Q6	N6	R6	T6	-	S6	-
50/60Hz	B7	C7	E7	F7	G7	M7	P7	U7	Q7	N7	R7	T7	-	-	-

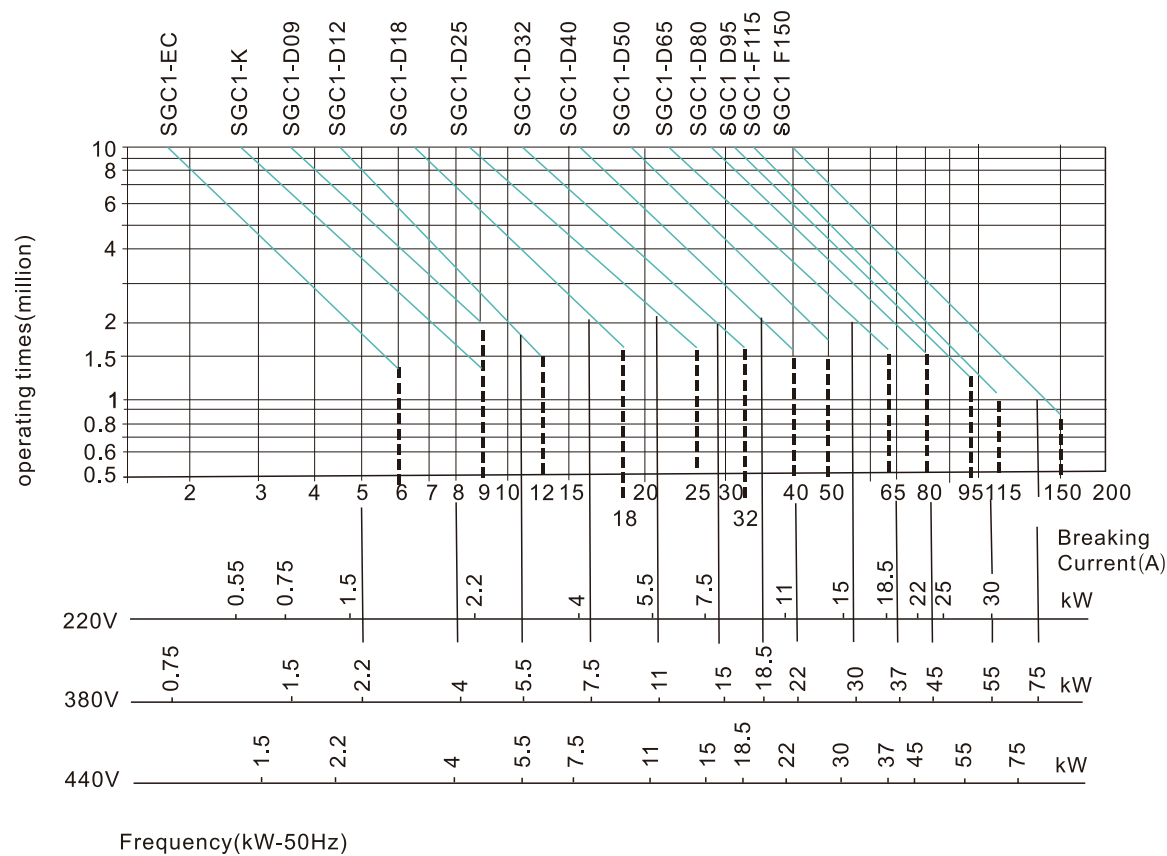
For technical data, see technical specifications for type SGC1-D Series

Technical specifications for SGC1-D Series

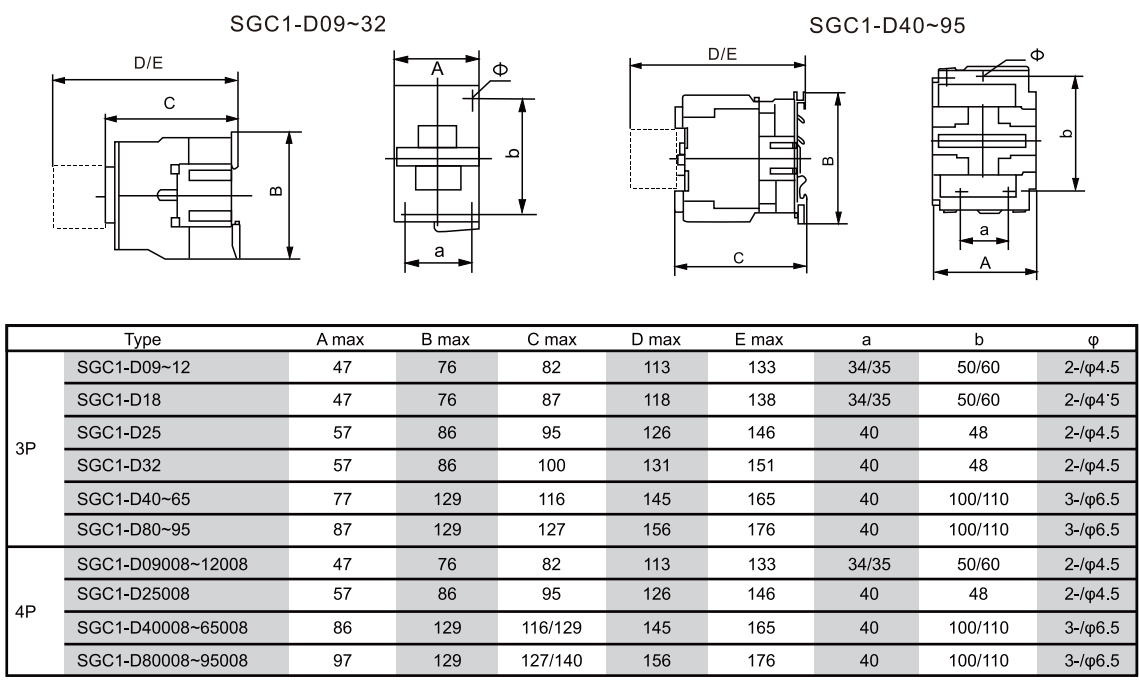


Type		SGC1-D										
		09	12	18	25	32	40	50	65	80	95	
Number of poles		3,4	3,4	3	3,4	3	3,4	3,4	3,4	3,4	3,4	
Rated operational current(A)	380V	In AC-3	9	12	18	25	32	40	50	65	80	95
		In AC-4	3.5	5	7.7	8.5	12	18.5	24	28	37	44
	660V	In AC-3	6.6	8.9	12	18	21	34	39	42	49	55
		In AC-4	1.5	2	3.8	4.4	7.5	9	12	14	17.3	21.3
440V		In AC-1	20	25	32	40	50	60	80	80	110	125
Rated conventional thermal current Ith(A)		20	25	32	40	50	60	80	80	125	125	
Rated making capacity(A) 400V		10 x Ie AC-3 or 12 x Ie AC-4										
Rated breaking capacity(A) 400V		8 x Ie AC-3 or 12 x Ie AC-4										
Rated operational power in category AC-3(kw)	220/230/240V	2.2	3	4	5.5	7.5	11	15	18.5	22	25	
	380/400V	4	5.5	7.5	11	15	18.5	22	30	37	45	
	415V	4	5.5	9	11	15	22	25	37	45	45	
	440V	4	5.5	9	11	15	22	30	37	45	45	
	660/690V	5.5	7.5	10	15	18.5	30	33	37	45	45	
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	SGA1-DN										
	Side	SGA8-DN										
	Front time delay	SGA2-DT/SGA3-DR										
	Front dust and damp protected	■										
Reversing contactor type		SGC2-D										
Associated thermal overload relays		SGR2-D13				SGR2-D23	SGR2-D33					
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	
Elechanical 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	

1.Electrical life curve for AC contactor SGC1-D



2.Overall and mounting dimensions(SGC1-D Series)



SGP1-D Series DC Operated AC Contactors



Model	Rated operating current 380V AC-3(A)	Conventional thermal current(A)	Standard power ratings of 3phase motors 50-60Hz AC-3			Auxiliary contact		Type
			220V/230V (kW)	380V/400V (kW)	660V/690V (kW)			
SGP1-D0910	9	20	2.2	4	5.5	1	-	3P+NO
SGP1-D0901						-	1	3P+NC
SGP1-D1210	12	20	3	5.5	7.5	1	-	3P+NO
SGP1-D1201						-	1	3P+NC
SGP1-D1810	18	32	4	7.5	9	1	-	3P+NO
SGP1-D1801						-	1	3P+NC
SGP1-D2510	25	40	5.5	11	15	1	-	3P+NO
SGP1-D2501						-	1	3P+NC
SGP1-D3210	32	50	7.5	15	18.5	1	-	3P+NO
SGP1-D3201						-	1	3P+NC
SGP1-D4011	40	60	11	18.5	30	1	1	3P+NO+NC
SGP1-D5011	50	80	15	22	33	1	1	3P+NO+NC
SGP1-D6511	65	80	18.5	30	37	1	1	3P+NO+NC
SGP1-D8011	80	125	22	37	45	1	1	3P+NO+NC
SGP1-D9511	95	125	25	45	45	1	1	3P+NO+NC

SG19 Series Contactor for Power Factor Contactors

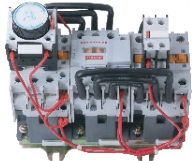


Model	Rated Conventional Thermal Current Ith	Controllable power			Auxiliary contact	
		220V/230V (Kvar)	380V/400V (Kvar)	660V/690V (Kvar)		
SG19-2511	25	6	12	12	1	1
SG19-2502					-	2
SG19-2520					2	-
SG19-3211	32	8.5	16	16	1	1
SG19-3202					-	2
SG19-3220					2	-
SG19-4311	43	10	20	20	1	1
SG19-4302					-	2
SG19-4320					2	-
SG19-5012	50	12	25	25	1	2
SG19-5021					2	1
SG19-6312	63	15	30	30	1	2
SG19-6321					2	1
SG19-8012	80	22	37	37	1	2
SG19-8021					2	1
SG19-9512	95	23	45	45	1	2
SG19-9521					2	1
SG19-12512	125	25	50	50	1	2
SG19-12521					2	1

SGC2-D Series Mechanical Interlocking Contactors

	Model	Rated operating current 400V AC-3 (A)	Standard power ratings of 3phase motors 50-60Hz AC-3					Poles
			220V/230V (kW)	380V/400V (kW)	415V (kW)	440V (kW)	660V/690V (kW)	
	SGC2-D09	9	2.2	4	4	4	5.5	3
	SGC2-D12	12	3	5.5	5.5	5.5	7.5	3
	SGC2-D18	18	4	7.5	9	9	10	3
	SGC2-D25	25	5.5	11	11	11	15	3
	SGC2-D32	32	7.5	15	15	15	18.5	3
	SGC2-D40	40	11	18.5	22	22	30	3
	SGC2-D50	50	15	22	25	30	33	3
	SGC2-D65	65	18.5	30	37	37	37	3
	SGC2-D80	80	22	37	45	45	45	3
	SGC2-D95	95	25	45	45	45	45	3

SGC3-D Series Star-delta Reduced Voltage Starter

	Model	Rated operating current 380V AC-3 (A)	Standard power ratings of 3phase motors 50-60Hz AC-3			
			220V/230V (kW)	380V/400V (kW)	415V (kW)	440V (kW)
	SGC3-D093	9	4	7.5	7.5	7.5
	SGC3-D123	12	5.5	11	11	11
	SGC3-D183	18	7.5	15	15	18.5
	SGC3-D253	25	11	18.5	18.5	22
	SGC3-D323	32	15	25	25	30
	SGC3-D403	40	18.5	33	33	37
	SGC3-D503	50	25	45	45	59
	SGC3-D653	65	30	55	55	59
	SGC3-D803	80	37	63	63	75
	SGC3-D953	95	45	80	80	80

Auxiliary contact and Time relay

Front auxiliary contact blocks 		Side auxiliary contact blocks 		Time delay auxiliary contact 		Mechanical interlock 		Spare coils 	
Type		Mounting Type		Auxiliary Contacts		Type		Voltage (VAC)	
				 				Rated frequency(Hz)	
SGA1-DN10		Top		1 0					
SGA1-DN01		Top		0 1					
SGA1-DN02		Top		0 2					
SGA1-DN11		Top		1 1					
SGA1-DN20		Top		2 0					
SGA1-DN22		Top		2 2					
SGA1-DN40		Top		4 0					
SGA1-DN04		Top		0 4					
SGA1-DN13		Top		1 3					
SGA1-DN31		Top		3 1					
Type		Mounting Type		Auxiliary Contacts		Type		Delay range	
				 					
SGA8-DN11		Side		1 1					
Type		Delay range		Auxiliary Contacts		Type		Delay range	
				 					
Making time-delay		SGA2-DT0		0.1-3s					
		SGA2-DT2		0.1-30s					
		SGA2-DT4		10-180s					
Breaking time-delay		SGA3-DR0		0.1-3s					
		SGA3-DR2		0.1-30s					
		SGA3-DR4		10-180s					
Type		Matched AC Contactor				Type		Voltage (VAC)	
SGML-0932		SGC1-D09 to SGC1-D32						Rated frequency(Hz)	
SGML-4095		SGC1-D40 to SGC1-D95							
SG9F 970		SGC1-F115 to SGC1-F150							
SG9FG970		SGC1-F185 to SGC1-F225							
SG9FJ 970		SGC1-F265 to SGC1-F400							
SG9FL 970		SGC1-F630							
Type		Voltage (VAC)		Rated frequency(Hz)		Matched AC Contactor			
SGX1-D2		24(B7)							
SGX1-D4		36(C7)							
SGX1-D6		48(E7)							
		110(F7)							
		127(G7)							
		220(M7)							
		230(P7)							
		240(U7)							
		380(Q7)							
		415(N7)							
		440(R7)							
		480(T7)							

SGC2-D Series AC Contactor

Technical data

Standard	IEC60947-4-1	
Electric ratings	Up to 620A,1000V	
Approvals	CE	
Operation Range	Pick-up voltage	(85%~110%)Uc
	Drop-out voltage	(20%~75%) Uc
Rated insulation voltage Ui(V)	1000	
Rated impluse withstand voltage Uimp(kV)	8	
Rated frequency(Hz)	50/60	
Utilization category	AC-3,AC-4	
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	



1. Model explanation:



SGC2-DXXX

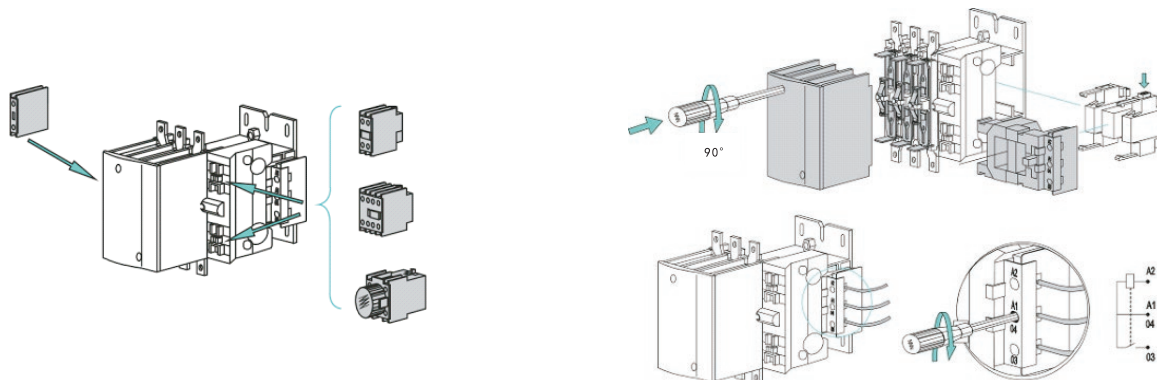
— The rated operational current ,AC-3 category

— Design code

2. Technical specifications for SGC2-D Series

Type		SGC2-D								
		115	150	170	205	245	300	410	475	620
Number of poles		3,4	3,4	3,4	3,4	3,4	2,3,4	2,3,4	2,3,4	2,3,4
current Ie(A) (Ue≤400V)	In AC-3	115	150	170	205	245	300	410	475	620
	In AC-1	200	200	200	275	315	400	500	700	900
Rated conventional thermal current Ith(A)		200	200	200	275	315	400	500	700	900
Rated making capacity(A) 1ms		10 x In AC-3 or 12 x In AC-4								
Rated breaking capacity(A) 1ms		8 x In AC-3 or 10 x In AC-4								
Rated operational power in category AC-3(kw)	220/230V	30	40	55	63	75	100	129	147	200
	380/400V	55	75	90	100	132	160	200	250	335
	415V	59	80	100	110	140	180	220	280	375
	440V	59	80	100	110	140	180	220	280	375
	500V	75	90	110	129	160	200	257	335	400
	660/690V	80	100	110	140	180	220	280	355	450
	1000V	75	90	100	100	147	160	185	335	425
Average impedance per pole(mΩ)		0.6	0.6	0.6	0.32	0.30	0.28	0.24	0.20	0.12
Electrical life(X 10 ⁶ times)		1.2	1.2	1	1	0.8	0.8	0.8	0.8	0.8
Mechanical life(X 10 ⁶ times)		10	10	6	6	6	6	6	6	6
Matching fuse model		RT16-1	RT16	RT16	RT16	RT16-3	RT16-3	RT16-3	RT16-3	RT16-3
Tightening torque(N.m) cable connection		18	18	18	18	35	35	35	35	58

3.Scheme drawing



SGC1-F Series

AC Contactor

Technical data

Standard	IEC60947-4-1	
Electric ratings	Up to 800A, 1000V	
Approvals	CE	
Operation Range	Pick-up voltage	(85%~110%) U _c
	Drop-out voltage	(20%~75%) U _c
Rated insulation voltage U _i (V)	1000	
Rated impulse withstand voltage U _{imp} (kV)	8	
Rated frequency(Hz)	50/60	
Utilization category	AC-3,AC-4	
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	



1. Model explanation:



SGC1-FXXX

— The rated operational current ,AC-3 category

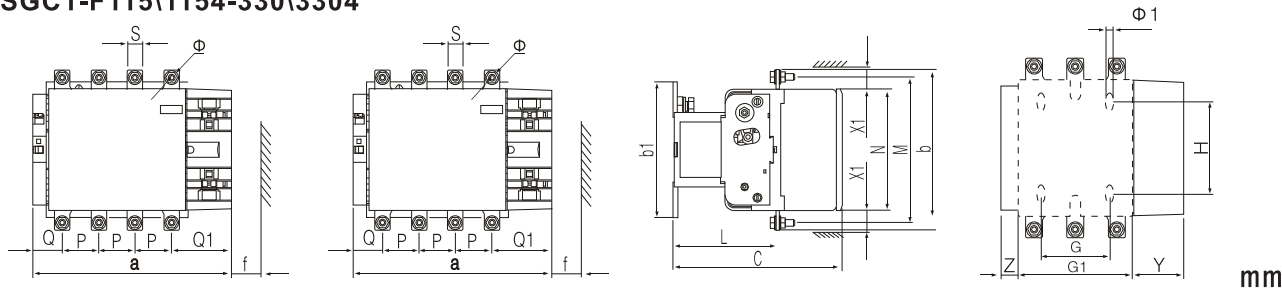
— Design code

2. Technical specifications for SGC1-F Series

Type		SGC1-F										
		115	150	185	225	260	330	400	500	630	780	800
Number of poles		3,4	3,4	3,4	3,4	3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	3
current Ie(A) (Ue≤400V)	In AC-3	115	150	185	225	265	330	400	500	630	780	800
	In AC-1	200	250	275	315	350	400	500	700	1000	1600	1000
Rated conventional thermal current Ith(A)		200	250	275	315	350	400	500	700	900	1600	1000
Rated making capacity(A) 1ms		10 x In AC-3 or 12 x In AC-4										
Rated breaking capacity(A) 1ms		8 x In AC-3 or 10 x In AC-4										
Rated operational power in category AC-3(kw)	220/230V	30	40	55	63	75	100	129	147	200	220	220
	380/400V	55	75	90	100	132	160	200	250	335	400	400
	415V	59	80	100	110	140	180	220	280	375	425	425
	440V	59	80	100	110	140	180	220	280	375	425	425
	500V	75	90	110	129	160	200	257	335	400	450	450
	660/690V	80	100	120	129	180	220	280	355	450	475	475
	1000V	65	65	100	140	147	160	185	335	450	450	450
Average impedance per pole(mΩ)		0.37	0.35	0.33	0.32	0.3	0.28	0.26	0.18	0.12	0.1	0.12
Add-on auxiliary contact blocks	Front	SGA1-DN										
	Side	SGA8-DN										
	Front time delay	SGA2-DT/SGA3-DR										
	Front dust and damp protected	-										
Operation cycles (times/hour)	AC-1,AC-2,AC-3	1200	1200	600	600	600	600	600	600	600	600	600
	AC-4	300	300	300	300	300	300	300	300	300	300	300
Electrical life(X 10 ⁶ times)		1.2	1.2	1	1	0.8	0.8	0.8	0.8	0.8	0.8	0.6
Mechanical life(X 10 ⁶ times)		10	10	6	6	6	6	6	6	6	6	3
Matching fuse model		RT16-2	RT16-2	RT16-3	RT16-3	RT16-3	RT16-3	RT16-3	RT16-3	RT16-3	RT16-3	RT16-3
Tightening torque(N.m) cable connection		10	18	18	35	35	35	35	35	58	58	58

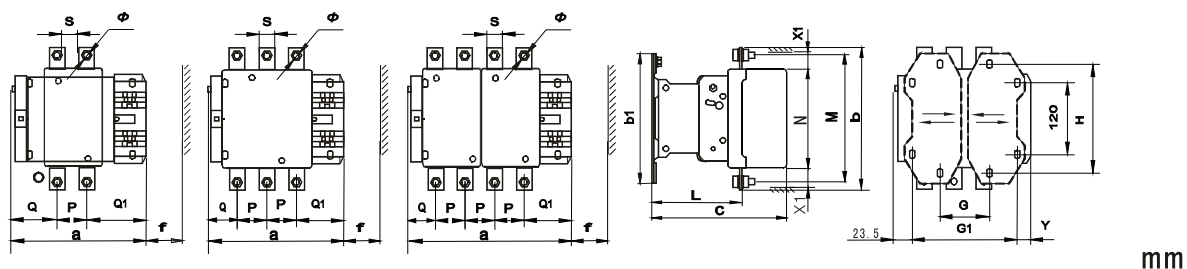
Overall and mounting dimensions(SGC1-F Series)

1.SGC1-F115\1154-330\3304



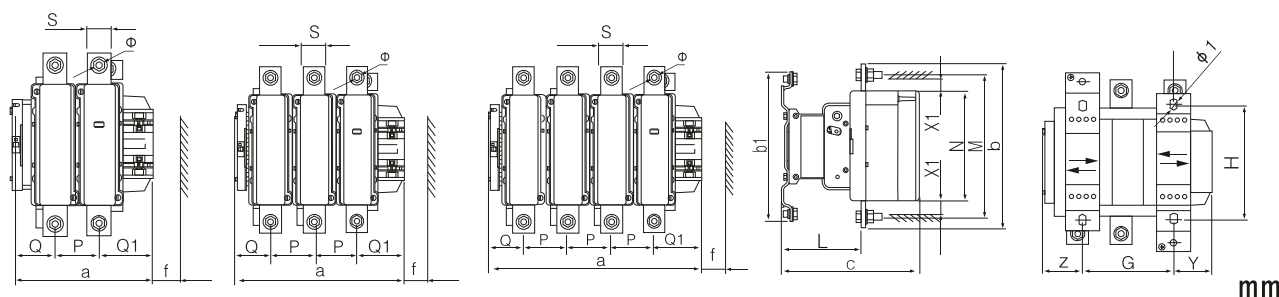
SGC1-F	a	P	Q	Q1	S	ϕ	f	b	b1	M	N	C	L	G	H	$\phi 1$	G1	Z	Y	X1	
																				500V $\leq$	>500V
115	163.5	37	29.5	60	15	M6	131	162	137	147	124	171	107	80	120-106	6.5	106	13.5	44	10	15
1154	200.5	37	29.5	60	15	M6	131	162	137	147	124	171	107	80	120-106	6.5	143	13.5	44	10	15
150	163.5	40	26	57.5	20	M8	131	170	137	150	124	171	107	80	120-106	6.5	106	13.5	44	10	15
1504	200.5	40	25	55.5	20	M8	131	170	137	150	124	171	107	80	120-106	6.5	143	13.5	44	10	15
185	168.5	40	29	59.5	20	M8	130	174	137	154	127	181	113.5	80	120-106	6.5	111	13.5	44	10	15
1854	208.5	40	29	59.5	20	M8	130	174	137	154	127	181	113.5	80	120-106	6.5	151	13.5	44	10	15
225	168.5	48	21	51.5	25	M10	130	197	137	172	127	181	113.5	80	120-106	6.5	111	13.5	44	10	15
2254	208.5	48	17	47.5	25	M10	130	197	137	172	127	181	113.5	80	120-106	6.5	151	20.5	44	10	15
265	201.5	48	39	66.5	25	M10	147	203	145	178	147	213	141	96	120-106	6.5	140	20.5	38	10	15
2654	244.5	48	34	66.5	25	M10	147	203	145	178	147	213	141	96	120-106	6.5	186	20.5	38	10	15
330	213	48	43	74	25	M10	147	206	145	181	158	219	145	96	120-106	6.5	154.5	20.5	38	10	15
3304	261	48	43	74	25	M10	147	206	145	181	158	219	145	96	120-106	6.5	202.5	20.5	38	10	15

2.SGC1-F400\4004\4002\500\5004\5002



SGC1-F	a	P	Q	Q1	S	ϕ	f	b	b1	M	N	C	L	G	G1	H	$\phi 1$	Y	X1	
																			500V $\leq$	>500V
4002	213	48	69	96	25	M10	151	206	209	181	158	219	145	80(66-102)	170(156-192)	180	8.5	19.5	15	20
400	213	48	43	74	25	M10	151	206	209	181	158	219	145	80(66-102)	170(156-192)	180	8.5	19.5	15	20
4004	261	48	43	74	25	M10	151	206	209	181	158	219	145	80(66-150)	170(156-240)	180	8.5	67.5	15	20
5002	233	50	76	102	30	M10	169	238	209	208	172	232	146	80(66-120)	170(156-210)	180	8.5	39.5	15	20
500	233	50	46	77	30	M10	169	238	209	208	172	232	146	80(66-120)	170(156-210)	180	8.5	39.5	15	20
5004	288	50	46	77	30	M10	169	238	209	208	172	232	146	140(66-175)	230(156-265)	180	8.5	39.5	15	20

3.SGC1-F630\6304\800



SGC1-F	a	P	Q	Q1	S	ϕ	f	b	b1	M	N	C	L	G	H	$\phi 1$	Z	Y	X1	
																			500V $\leq$	>500V
6302	309	80	102	127	40	M12	201	304	280	264	202	255	155	180(100-195)	185	10.5	60.5	68.5	20	25
630	309	80	60	89	40	M12	201	304	280	264	202	255	155	180(100-195)	185	10.5	60.5	68.5	20	25
6304	309	80	60	89	40	M12	201	304	280	264	202	255	155	240(150-275)	185	10.5	60.5	68.5	20	25
800	309	80	60	89	40	M12	201	304	280	264	202	255	155	180(100-195)	185	10.5	60.5	68.5	20	25

SGR2-D Series Thermal Relay

Technical data

Type	SGR2-D13,SGR2-D23,SGR2-D33,SGR2-D150,SGR2-D200, SGR2-D400,SGR2-D630,SGR2-F53,SGR2-F73	
Standard	IEC60947-4-1	
Approvals	CE, CB , TUV	
Tripping class	10A	
Rated insulation voltage Ui(V)	690/1000	
Rated impulse withstand voltage Uimp(kV)	6/8	
Signalling	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

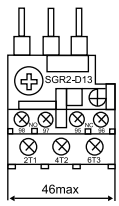
SGR2-D thermal relay matched with contactor SGC1-D

	Rated frame current (A)	Rated working current of thermal relay	Rated current (A)	Current setting range (A)	Matched fuse type aM (A)	Matched fuse type gG (A)	Matched AC contactor
	25	SGR2-D 1301	0.16	0.10~0.16	0.25	2	SGC1-D09
		SGR2-D 1302	0.25	0.16~0.25	0.5	2	SGC1-D09
		SGR2-D 1303	0.40	0.25~0.40	1	2	SGC1-D09
		SGR2-D 1304	0.63	0.40~0.63	1	2	SGC1-D09
		SGR2-D 1305	1.0	0.63~1.0	2	4	SGC1-D09
		SGR2-D 1306	1.6	1.0~1.6	2	4	SGC1-D09
		SGR2-D 1306X	2.0	1.25~2.0	4	6	SGC1-D09
		SGR2-D 1307	2.5	1.6~2.5	4	6	SGC1-D09
		SGR2-D 1308	4.0	2.5~4.0	6	10	SGC1-D09
		SGR2-D 1310	6.0	4.0~6.0	8	16	SGC1-D09
		SGR2-D 1312	8.0	5.5~8.0	12	20	SGC1-D09
		SGR2-D 1314	10	7~10	12	20	SGC1-D12
		SGR2-D 1316	13	9~13	16	25	SGC1-D18
		SGR2-D 1321	18	12~18	20	35	SGC1-D18
		SGR2-D 1322	25	17~25	25	50	SGC1-D25
	36	SGR2-D 2353	32	23~32	40	63	SGC1-D32
		SGR2-D 2355	40	30~40	40	80	SGC1-D40
	93	SGR2-D 3353	32	23~32	40	63	SGC1-D32
		SGR2-D 3355	40	30~40	40	100	SGC1-D40
		SGR2-D 3357	50	37~50	63	100	SGC1-D50
		SGR2-D 3359	65	48~65	63	100	SGC1-D65
		SGR2-D 3361	70	55~70	80	125	SGC1-D80
		SGR2-D 3363	80	63~80	80	125	SGC1-D80
		SGR2-D 3365	93	80~93	100	160	SGC1-D95
		SGR2-D 150	150	80~150	160	250	SGC1-F115-150
		SGR2-D 200	200	80~200	200	315	SGC1-F115-150
		SGR2-D 400	400	160~400	400	630	SGC1-F225-400
		SGR2-D 630	630	315~630	630	800	SGC1-F330-630

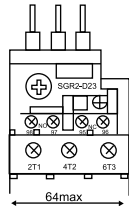
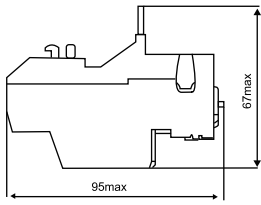
SGR2-F thermal relay matched with contactor SGC1-F

	Type code	Current setting range	Matched fuse type		Matched AC contactor
			aM Type (A)	gG Type (A)	
	SGR2-F53/50	30-50	50	80	SGC1-F115~F185
	SGR2-F53/80	48-80	80	125	SGC1-F115~F185
	SGR2-F53/100	60-100	100	200	SGC1-F115~F185
	SGR2-F53/150	90-150	160	250	SGC1-F115~F185
	SGR2-F53/220	132-220	250	315	SGC1-F225~F265
	SGR2-F73/330	200-330	400	500	SGC1-F225~F500
	SGR2-F73/500	300-500	500	800	SGC1-F225~F500
	SGR2-F73/630	380-630	630	800	SGC1-F400~F630

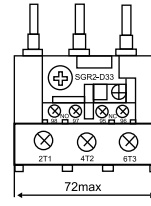
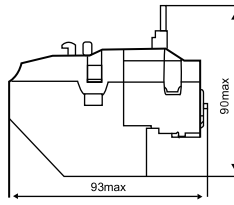
1. Overall and mounting dimensions (SGR2-D/SGR2-F Series)



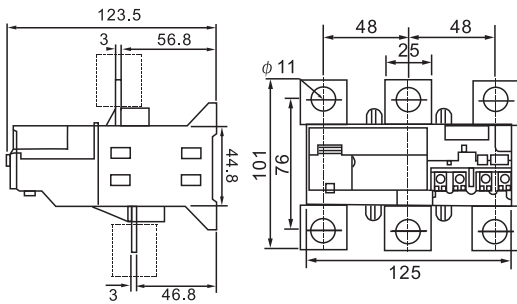
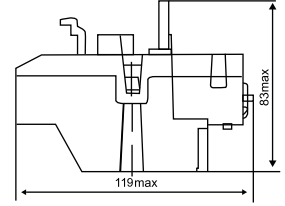
SGR2-D13



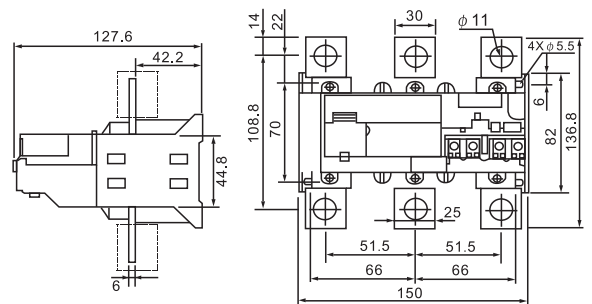
SGR2-D23



SGR2-D33



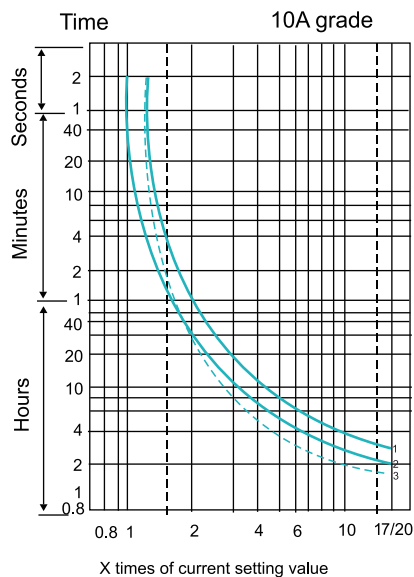
SGR2-F53/220



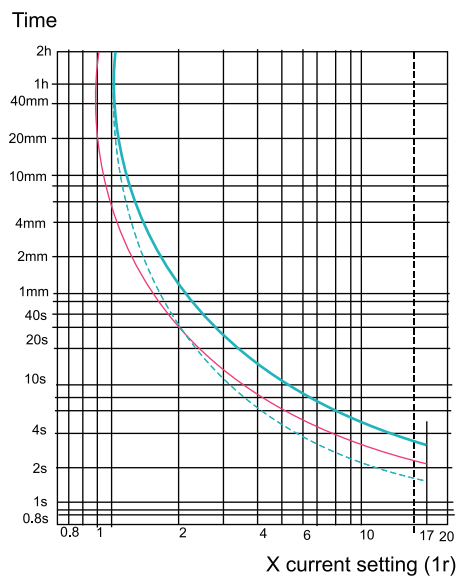
SGR2-F73/630

2. Tripping curve for thermal relay

SGR2-D

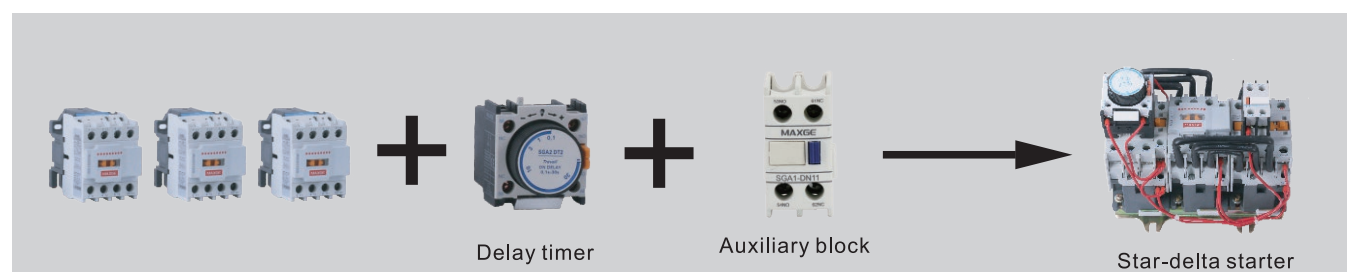
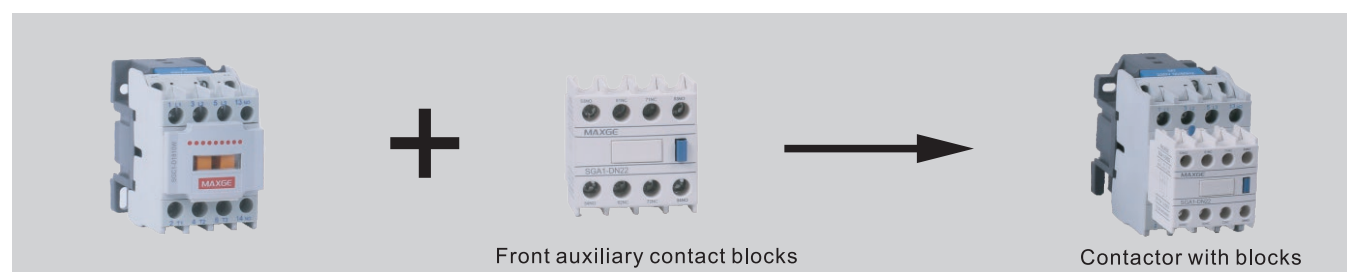
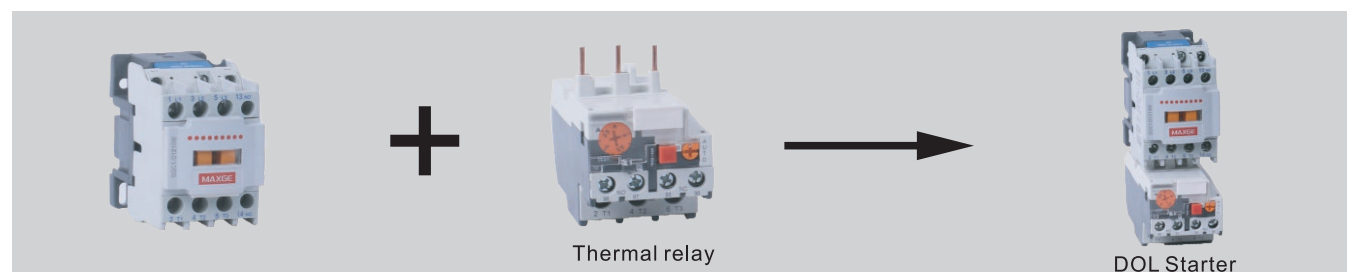
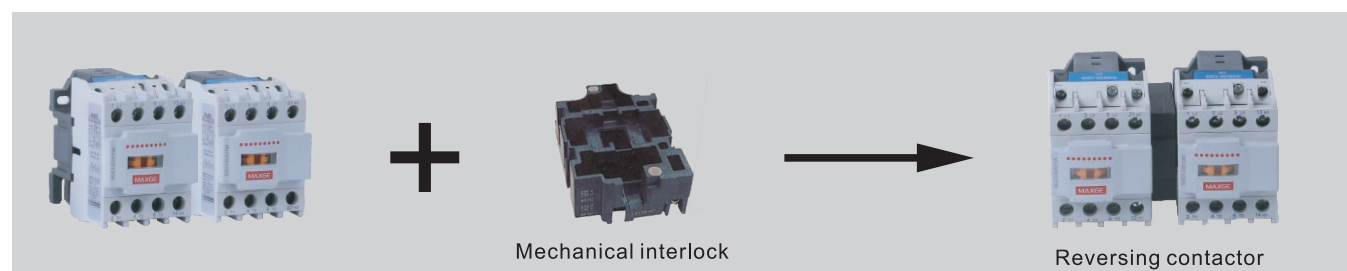
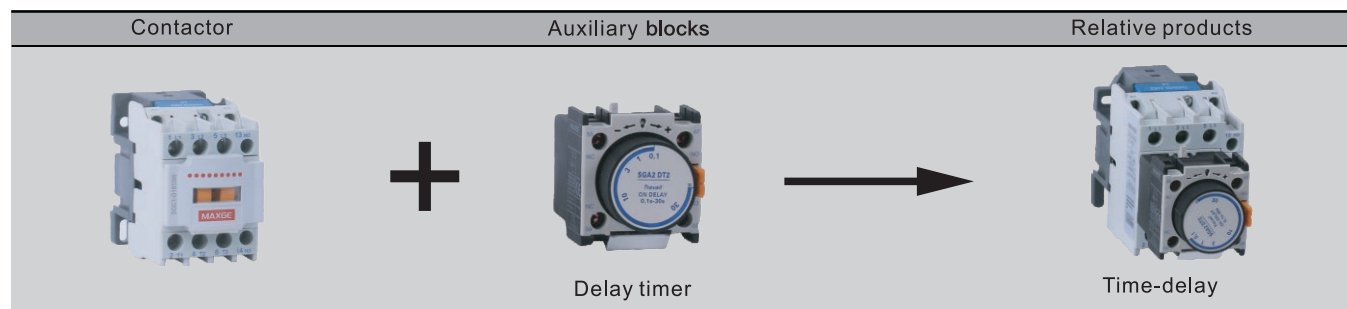


SGR2-F



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

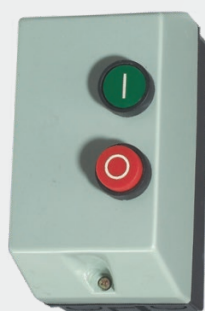
Derivative products of AC contactor, please refer to pictures below



SGE1-D Series Magnetic Starter

Technical data

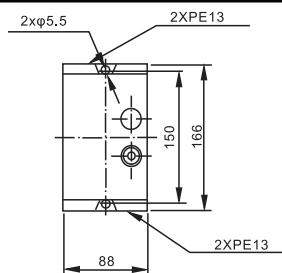
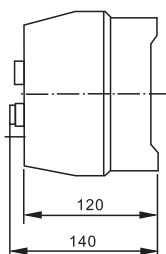
Standard	IEC60947-4-1, IEC60439-1
Electric ratings	09, 12, 18, 25, 32, 40, 50, 65, 80, 95
Approvals	CE
Rated operational voltage U _e (V)	690
Rated insulation voltage U _i (V)	690
Rated impulse withstand voltage U _{imp} (kV)	8
Rated frequency(Hz)	50/60
Control buttons	Green Start button
	Red Stop/Reset button
Enclosure	SGE1-D09/12/18 Frame Double insulated, IP 65
	SGE1-D25/32 Frame Double insulated, IP 65
	SGE1-D40/50/65/80/95 Frame Metal, IP 65
Electrical life (X10 ⁵ times)	5
Mechanical life(X10 ⁵ times)	50
Matched AC Contactor type	SGC1-D series
Matched Thermal relay type	SGR2-D series
Ambient air temperature(°C)	-5 to+40, max.95%humidity
Storage temperature(°C)	-40~+75
Maximum operating altitude (meters)	≤2000



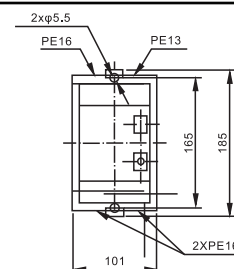
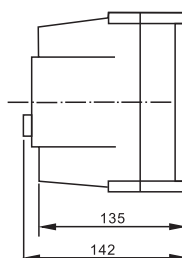
SGE1-D Magnetic Starter



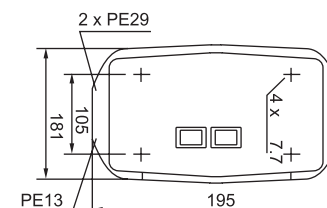
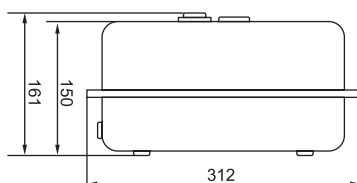
Type	Matched items		Rated power AC-3(KW)				
	Thermal relay	AC contactor	220/230V	380/400V	415V	440V	660/690V
SGE1-D09	SGR2-D13	SGC1-D09	2.2	4	4	4	5.5
SGE1-D12	SGR2-D13	SGC1-D12	3	5.5	5.5	5.5	7.5
SGE1-D18	SGR2-D13	SGC1-D18	4	7.5	9	9	10



Type	Matched items		Rated power AC-3(KW)				
	Thermal relay	AC contactor	220/230V	380/400V	415V	440V	660/690V
SGE1-D25	SGR2-D13	SGC1-D25	5.5	11	11	11	15
SGE1-D32	SGR2-D23	SGC1-D32	7.5	15	15	15	18.5



Type	Matched items		Rated power AC-3(KW)				
	Thermal relay	AC contactor	220/230V	380/400V	415V	440V	660/690V
SGE1-D40	SGR2-D33	SGC1-D40	11	18.5	22	22	30
SGE1-D50	SGR2-D33	SGC1-D50	15	22	25	30	33
SGE1-D65	SGR2-D33	SGC1-D65	18.5	30	37	37	37
SGE1-D80	SGR2-D33	SGC1-D80	22	37	45	45	45
SGE1-D95	SGR2-D33	SGC1-D95	25	45	45	45	45

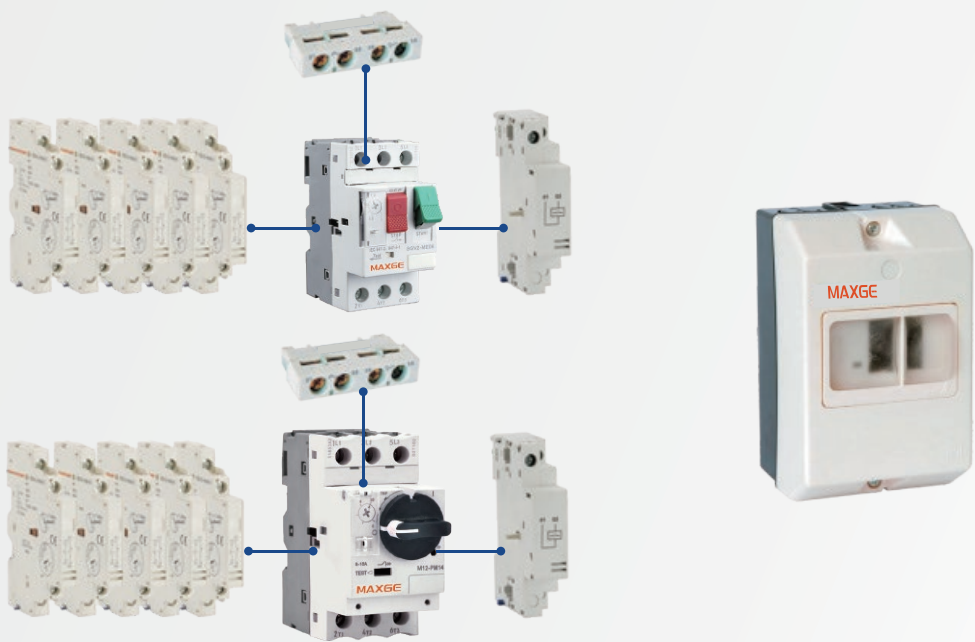


SGV2-ME/PM Series

Motor Protection Circuit Breaker

Technical data

Standard	IEC60947-2, IEC60947-4-1	
Approvals	CE	
Utilization Category	According to IEC60947-2	A
	According to IEC60947-4-1	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	
Electrical life in AC-3(times)	10000	
Mechanical life(times)	20000	
Tightening torque(N.m)	1.7	
Degree of Protection	IP 20; IP65 with enclosure	
Ambient air temperature(°C)	- 5 to + 40, max. 95% humidity	
Storage temperature(°C)	-40~+70	
Maximum operating altitude(meters)	≤2000	



1. Technical specifications for SGV2-ME, PM series



Type	Current setting range (A)	Instantaneous short-circuit release(A)	Thermal current I _{th} (A)	Standard rated power of three-phase (kW)			
				230/240V	400V	415V	440V
SGV2-ME01	0.1-0.16	1.5	0.16	-	-	-	-
SGV2-ME02	0.16-0.25	2.4	0.25	-	-	-	-
SGV2-ME03	0.25-0.4	5.0	0.4	-	-	-	-
SGV2-ME04	0.4-0.63	8.0	0.63	-	-	-	-
SGV2-ME05	0.63-1	13.0	1	-	-	-	0.37
SGV2-ME06	1-1.6	22.5	1.6	-	0.37	-	0.55
SGV2-ME07	1.6-2.5	33.5	2.5	0.37	0.75	0.75	1.10
SGV2-ME08	2.5-4	51.0	4	0.75	1.50	1.50	1.50
SGV2-ME10	4-6.3	78.0	6.3	1.10	2.20	2.20	3.00
SGV2-ME14	6-10	138	9	2.20	4.00	4.00	4.00
SGV2-ME16	9-14	170	13	3.00	5.50	5.50	7.50
SGV2-ME20	13-18	223	17	4.00	7.50	9.00	9.00
SGV2-ME21	17-23	327	21	5.50	11.00	11.00	11.00
SGV2-ME22	20-25	327	23	5.50	11.00	11.00	11.00
SGV2-ME32	24-32	416	24	7.50	15.00	15.00	15.50
SGV3-ME40	25-40	480	32	11.00	18.50	22.00	22.00
SGV3-ME63	40-63	550	50	15.00	30.00	33.00	33.00
SGV3-ME80	56-80	665.5	64	22.00	40.00	45.00	45.00



Type	Current setting range (A)	Instantaneous short-circuit release(A)	Thermal current I _{th} (A)	Standard rated power of three-phase(kW)			
				230/240V	400V	415V	440V
SGV2-PM01	0.1-0.16	1.5	0.16	-	-	-	-
SGV2-PM02	0.16-0.25	2.4	0.25	-	-	-	-
SGV2-PM03	0.25-0.4	5.0	0.4	-	-	-	-
SGV2-PM04	0.4-0.63	8.0	0.63	-	-	-	-
SGV2-PM05	0.63-1	13.0	1	-	-	-	0.37
SGV2-PM06	1-1.6	22.5	1.6	-	0.37	-	0.55
SGV2-PM07	1.6-2.5	33.5	2.5	0.37	0.75	0.75	1.10
SGV2-PM08	2.5-4	51.0	4	0.75	1.50	1.50	1.50
SGV2-PM10	4-6.3	78.0	6.3	1.10	2.20	2.20	3.00
SGV2-PM14	6-10	138	9	2.20	4.00	4.00	4.00
SGV2-PM16	9-14	170	13	3.00	5.50	5.50	7.50
SGV2-PM20	13-18	223	17	4.00	7.50	9.00	9.00
SGV2-PM21	17-23	327	21	5.50	11.00	11.00	11.00
SGV2-PM22	20-25	327	23	5.50	11.00	11.00	11.00
SGV2-PM32	24-32	416	24	7.50	15.00	15.00	15.50

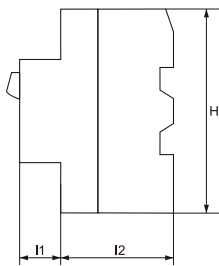
2. SGV2-ME, PM Breaking Capacity

Type											
			01-06	07	08	10	14	16	20	21 & 22	32
Rated Current(A)		A	0.1-1.6	2.5	4	6.3	10	14	18	23 & 25	32
Breaking Capacity Comply to IEC60947-2	230/ 240 V	I _{cu}	kA	★	★	★	★	★	★	50	50
		I _{cs} %(I)		★	★	★	★	★	★	100	100
	400/ 415 V	I _{cu}	kA	★	★	★	★	★	15	15	10
		I _{cs} %(I)		★	★	★	★	★	50	50	40
	440 V	I _{cu}	kA	★	★	★	50	15	8	8	6
		I _{cs} %(I)		★	★	★	100	100	50	50	50
	500 V	I _{cu}	kA	★	★	★	50	10	6	6	4
		I _{cs} %(I)		★	★	★	100	100	75	75	75
	690 V	I _{cu}	kA	★	3	3	3	3	3	3	3
		I _{cs} %(I)		★	75	75	75	75	75	75	75

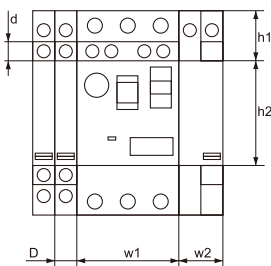
3.Overall and mounting dimensions

◆ SGV2-ME Series

Dimensions



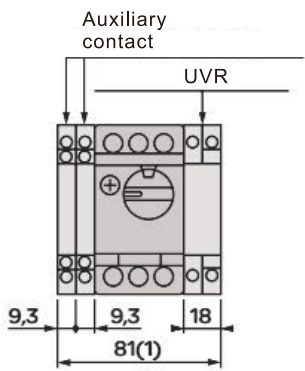
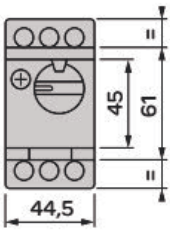
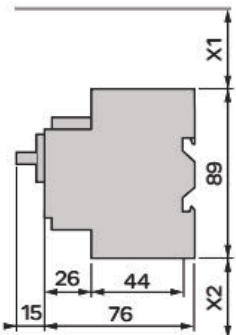
Auxiliary contact



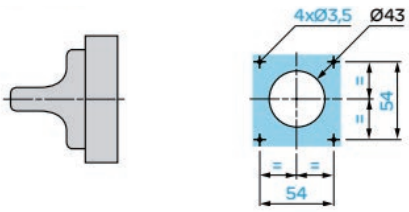
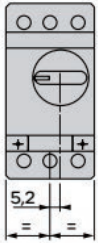
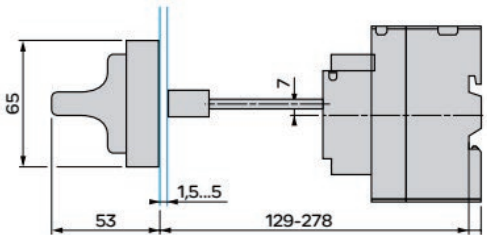
UVR

Dimension(mm)				
H	l1	l2	d	D
89	16	50	10	9,2
w1	w2	h1	h2	
44,5	18	22	45	

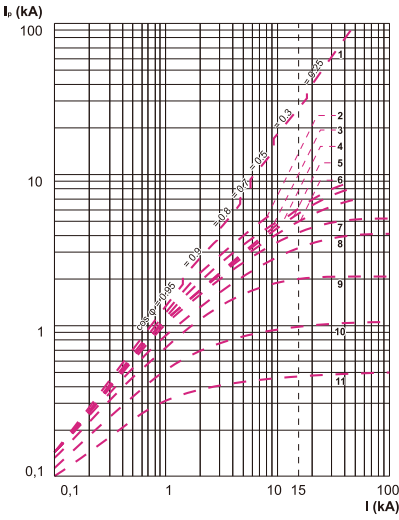
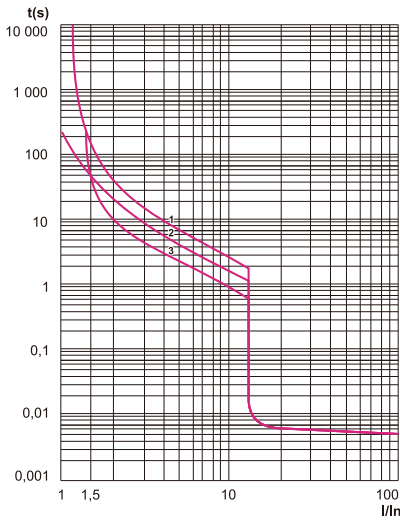
◆ SGV2-PM Series



◆ SGV2-PMN Series

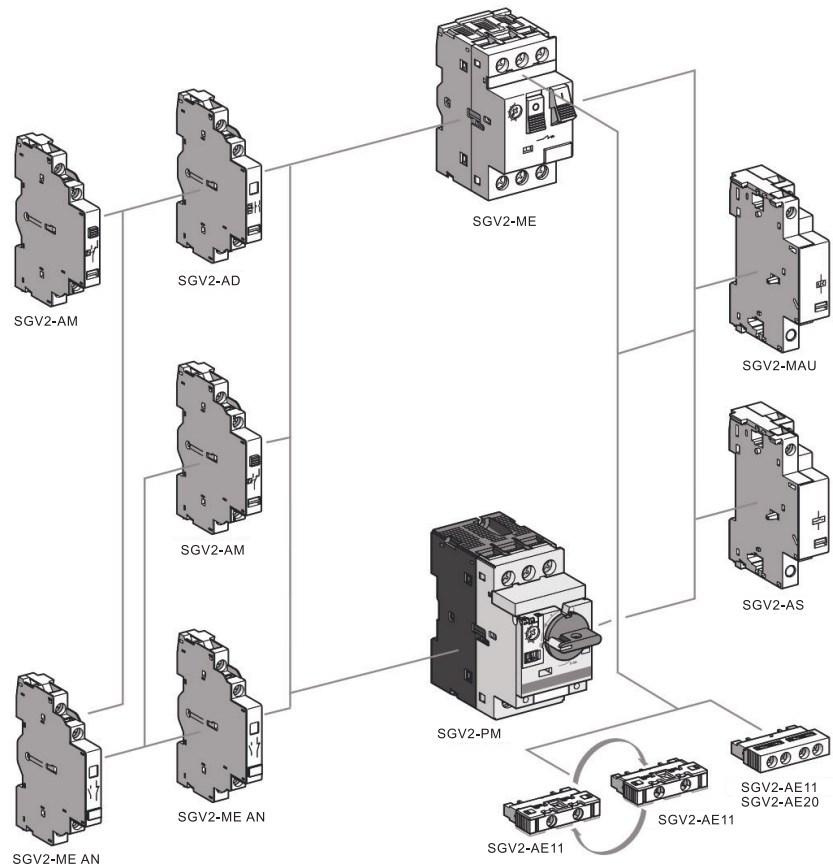


4. Curve characteristics



Auxiliary Devices of Motor Protection Circuit Breaker

 Voltage-release	Type	Rated operational voltage Ue(V)	Voltage range of operation	Rated insulation voltage Ui(V)	Frequency (Hz)
	SGV2-ME AU115	110-127	35%-70% Ue	690	50/60
	SGV2-ME AU225	220-240	35%-70% Ue	690	50/60
	SGV2-ME AU385	380-415	35%-70% Ue	690	50/60
 Auxiliary contact	Type	Mounting Type	Auxiliary Contacts		Conventional thermal current Ith(A)
	SGV2-AE11	Top	1	1	2.5
	SGV2-AE20	Top	2	0	2.5
 Auxiliary contact	SGV2-ME AN11	Side	1	1	6
	SGV2-ME AN20	Side	2	0	6
 Enclosure	Type	Protection of degree	Material		Suitable SGV2-M
			Plastic box	Screen	
	SGV2-ME E	IP 65	wear resistance of UV rays and non-flammable	silicon	Up to 32A



SGLW26 Series

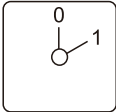
Rotary Switches

Technical data

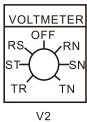
Standard	IEC60947-3/IEC60947-5-1
Approval	CE
Rated thermal current Ith(A)	10/20/25/32/40/63/125/160/250/315
Rated operational voltage Ue(V)	240/440
Rated insulation voltage Ui(V)	660/690
Rated frequency(Hz)	50/60
Number of poles(P)	1,2,3,4
Handle type	black thumb grip and light grey front plate padlockable handle
Degree of protection	IP20
Ambient air temperature(°C)	-25~+40 max.90% humidity
Storage temperature(°C)	-40~+75
Maximum operating altitude(meters)	2000



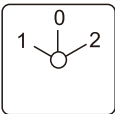
Control switches with black thumb grip and light grey front plate

Picture	Function	Number of poles	In(A)	Type code
 	0-1	1	10	SGLW26-011010
			20	SGLW26-011020
			25	SGLW26-011025
			32	SGLW26-011032
			40	SGLW26-011040
			63	SGLW26-011063
			125	SGLW26-011125
			160	SGLW26-011160
			250	SGLW26-011250
			315	SGLW26-011315
	0-1	2	10	SGLW26-012010
			20	SGLW26-012020
			25	SGLW26-012025
			32	SGLW26-012032
			40	SGLW26-012040
			63	SGLW26-012063
			125	SGLW26-012125
			160	SGLW26-012160
			250	SGLW26-012250
			315	SGLW26-012315
	0-1	3	10	SGLW26-013010
			20	SGLW26-013020
			25	SGLW26-013025
			32	SGLW26-013032
			40	SGLW26-013040
			63	SGLW26-013063
			125	SGLW26-013125
			160	SGLW26-013160
	0-1	4	250	SGLW26-013250
			10	SGLW26-014010
			20	SGLW26-014020
			25	SGLW26-014025
			32	SGLW26-014032
			40	SGLW26-014040
			63	SGLW26-014063
			125	SGLW26-014125
			160	SGLW26-014160
			250	SGLW26-014250

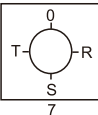
Voltmeter switches with black thumb grip and light grey front plate

Picture	Function	Number of poles	In(A)	Type code
		3	20	SGLW 26V

Control switches with black thumb grip and light grey front plate

Picture	Function	Number of poles	In(A)	Type code
 	1-0-2	1	10	SGLW26-1021010
			20	SGLW26-1021020
			25	SGLW26-1021025
			32	SGLW26-1021032
			40	SGLW26-1021040
			63	SGLW26-1021063
			125	SGLW26-1021125
			160	SGLW26-1021160
			250	SGLW26-1021250
			315	SGLW26-1021315
	1-0-2	2	10	SGLW26-1022010
			20	SGLW26-1022020
			25	SGLW26-1022025
			32	SGLW26-1022032
			40	SGLW26-1022040
			63	SGLW26-1022063
			125	SGLW26-1022125
			160	SGLW26-1022160
			250	SGLW26-1022250
			315	SGLW26-1022315
	1-0-2	3	10	SGLW26-1023010
			20	SGLW26-1023020
			25	SGLW26-1023025
			32	SGLW26-1023032
			40	SGLW26-1023040
			63	SGLW26-1023063
			125	SGLW26-1023125
			160	SGLW26-1023160
	1-0-2	4	250	SGLW26-1023250
			10	SGLW26-1024010
			20	SGLW26-1024020
			25	SGLW26-1024025
			32	SGLW26-1024032
			40	SGLW26-1024040
			63	SGLW26-1024063
			125	SGLW26-1024125
			160	SGLW26-1024160
			250	SGLW26-1024250

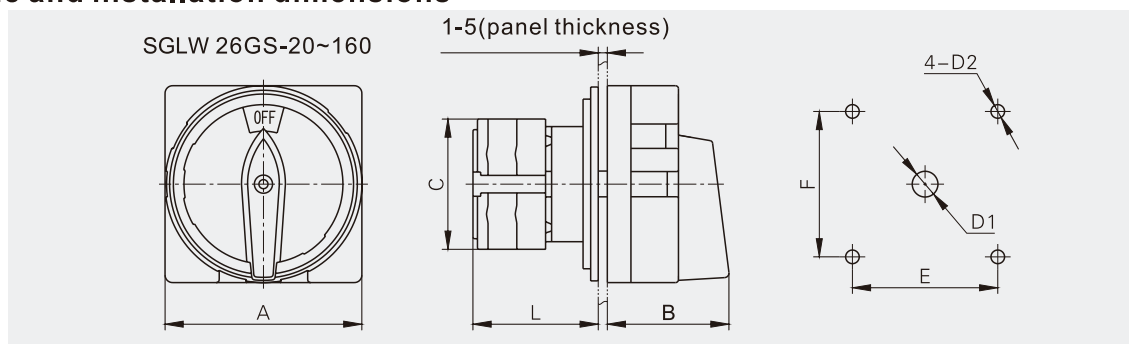
Ammeter switches with black thumb grip and light grey front plate

Picture	Function	Number of poles	In(A)	Type code
		3	20	SGLW26A

1.Control switches with padlockable handle

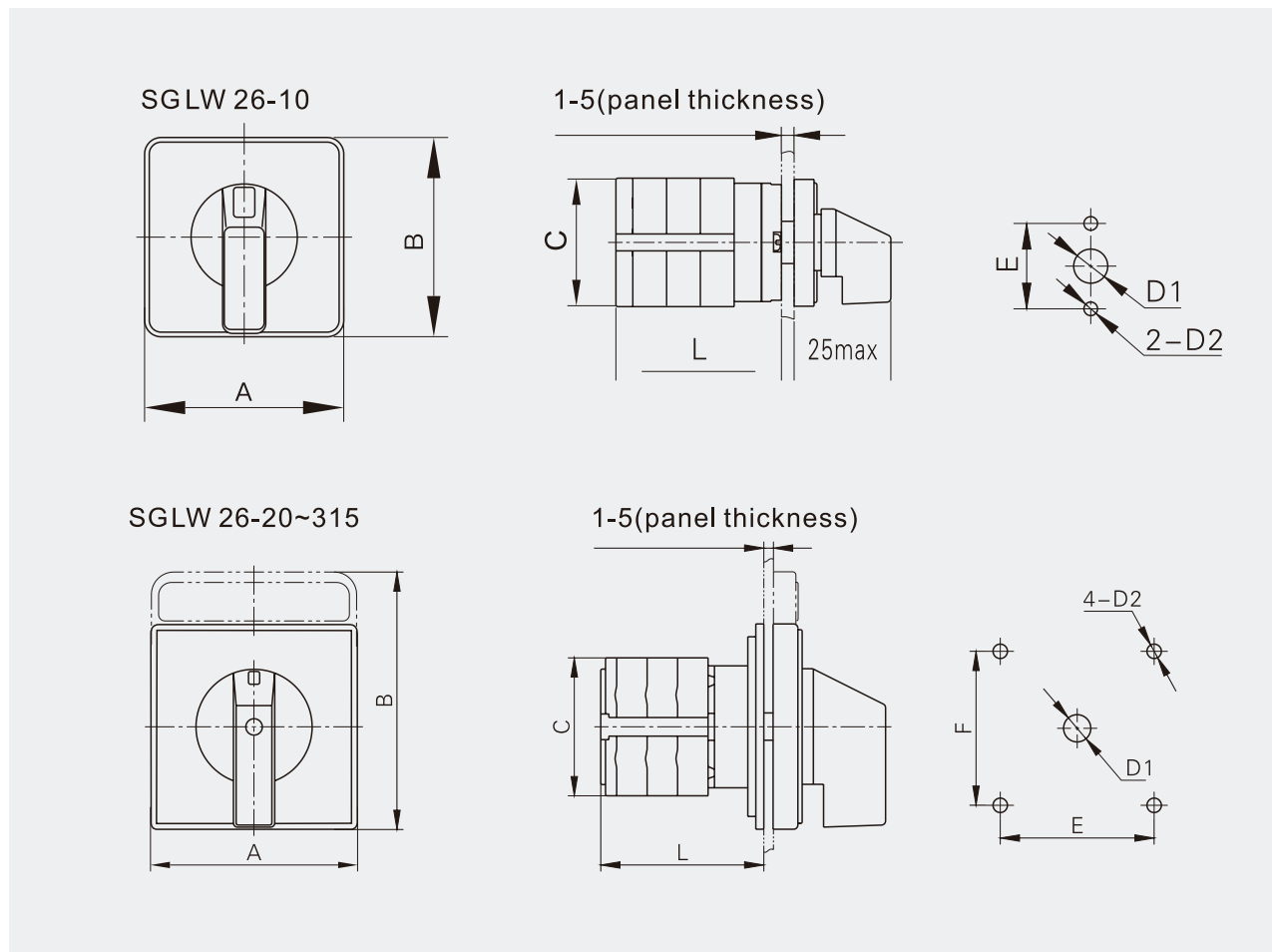
Picture	Function	Number of poles	In(A)	Type code
	ON-OFF	1	20	SGLW26GS120
			25	SGLW26GS125
			32	SGLW26GS132
			63	SGLW26GS163
			125	SGLW26GS1125
			160	SGLW26GS1160
	ON-OFF	2	20	SGLW26GS220
			25	SGLW26GS225
			32	SGLW26GS232
			63	SGLW26GS263
			125	SGLW26GS2125
			160	SGLW26GS2160
	ON-OFF	3	20	SGLW26GS320
			25	SGLW26GS325
			32	SGLW26GS332
			63	SGLW26GS363
			125	SGLW26GS3125
			160	SGLW26GS3160
	ON-OFF	4	20	SGLW26GS420
			25	SGLW26GS425
			32	SGLW26GS432
			63	SGLW26GS463
			125	SGLW26GS4125
			160	SGLW26GS4160

2.Outline and installation dimensions



Type	Panel configuration	Dimension(mm)				Mounting Dimension (mm)			
		A	B	C	L	E	F	D1	D2
SGLW26GS-20	M1	48	43	42	33	36	36	φ8.5	φ4.5
SGLW26GS-20	M2	64	43	43	42	48	48	φ10	φ4.5
SGLW26GS-25	M1	48	45.2	50	33	36	36	φ8.5	φ4.5
SGLW26GS-25	M2	64	45.2	51	42	48	48	φ10	φ4.5
SGLW26GS-32	M2	64	58	55	42	48	48	φ10	φ4.5
SGLW26GS-32	M3	88	58	55	52	68	68	φ13	φ6
SGLW26GS-40	M2	64	58	55	42	48	48	φ10	φ4.5
SGLW26GS-40	M3	88	58	55	52	68	68	φ13	φ6
SGLW26GS-63	M2	64	58	55	42	48	48	φ10	φ4.5
SGLW26GS-63	M3	88	66	72.5	52	68	68	φ13	φ6
SGLW26GS-125	M3	88	84	88	52	68	68	φ13	φ6
SGLW26GS-160	M3	88	88	100	52	68	68	φ13	φ6

3.Outline and installation dimensions



Type	Panel configuration	Dimension(mm)				Mounting Dimension (mm)			
		A	B	C	L	E	F	D1	D2
SGLW26-10	M0	30	30	30.5	15.5+8n	20	-	φ8	φ3.2
SGLW26-20	M1	48	48	43	22+9.6n	20	36	φ8.5	φ4.5
SGLW26-20	M2	64	64	43	25+9.6n	48	48	φ10	φ4.5
SGLW26-25	M1	48	48	45.2	23+12.8n	36	36	φ8.5	φ4.5
SGLW26-25	M2	64	64	45.2	26.5+12.8n	48	48	φ10	φ4.5
SGLW26-32	M2	64	64	58	29.2+12.8n	48	48	φ10	φ4.5
SGLW26-32	M3	88	88	58	29.2+12.8n	68	68	φ13	φ6
SGLW26-40	M2	64	64	58	29.2+12.8n	48	48	φ10	φ4.5
SGLW26-40	M3	88	88	58	29.2+12.8n	68	68	φ13	φ6
SGLW26-63	M2	64	64	58	29.2+21.5n	48	48	φ10	φ4.5
SGLW26-63	M3	88	88	66	29.2+21.5n	68	68	φ13	φ6
SGLW26-125	M3	88	88	84	35+26.5n	68	68	φ13	φ6
SGLW26-160	M3	88	88	88	35+32.5n	68	68	φ13	φ6
SGLW26-250	M3	88	88	108	35.5+36n	68	68	φ13	φ6
SGLW26-315	M4	130	130	126	39.5+38.5n	104	104	φ16	φ7

SGLW 30 Series

Rotary Switches

Technical data

Standard	IEC60947-3/IEC60947-5-1
Approval	CE
Rated thermal current Ith(A)	20/25/32/40/63/80/100
Rated operational voltage Ue(V)	240/440
Rated insulation voltage Ui(V)	660
Rated frequency(Hz)	50
Number of poles(P)	3,4
Handle type	padlockable handle
Degree of protection	IP65 with box
Ambient air temperature(°C)	-25~+40 max.90% humidity
Storage temperature(°C)	-40~+75
Maximum operating altitude(meters)	2000



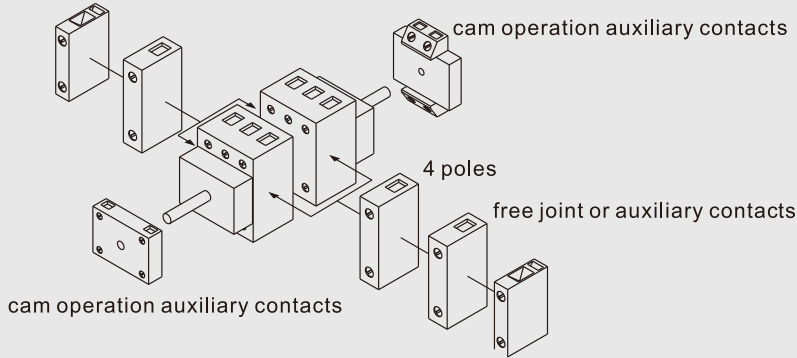
Picture	Function	Number of poles	In(A)	Type code
Control switches with padlockable handle 	ON/OFF	3	20	SGLW30-3D20
			25	SGLW30-3D25
			32	SGLW30-3D32
			40	SGLW30-3D40
			63	SGLW30-3D63
			80	SGLW30-3D80
			100	SGLW30-3D100
	ON/OFF	4	20	SGLW30-4D20
			25	SGLW30-4D25
			32	SGLW30-4D32
			40	SGLW30-4D40
			63	SGLW30-4D63
			80	SGLW30-4D80
			100	SGLW30-4D100
Control switches with padlockable handle 	ON/OFF	3	20	SGLW30-3R20
			25	SGLW30-3R25
			32	SGLW30-3R32
			40	SGLW30-3R40
			63	SGLW30-3R63
			80	SGLW30-3R80
			100	SGLW30-3R100
	ON/OFF	4	20	SGLW30-4R20
			25	SGLW30-4R25
			32	SGLW30-4R32
			40	SGLW30-4R40
			63	SGLW30-4R63
			80	SGLW30-4R80
			100	SGLW30-4R100
Insulated with padlockable handle IP65 	ON/OFF	3	20	SGLW30-3B20
			25	SGLW30-3B25
			32	SGLW30-3B32
			40	SGLW30-3B40
			63	SGLW30-3B63
			80	SGLW30-3B80
			100	SGLW30-3B100
	ON/OFF	4	20	SGLW30-4B20
			25	SGLW30-4B25
			32	SGLW30-4B32
			40	SGLW30-4B40
			63	SGLW30-4B63
			80	SGLW30-4B80
			100	SGLW30-4B100

Auxiliary contacts

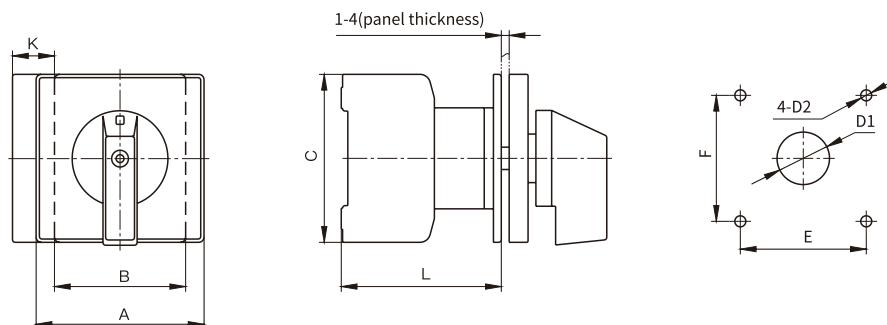


AC15 220~240V 6A/380~440V 4A

grounding or auxiliary contacts

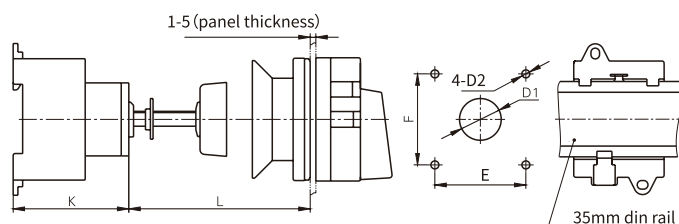


Outline and installation dimensions

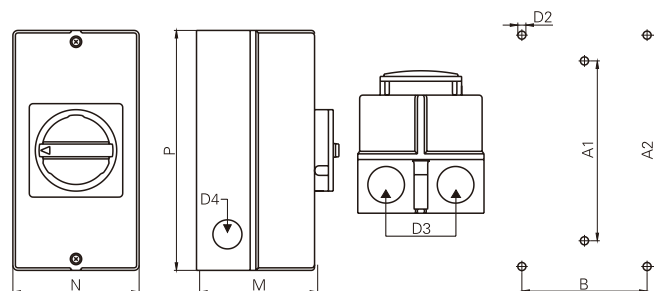


Type	Dimension(mm)					Mounting Dimension (mm)			
	A	B	C	K	L	E	F	D1	D2
SGLW30-D20	64	42	54	13.5	61	48	48	φ10	φ4.2
SGLW30-D25	64	42	54	13.5	61	48	48	φ10	φ4.2
SGLW30-D32	64	42	54	13.5	61	48	48	φ10	φ4.2
SGLW30-D40	64	50	64	16	67	48	48	φ10	φ4.2
SGLW30-D63	64	50	64	16	67	48	48	φ10	φ4.2
SGLW30-D80	64	70	80	22.5	82	48	48	φ10	φ4.2
SGLW30-D100	64	70	80	22.5	82	48	48	φ10	φ4.2

Type	Dimension(mm)			Mounting Dimension (mm)			
	K	Lmin	Lmax	E	F	D1	D2
SGLW30-R20	50	32	150	48	48	φ22	φ4.2
SGLW30-R25	50	32	150	48	48	φ22	φ4.2
SGLW30-R32	50	32	150	48	48	φ22	φ4.2
SGLW30-R40	50	32	150	48	48	φ22	φ4.2
SGLW30-R63	50	32	150	48	48	φ22	φ4.2
SGLW30-R80	50	32	150	48	48	φ22	φ4.2
SGLW30-R100	50	32	150	48	48	φ22	φ4.2



Type	Dimension(mm)					Mounting Dimension (mm)			
	D3	D4	M	N	P	A1	A2	B	D2
SGLW30-B20	φ23	φ19	85	83	160	150	—	—	φ4.2
SGLW30-B25	φ23	φ19	85	83	160	150	—	—	φ4.2
SGLW30-B32	φ23	φ19	85	83	160	150	—	—	φ4.2
SGLW30-B40	φ29	φ23	100	95	190	178	—	—	φ4.2
SGLW30-B63	φ29	φ23	100	95	190	178	—	—	φ4.2
SGLW30-B80	φ37.5	φ23	144	145	250	—	229	124	φ4.2
SGLW30-B100	φ37.5	φ23	144	145	250	—	229	124	φ4.2



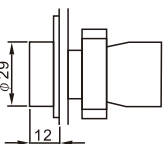
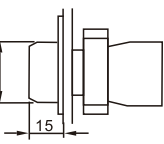
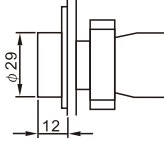
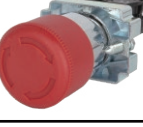
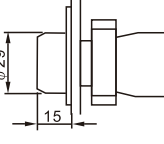
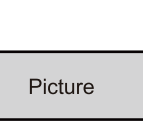
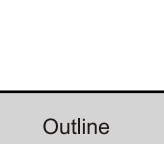
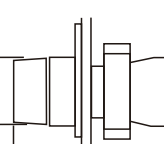
SGB2 Series Push Button & LED Indicators

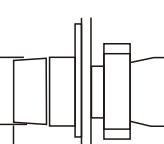
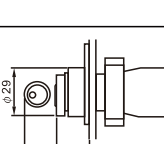
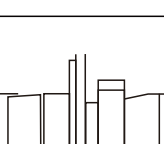
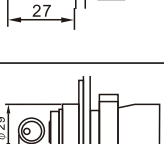
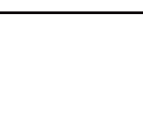
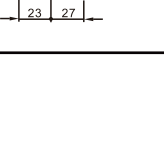
Technical data

Standard	IEC60947-5-1
Rated Insulation voltage U_i (v)	400 V
Rated Frequency(Hz)	50/60Hz
Impulse voltage wear resistance	6000V
Rated current	6A(230V AC);0.3A(230V DC)
Short circuit protection	safety device 10A gG outside in the circuit
Mechanical wear resistance	1x106 commutation cycles
Power of mechanical compression at closing	20N
Power of mechanical compression at opening	8N
Operating temperature (°C)	-20 ~ +65
Humidity	35-85%RH
Tightening moment of the joining conductors	0.15Nm
Section of the conductor	1x0.5; 1x0.75; 1x1; 1x1.5;1x2.5mm ²
To a flat metal or plastic surface with thickness	max 4mm
Opening with size	Ø 22.5mm

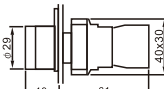


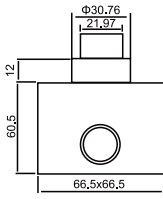
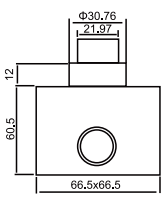
SGB2 Series Push button

Picture	Outline	Color	Type of contacts	Plastic/Metal
		○	1NO	SGB2-EA11
		●	1NO	SGB2-EA21
		●	1NO	SGB2-EA31
		●	1NO	SGB2-EA51
		○	1NO	SGB2-EA61
		●	1NO	SGB2-EA42
		●	1NO	SGB2-EP11
		●	1NO	SGB2-EP21
		○	1NO	SGB2-EP31
		●	1NO	SGB2-EP51
		●	1NO	SGB2-EP61
		●	1NO	SGB2-EP42
		○	1NO	SGB2-BA11
		●	1NO	SGB2-BA21
		●	1NO	SGB2-BA31
		●	1NO	SGB2-BA51
		○	1NO	SGB2-BA61
		●	1NO	SGB2-BA42
		●	1NO	SGB2-BP11
		●	1NO	SGB2-BP21
		○	1NO	SGB2-BP31
		●	1NO	SGB2-BP51
		●	1NO	SGB2-BP61
		●	1NO	SGB2-BP42

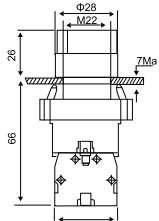
Picture	Outline	N° of position	Type of contacts	Plastic/Metal
		2°	1NO	SGB2-ED21
			1NO+1NC	SGB2-ED25
			1NO	SGB2-ED41
			1NO+1NC	SGB2-ED45
		3°	2NO	SGB2-ED33
			2NO	SGB2-ED53
			2NO	SGB2-ED73
			2NO	SGB2-ED83
		2°	1NO	SGB2-EG21
			1NO+1NC	SGB2-EG25
			1NO	SGB2-EG41
			1NO+1NC	SGB2-EG45
		3°	2NO	SGB2-EG33
			2NO	SGB2-EG53
		2°	1NO	SGB2-BD21
			1NO+1NC	SGB2-BD25
			1NO	SGB2-BD41
			1NO+1NC	SGB2-BD45
		3°	2NO	SGB2-BD33
			2NO	SGB2-BD53
			2NO	SGB2-BD73
			2NO	SGB2-BD83
		2°	1NO	SGB2-BG21
			1NO+1NC	SGB2-BG25
			1NO	SGB2-BG41
			1NO+1NC	SGB2-BG45
		3°	2NO	SGB2-BG33
			2NO	SGB2-BG53

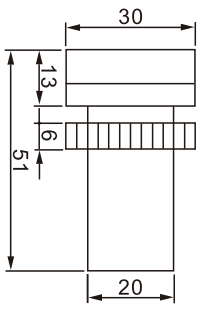
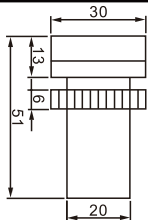
SGB2 Series Push button

Picture	Outline	Description	Type of contacts	Plastic/Metal
		Red spring reverse "Mushroom" type	1NC	SGB2-ES442 SGB2-ES542 SGB2-ES642
		Green&Red double button	1NO+1NC	SGB2-EL8325 SGB2-EL9325
		White color Green color Yellow color Blue color	1NO	SGB2-EW3161 SGB2-EW3361 SGB2-EW3561 SGB2-EW3661
		Red color	1NC	SGB2-EW3462
		Red spring reverse "Mushroom" type	1NC	SGB2-BS442 SGB2-BS542 SGB2-BS642
		Green&Red double button	1NO+1NC	SGB2-BL8325 SGB2-BL9325
		White color Green color Yellow color Blue color	1NO	SGB2-BW3161 SGB2-BW3361 SGB2-BW3561 SGB2-BW3661
		Red color	1NC	SGB2-BW3462

Picture	Outline	Color	N° of position & Type of contacts	Plastic/Metal
		- White - Black - Green - Yellow - Blue	2° position 1NO+1NC	SGB2-EK2765 SGB2-EK2365 SGB2-EK2565 SGB2-EK2665 SGB2-EK2465
		- White - Black - Green - Yellow - Blue	3° position 1NO+1NC	SGB2-EK3765 SGB2-EK3365 SGB2-EK3565 SGB2-EK3665 SGB2-EK3465
		- White - Black - Green - Yellow - Blue	2° position 1NO+1NC	SGB2-BK2765 SGB2-BK2365 SGB2-BK2565 SGB2-BK2665 SGB2-BK2465
		- White - Black - Green - Yellow - Blue	3° position 1NO+1NC	SGB2-BK3765 SGB2-BK3365 SGB2-BK3565 SGB2-BK3665 SGB2-BK3465

SGB2 and SGD22 Series LED indicators

Picture	Outline	Color	Description	Reference
			LED 220/240VAC 50/60Hz	SGB2-EV61
				SGB2-EV63
				SGB2-EV65
				SGB2-EV66
				SGB2-EV64

Picture	Outline	Color	Description	Reference
		LED White	12VAC/DC	SGD22-22D-W-22
			24VAC/DC	SGD22-22D-W-23
			48VAC/DC	SGD22-22D-W-25
			110VAC/DC	SGD22-22D-W-26
			230VAC	SGD22-22D-W-31
			400VAC	SGD22-22D-W-32
		LED Green	12VAC/DC	SGD22-22D-G-22
			24VAC/DC	SGD22-22D-G-23
			48VAC/DC	SGD22-22D-G-25
			110VAC/DC	SGD22-22D-G-26
			230VAC/DC	SGD22-22D-G-31
			400VAC/DC	SGD22-22D-G-32
		LED Yellow	12VAC/DC	SGD22-22D-Y-22
			24VAC/DC	SGD22-22D-Y-23
			48VAC/DC	SGD22-22D-Y-25
			110VAC/DC	SGD22-22D-Y-26
			230VAC	SGD22-22D-Y-31
			400VAC	SGD22-22D-Y-32
		LED Blue	12VAC/DC	SGD22-22D-B-22
			24VAC/DC	SGD22-22D-B-23
			48VAC/DC	SGD22-22D-B-25
			110VAC/DC	SGD22-22D-B-26
			230VAC	SGD22-22D-B-31
			400VAC	SGD22-22D-B-32
		LED Red	12VAC/DC	SGD22-22D-R-22
			24VAC/DC	SGD22-22D-R-23
			48VAC/DC	SGD22-22D-R-25
			110VAC/DC	SGD22-22D-R-26
			230VAC	SGD22-22D-R-31
			400VAC	SGD22-22D-R-32
		LED Red	12VAC/DC	SGD22-22SM-R-22
			24VAC/DC	SGD22-22SM-R-23
			48VAC/DC	SGD22-22SM-R-25
			110VAC/DC	SGD22-22SM-R-26
			230VAC	SGD22-22SM-R-31
			400VAC	SGD22-22SM-R-32

Accessories for Push button

Picture	Type of contacts	Description	Reference
	1NO	base for SGB2	SGB2-NO
	1NC	base for SGB2	SGB2-NC

Picture	Contact auxiliary	Description	Reference
	25X11	brand frame for SGB2	LA800E-P08
	25X18	brand frame for SGB2	LA800E-P12

Picture	Contact auxiliary	Description	Reference
	φ 60	alarm circle	LA800E-P16

Picture	Contact auxiliary	Description	Reference
	220/240VAC	○	LA800E-LW230
		●	LA800E-LG230
		●	LA800E-LY230
		●	LA800E-LB230
		●	LA800E-LR230
	24VAC/DC	○	LA800E-LW24
		●	LA800E-LG24
		●	LA800E-LY24
		●	LA800E-LB24
		●	LA800E-LR24

SGCK Series Limit Switches

Technical data

Standard	IEC60947-1; IEC60947-5-1
Ambient temperature (°C)	-5 ~ +65
Humidity	95% RH max

The switches are applicable to AC control circuits of 50 to 60Hz, with a voltage up to 500V or DC control circuits with a voltage up to 250V, and a current up to 15A to convert a mechanical signal into an electrical signal for the purpose of controlling mechanical movement or performing sequential control.

SGZ Series Micro Switches

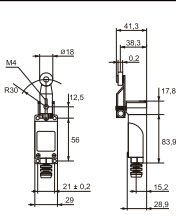
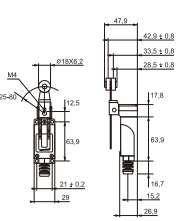
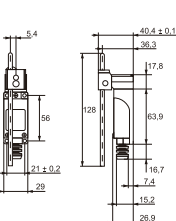
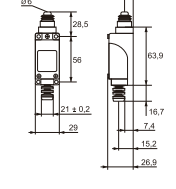
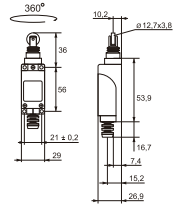
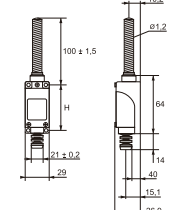
Technical data

Standard	IEC60947-1; IEC 60947-5-1
Ambient temperature (°C)	-10 ~ +80
Humidity	95% RH max

General purpose micro switches are used in AC control circuit of 50/60Hz, with a voltage up to 380V and a rated control capacity of 100VA or in DC control circuits with a voltage up to 220V and a rated control capacity of 10W



SGCK Series Limit switches

Picture	Outline	Power of starting(g)	Power of release(g)	Switching position	General movement	Rated current	Reference
		750g	100g	20°	50°	5A-active 3A-inductive	SGCK-TZ8104
		750g	100g	20°	50°	5A-active 3A-inductive	SGCK-TZ8108
		750g	100g	20°	50°	5A-active 3A-inductive	SGCK-TZ8107
		900g	150g	1.5mm	4mm	5A-active 3A-inductive	SGCK-TZ8111
		900g	150g	1.5mm	4mm	5A-active 3A-inductive	SGCK-TZ8112 SGCK-TZ8122
		150g	/	30mm	/	5A-active 3A-inductive	SGCK-TZ8166 SGCK-TZ8167 SGCK-TZ8168 SGCK-TZ8169

SGCK Series Limit switches

1.Characteristics

Description	Reference
Operation speed	0.5mm-50cm/sec
Operating frequency	Mechanical: 120 operations/minute Electical: 30 operations/minute
Contact resistance	25mΩ max. (initial value)
Insulation resistance	100mΩ min. (below 500VDC)
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 Hz for 1 minute between current-carrying and noncurrent-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz, 1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec ² (about 100G'S)
	Malfunction: 300m/Sec ² (about 30G'S)
Ambient temperature(°C)	-5~+65 (With no icing)
Humidity	<95% RH
Weight	About 130 to 190g
Mechanical life:	10,000,000 operations above
Electrical life:	500,000 operations above
Degree of protection	IP 65

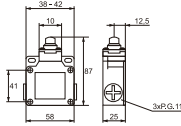
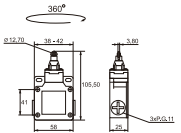
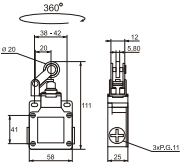
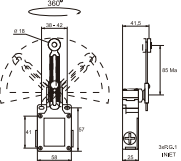
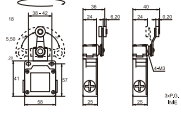
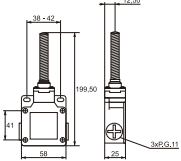
2. Ratings

Rated voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NO	NC
125VAC	5	5	1.5	0.7	3	3	2	1
250VAC			1	0.5	3	3	1.5	0.8
8VDC	5	5	3	3	5	4	3	3
14VDC	5	5	3	3	4	4	3	3
30VDC	5	5	3	3	4	4	3	3
125VDC	0.4	0.4	/	/	/	/	/	/
250VDC	0.2	0.2						
Inrush Current	N.C: below 24A, N.O: below 12A							

NOTES:

1. Inductive load has a power factor of 0.4 min. (AC) and a time constant of 7 msec. max. (DC)
2. Lamp load has an inrush current of 10 times the steady-state current, while motor, load has an inrush current of 6 times the steady-state current.
3. Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

SGCK Series Limit switches

SGCK Limit switch	Contour	Power of starting(g)	Power of release(g)	Switching position	General movement	Rated current	Reference
		800g	400g	2.0mm	5.8mm	10A-active 4A-inductive	SGCK-CSA001
		800g	400g	2.0mm	5.8mm	10A-active 4A-inductive	SGCK-CSA003
		800g	400g	2.0mm	5.8mm	10A-active 4A-inductive	SGCK-CSA012
		400g	100g	22.5°	95°	10A-active 4A-inductive	SGCK-CSA031
		400g	100g	22.5°	95°	10A-active 4A-inductive	SGCK-CSA021
		150g	50g	22.5°	50mm	10A-active 4A-inductive	SGCK-CSA081

SGCK Series Limit switches

1.Characteristics

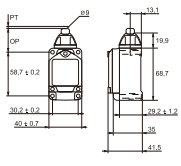
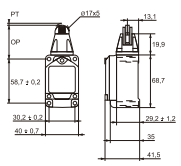
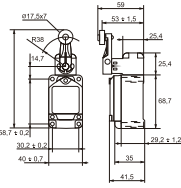
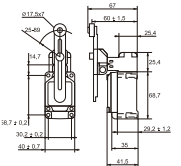
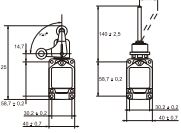
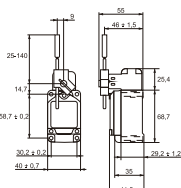
Description	Reference
Double Break Mechanism	INO+INC Force Break snap action
Rated Voltage / Current	10(4)A, 125, 250VAC / 6(2)A, 380VAC For inductance Load, Cosφ=0.4
Contact resistance	25mΩ max. (initial value)
Insulation resistance	100mΩ min. (at 500VDC)
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Mechanical Life	10, 000, 000 operations min. (under rated conditions)
Electrical Life	500,000 at 10A 250VAC Resistiv
Operating Speed	5mm/s to 0.5m/s
Degree of Protection	IP66
Ambient Temperature	Max 30°C over ambient temperature at rated voltage/current
Conformed Standards	EN 50041, EN 50047, IEC 337-1, VDE 0660
Operating Temperature(°C)	-5~+65(with no icing)
Storage Temperature (°C)	-5~+65(with no icing)
Ambient Operating Humidity	95% RH Max.
Shock Resistance	Mechanical durable: 1000m/s ² min.
	Malfunction: 300m/s ² min.
Vibration Frequency	Malfunction: 10 to 55Hz, 1.5mm double amplitude
Terminal Screw Torsional Force	6-8 kgf-cm
Other Screw Torsional Force	Cover 12-14 kgf-cm/Head 8-9 kgf-cm/Mounting 50-60 kgf-cm
Bare Wire Diameter	φ 2 Max
Cable Diameter	φ 12 Max(IP 65 if use cable φ8-9)

NOTES: Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring

2.Features

Strong metal outer shell, swing arm max.±95°
 Stainless steel idler wheel, punch and spring
 Selective M18x1.5 cable gland

SGCK Series Limit switches

Picture	Outline	Power of starting(g)	Power of release(g)	Switching position	General movement	Rated current	Reference
		2720g	910g	2.0mm	6.4mm	10A-active 3A-inductive	SGCK-CWLD
		2720g	910g	2.0mm	5.6mm	10A-active 3A-inductive	SGCK-CWLD2
		1360g	227g	20°	50°	10A-active 3A-inductive	SGCK-CWL-CA2-2
		2720g	910g	20°	50°	10A-active 3A-inductive	SGCK-CWL-CA12-2-Q
		1200g	/	55°	90±10°	10A-active 3A-inductive	SGCK-CA32-41
		150g	/	28mm	90±10°	10A-active 3A-inductive	SGCK-CWLNJ
		142g	28g	20°	50°	10A-active 3A-inductive	SGCK-CWLCL

SGCK Series Limit switches

1.Characteristics

Description	Reference
Operation speed	1mm-2m/s
Operating frequency	Mechanical: 120 operations/minute Electical: 30 operations/minute
Contact resistance	15mΩ max. (initial value)
Insulation resistance	100mΩ min. (below 500VDC)
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 Hz for 1 minute between current-carrying and noncurrent-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz, 1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec ² (about 100G'S)
	Malfunction: 300m/Sec ² (about 30G'S)
Ambient temperature (°C)	-5~+65 (With no icing)
Humidity	<95% RH
Weight	Approx.275g
Mechanical life	10,000,000 operations above
Electrical life	500 000,operations above
Degree of protection	IP66

2.Ratings

Rated voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NO	NC
14VAC	1		1	0.5	1.5		1	0.5
125VAC	10		3	1.5	10		5	2
250VAC	5		2	1	5		3	1
480VAC	3		1.5	0.8	3		1.5	0.8
8VDC	10		6	3	10		6	
14VDC	10		6	3	10		6	
30VDC	6		4	2	6		4	
125VDC	0.8		0.2	0.2	0.8		0.2	
250VDC	0.4		0.1	0.1	0.4		0.1	

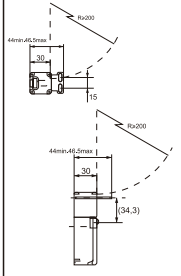
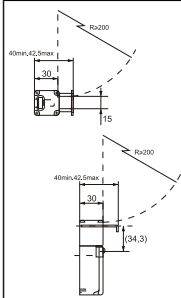
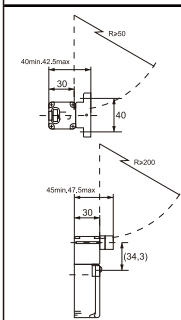
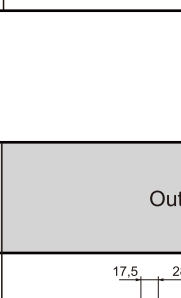
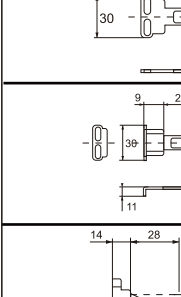
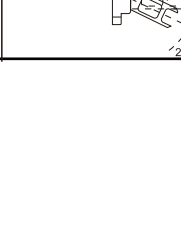
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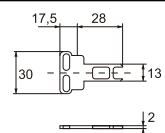
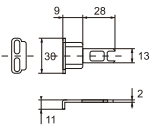
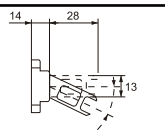
1. Inductive load has a power factor of 0.4 min. (AC) and a time constant of 7 msec. max. (DC)

2. Lamp load has an inrush current of 10 times the steady-state current, while motor, load has an inrush current of 6 times the steady-state current.

3. Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

SGCK Series Limit switches

Picture	Outline	Power of starting(g)	Power of release(g)	Switching position	General movement	Rated current	Reference
		147g	29.4g	6mm	28mm	10A-active 3A-inductive	SGCK-93BPG01
		147g	29.4g	6mm	28mm	10A-active 3A-inductive	SGCK-93CPG01
		147g	29.4g	6mm	28mm	10A-active 3A-inductive	SGCK-93BPG02
		147g	29.4g	6mm	28mm	10A-active 3A-inductive	SGCK-93CPG02
		147g	26.4g	6mm	28mm	10A-active 3A-inductive	SGCK-93BPG03
		147g	26.4g	6mm	28mm	10A-active 3A-inductive	SGCK-93CPG03

Picture	Outline	Key Actuating	Reference
		Horizontal	SGCK-CZ93-K1
		Vertical	SGCK-CZ93-K2
		Adjustable	SGCK-CZ93-K3

SGCK Series Limit switches

1.Characteristics

Description	Reference
Rating	3A 240VAC (A300)
Operation speed	0.1mm-0.5m/s
Operating frequency	30 operations/minute
Contact resistance	25mΩ max. (initial)
Insulation resistance	100mΩ min. (500VDC)
Rated insulation voltage(UI)	400V
Dielectric strength	AC2500V/Umip 4KV
Shock	Mechanical durable: 1, 000m/Sec2 (about 100G'S)
	Malfunction: 300m/Sec2 (about 30G'S)
Ambient temperature (°C)	-10~+70 (With no icing)
Humidity	<95% RH
Weight	Approx. 76g
Mechanical life	10,000,000 operations/min.
Electrical life	150,000 operations/min.
Degree of protection	IP65
Short-circuit protective device	10A fuse

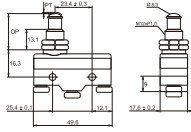
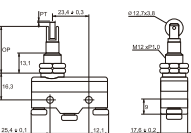
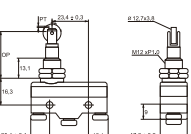
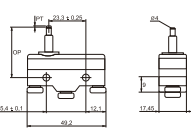
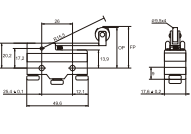
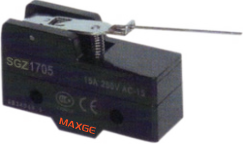
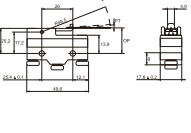
2.Ratings

Rated voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NO	NC
125VAC	10		3	1.5	10		5	2.5
250VAC	10		2	1	10		3	1.5
400VAC	10		1.5	0.8	3		1.5	0.8
8VDC	10		6	3	10		6	
14VDC	10		6	3	10		6	
30VDC	6		4	2	6		4	
125VDC	0.8		0.2	0.2	0.8		0.2	
250VDC	0.4		0.1	0.1	0.4		0.1	

3.Operating Characteristics

Key plug in force Max	147.N(1,500gf)
key pull out force Max	29.42N(3,000gf)
Pretravel	6 ±3mm
Total travel	28mm
Force required to have positive Min	58.84N(6,000gf)
Positive opening travel Min	10mm

SGZ Series Micro switches

Picture	Outline	Power of starting(g)	Power of release(g)	Switching position	General movement	Rated current	Reference
		350g	114g	0.4mm	5.8mm	15A-active 5A-inductive	SGZ-CM1307
		350g	114g	0.4mm	5.8mm	15A-active 5A-inductive	SGZ-CM1309
		350g	114g	0.4mm	5.8mm	15A-active 5A-inductive	SGZ-CM1308
		350g	114g	0.4mm	95°	15A-active 5A-inductive	SGZ-CM1305
		150g	22g	7.1mm	95°	15A-active 5A-inductive	SGZ-CM1703
		10g	3g	20mm	50mm	15A-active 5A-inductive	SGZ-CM1705

SGZ Series Micro switches

1.Characteristics

Description	Reference
Operation speed	0.1mm-1m/s
Operating frequency	Mechanical: 240 operations/minute Electrical: 20 operations/minute
Contact resistance	15mΩ max. (initial value)
Insulation resistance	100mΩ min. (at 500VDC)
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 Hz for 1 minute between current-carrying and noncurrent-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz, 1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec ² (about 100G'S)
	Malfunction: 300m/Sec ² (about 30G'S)
Ambient temperature (°C)	General purpose type: -25~+80 (With no icing)
	Sealed type: -15~+80 (With no icing)
Humidity	General purpose type: 85% RH max., Sealed type: 95% RH max.
Mechanical life	20,000,000 operations above
Electrical life	500,000 operations above
Weight	Approx.22g to 58g

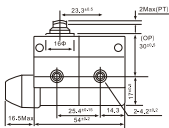
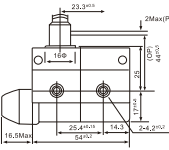
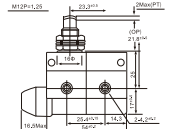
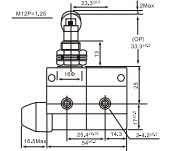
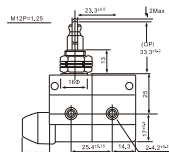
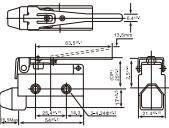
2.Ratings

Rated voltage	Noninductive Load (A)				Inductive Load (A)				Inrush Current	
	Resistance Load		Lamp Load		Inductive Load		Motor Load			
	NC	NO	NC	NO	NC	NO	NO	NC	NC	NO
125VAC	15		3	1.5	15		5	2	30	15
250VAC	15		2.5	1.25	15		3	1	max	max
500VAC	3		1.5	0.75	2.5		1.5	0.8	/	/
8VDC	15		3	1.5	15		5	2.5	/	/
14VDC	15		3	1.5	15		5	2.5	/	/
30VDC	6(2)		3	1.5	2.5		5	2.5	/	/
125VDC	0.4		0.4	0.4	/		0.05	0.05	/	/
250VDC	0.2		0.2	0.2	/		0.03	0.03	/	/

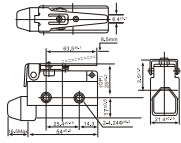
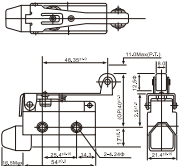
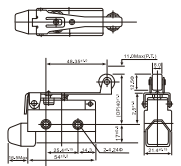
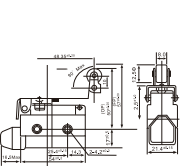
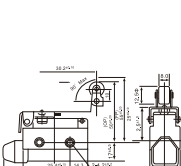
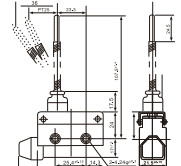
3.Features

- Various of actuators, action position is adjustable
- High switch on and off capacity(15A)
- High accuracy
- Wide range of operating speed
- Each type of CM series has solder terminal, screw terminal and tab terminal are selective
- Add A for solder terminal, add C for tab terminal, blank for screw terminal

SGZ Series Micro switches

Picture	Outline	Power of starting(g)	Power of release(g)	Switching position	General movement	Rated current	Reference
		600g	100g	2.0mm	0.8mm	10A-active 5A-inductive	SGZ-CZ7100
		600g	100g	2.0mm	5.0mm	10A-active 5A-inductive	SGZ-CZ7110
		600g	100g	2.0mm	6.0mm	10A-active 5A-inductive	SGZ-CZ7310
		600g	100g	2.0mm	6.0mm	10A-active 5A-inductive	SGZ-CZ7311
		600g	100g	2.0mm	6.0mm	10A-active 5A-inductive	SGZ-CZ7312
		150g	40g	13.5mm	4.0mm	10A-active 5A-inductive	SGZ-CZ7120

SGZ Series Micro switches

Picture	Outline	Power of starting(g)	Power of release(g)	Switching position	General movement	Rated current	Reference
		220g	60g	8.5mm	2.5mm	10A-active 5A-inductive	SGZ-CZ7140
		180g	50g	11.0mm	3.0mm	10A-active 5A-inductive	SGZ-CZ7121
		240g	80g	6.5mm	2.0mm	10A-active 5A-inductive	SGZ-CZ7141
		200g	60g	11.0mm	3.0mm	10A-active 5A-inductive	SGZ-CZ7124
		280g	100g	6.5mm	2.0mm	10A-active 5A-inductive	SGZ-CZ7144
		120g	/	250mm	11mm	10A-active 5A-inductive	SGZ-CZ7166

SGZ Series Micro switches

1.Characteristics

Description	Reference
Operation speed	0.01mm-1m/sec
Operating frequency	Mechanical: 240 operations/minute Electical:20 operations/minute
Contact resistance	15mΩ max. (initial value)
Insulation resistance	100mΩ min. (at 500VDC)
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 Hz for 1 minute between current-carrying and noncurrent-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec2 (about 100G'S)
	Malfunction: 300m/Sec2 (about 30G'S)
Ambient temperature (°C)	General purpose type: -25~+80 (With no icing)
	Sealed type: -15~+80 (With no icing)
Humidity	General purpose type: 85% RH max., Sealed type: 95% RH max.
Mechanical life	20,000,000 operations above (under rated OT)
Electrical life	500,000 operations above
Weight	Approx.22g to 58g

2.Ratings

Rated voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NO	NC
125VAC	10		3	1.5	10		5	2.5
250VAC	10		2.5	1.25	10		3	1.5
480VAC	3		1.5	0.75	2.5		1.5	0.75
8VDC	10		3	1.5	6		6	5
14VDC	10		3	1.5	6		6	5
30VDC	8		3	1.5	6		5	2.5
125VDC	0.5		0.4	0.4	0.05		0.05	0.05
250VDC	0.25		0.2	0.2	0.03		0.03	0.03

NOTES:

1. Inductive load has a power factor of 0.4 min. (AC) and a time constant of 7 msec. max. (DC)
2. Lamp load has an inrush current of 10 times the steady-state current, while motor, load has an inrush current of 6 times the steady-state current.
3. Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

SGF-NT/NHSeries

Low Voltage Fuse Bases

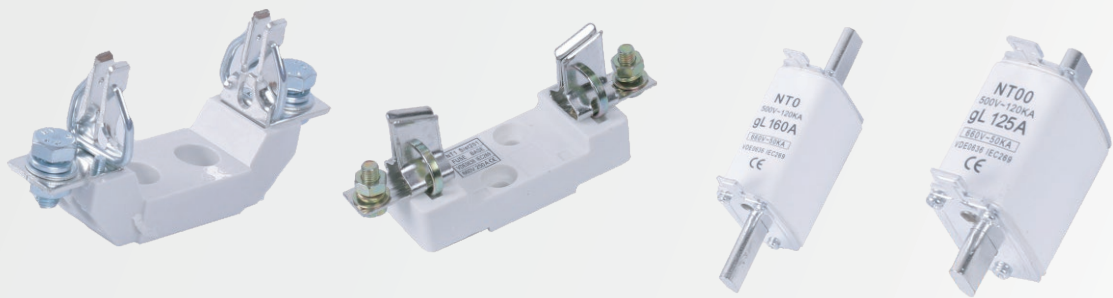
Technical data

Standard	IEC60269
Approval	CE
Rated frequency(Hz)	AC 50
Rated insulation voltage(V)	690
Rated current (A)	up to 1250

Low Voltage Fuse Links

Technical data

Standard	IEC60269
Approval	CE
Rated frequency(Hz)	AC 50
Rated voltage(V)	up to 1140
Rated current (A)	up to 1250
Rated short circuit current(kA)	120
Ambient temperature(°C)	-5 to + 55
Altitude(meters)	2000



Low Voltage Fuse Bases

Picture	Model of base	Model of fuse link	Rated insulation voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)
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NT00

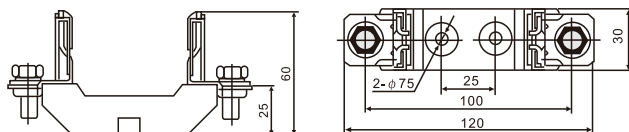
NT00/NH00S

690

160

193

Refer to drawing 1.1 for detailed data



Drawing 1.1

Remark: Fuse bases are made of porcelain

Picture	Model of base	Model of fuse link	Rated insulation voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)
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NT0

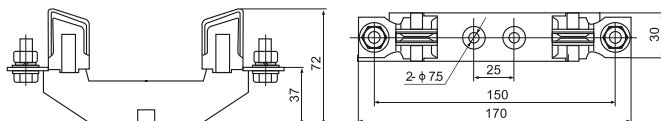
NT0/NH0S

690

160

295

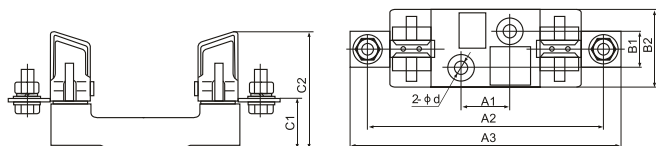
Refer to drawing 1.2 for detailed data



Drawing 1.2

Remark: Fuse bases are made of porcelain

Picture	Model of base	Model of fuse link	Rated insulation voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)								
						A ₁	A ₂	A ₃	B ₁	B ₂	C ₁	C ₂	φ d	
	NT1	NT1/NH1S	690	250	550	25	175	200	30	58	38	84	10.5	
	NT2	NT2/NH2S	690	400	770	25	200	225	30	60	38	100	10.5	
	NT3	NT3/NH3S	690	630	965	25	210	250	30	60	40	105	10.5	

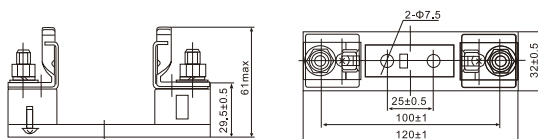


Drawing 1.3

Remark: Fuse bases are made of porcelain

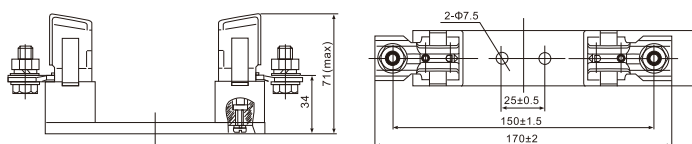
Low Voltage Fuse Bases

Picture	Model of base	Model of fuse link	Rated insulation voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)
	NH00	NT00/NH00S	660	160	240	Refer to drawing 1.4 for detailed data

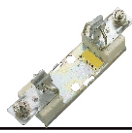


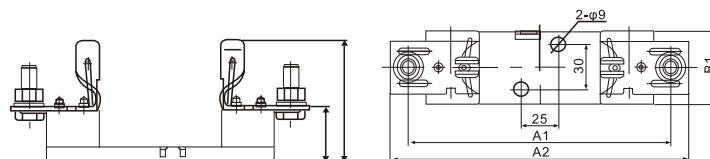
Drawing 1.4

Picture	Model of base	Model of fuse link	Rated insulation voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)
	NH0	NT0/NH0S	660	160	322	Refer to drawing 1.5 for detailed data



Drawing 1.5

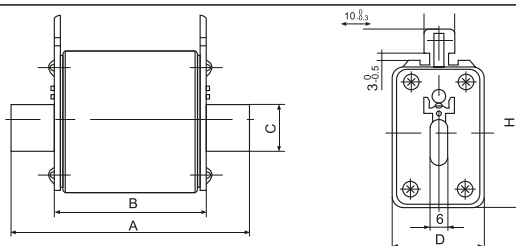
Picture	Model of base	Model of fuse link	Rated insulation voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)				
						A ₁	A ₂	B ₁	H ₁	H ₂
	NH1	NT1/NH1S	660	250	604	175	200	50	38	82
	NH2	NT2/NH2S	660	400	1006	200	230	64	54	104
	NH3	NT3/NH3S	660	630	1200	210	250	64	54	120



Drawing 1.6

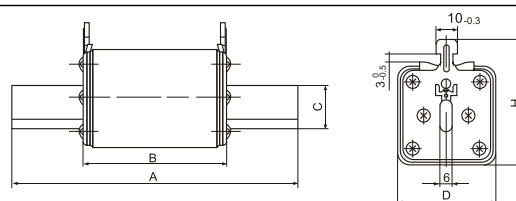
Low Voltage H.R.C Fuse Links

Picture	Model of fuse link	Rated voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)				
					A	B	C	D	H
	NT00	500/660	10~160	180	78	50.5	15	30	60
	NT0	500/660	6~160	267	125	67	15	30	60



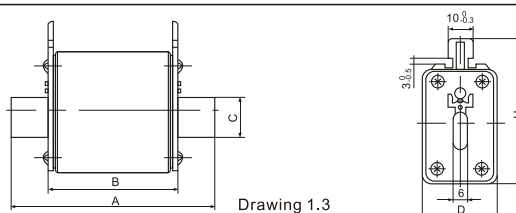
Drawing 1.1

Picture	Model of fuse link	Rated voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)				
					A	B	C	D	H
	NT1	500/660	32~250	447	135	67	20	46	58.5
	NT2	500/660	80~400	727	150	68	30	58.5	68.5
	NT3	500/660	160~630	975	150	68	36	70	82



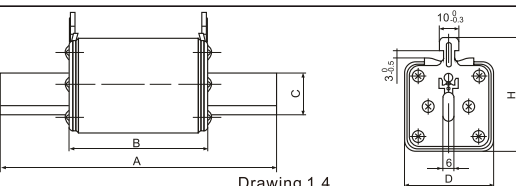
Drawing 1.2

Picture	Model of fuse link	Rated voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)				
					A	B	C	D	H
	NH00S	500/690	10~160	180	78	50.5	15	30	60
	NH0S	500/690	6~160	267	125	67	15	30	60



Drawing 1.3

Picture	Model of fuse link	Rated voltage (V)	Rated current (A)	Weight (g)	Overall dimension (mm)				
					A	B	C	D	H
	NH1S	500/660	32~250	447	135	67	20	40	64
	NH2S	500/660	80~400	727	150	68	30	54	74
	NH3S	500/660	160~630	975	150	68	36	70	88



Drawing 1.4

International Certification



ISO-9001



ISO-14001



ISO-45001



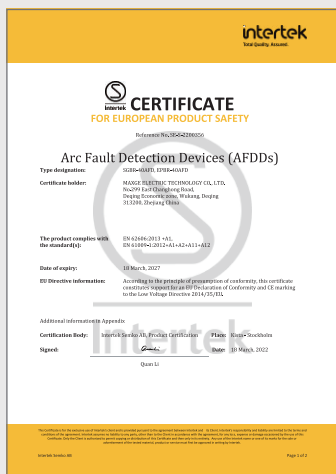
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⚠ Reserve the right to change the parameters without prior notice.



Address:
No.299 East Changhong Road,Mogan Mountain Hi-tech Industry
Development Zone,Deqing, Zhejiang,China

Tel: +86-572-8823878 8823666

Fax: +86-572-8822678 8822959

Email: maxge@maxge.com

Website: www.maxge.com

