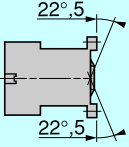
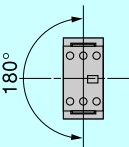
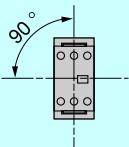
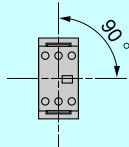


Environment

Rated insulation voltage (Ui)	Conforming to IEC/EN 60947-1, IEC/EN 60947-4-1, VDE 0110 gr C, CSA 22-2 n° 14, UL 508	V	690	
Conforming to standards			IEC/EN 60947-1, IEC/EN 60947-4-1, NF C 630110, VDE 0660	
Approvals			UL, CSA	
Protective treatment	Conforming to IEC/EN 60068 (DIN 50015)		"TC" (Klimafest, Climateproof)	
Degree of protection	Conforming to VDE 0106		Protection against direct finger contact	
Ambient air temperature around the device	Storage	°C	- 50...+ 70	
	Operation	°C	- 20...+ 50	
Maximum operating altitude	Without derating	m	2000	
Operating position	Vertical axis	Horizontal axis		
				
	Without derating	Without derating		
Cabling, screw clamp terminals			min	max
	Solid conductor	mm²	1 x 1.5 or 2 x 1.5	1 x 6 or 2 x 4
	Flexible cable without cable end	mm²	1 x 0.5 or 2 x 0.35	1 x 6 or 2 x 2.5
	Flexible cable with cable end	mm²	1 x 0.35 or 2 x 0.35	1 x 6 or 2 x 1.5
Tightening torque	Pozidriv n° 1 head	N.m	0.8	
Terminal referencing			Conforming to standards EN 50005	

Pole characteristics

Conventional thermal current (Ith)	For ambient temperature ≤ 55 °C	A	12
Rated operational frequency		Hz	50/60
Frequency limits of the operational current		Hz	Up to 400
Rated operational voltage (Ue)		V	690
Rated making capacity	I rms conforming to NF C 63-110 and IEC/EN 60947-4-1	A	66
Rated breaking capacity (for Ue ≤ 400 V)	Conforming to NF C 63-110 and IEC/EN 60947-4-1 (I rms)	A	52
Short time rating	In free air for a time "t" from cold state (θ ≤ 55 °C)	A	50
Short-circuit protection	gG fuse U ≤ 440 V	A	16
Average impedance per pole	At Ith and 50 Hz	mΩ	4
Maximum rated operational current	for a temperature ≤ 55 °C		
	AC-3 (1) (Ue ≤ 400 V)	A	6
	AC-1	A	12
Utilisation in category AC-1 resistive circuits, heating, lighting (Ue ≤ 440 V)	Increase in operational current by paralleling of poles	A	20

Auxiliary contact characteristics of add-on blocks

Rated operational voltage (Ue)	Up to	V	690
Rated insulation voltage (Ui)	Conforming to IEC/EN 60947-1, VDE 0110 group C, CSA C 22-2 n° 14	V	690
Conventional thermal current (Ith)	For ambient temperature ≤ 55 °C	A	10
Frequency of operational current		Hz	Up to 400
Short-circuit protection	To IEC/EN 60947-5-1 and VDE 0660, gG fuse	A	10

Operational power of contacts conforming to IEC/EN 60947-5-1

a.c. supply, category AC-15

Electrical durability (valid up to 3600 operating cycles per hour) on an inductive load such as the coil of an electromagnet: making current (cos φ 0.7) = 10 times the breaking current (cos φ 0.4).

V	24	48	110/ 127	220/ 230	380/ 400	440
1 million operating cycles	VA 48	96	240	440	800	880
3 million operating cycles	VA 17	34	86	158	288	317
10 million operating cycles	VA 7	14	36	66	120	132
Occasional making capacity	VA 1000	2050	5000	10000	14000	13000

d.c. supply, category DC-13

Electrical durability (valid up to 1200 operating cycles per hour) on an inductive load such as the coil of an electromagnet, without economy resistor, the time constant increasing with the load.

V	24	48	110	220	440
1 million operating cycles	W 120	80	60	52	51
3 million operating cycles	W 55	38	30	28	26
10 million operating cycles	W 15	11	9	8	7
Occasional making capacity	W 720	600	400	300	230

(1) For LC1 contactors

Control circuit characteristics

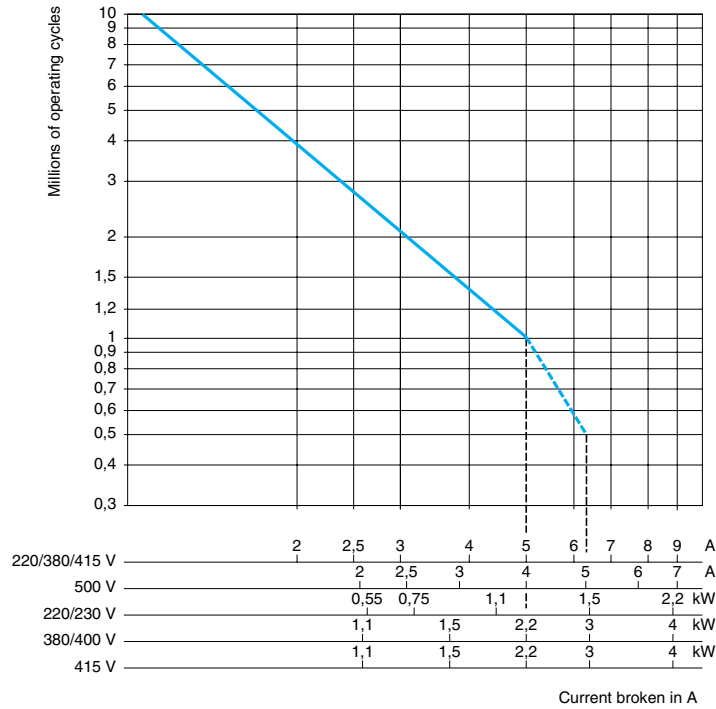
Contactor type			LC1-SK06	LP1-SK06
Rated control circuit voltage (Uc)		V	~ 24...400	≡ 12...72
Control voltage limits (θ ≤ 55 °C) single voltage coil	For operation		0.85...1.1 Uc	0.85...1.1 Uc
	For drop-out		≥ 0.20 Uc	≥ 0.10 Uc
Average coil consumption at 20 °C and at Uc	Inrush		16 VA	2.2 W
	Sealed		4.2 VA	2.2 W
Heat dissipation		W	1.4	2.2
Operating time at 20 °C and at Uc	Between coil energisation and - opening of the N/C contacts - closing of the N/O contacts	ms ms	8...16 7...14	10...18 8...12
	Between coil de-energisation and - opening of the N/O contacts - closing of the N/C contacts	ms ms	6...8 8...10	4...6 6...8
Maximum operating rate	In operating cycles per hour		1200	1200
Mechanical durability at Uc In millions of operating cycles	50/60 Hz coil		10	–
	≡ coil		–	10

2

2.1

Use in category AC-3 ($U_e \leq 440$ V)

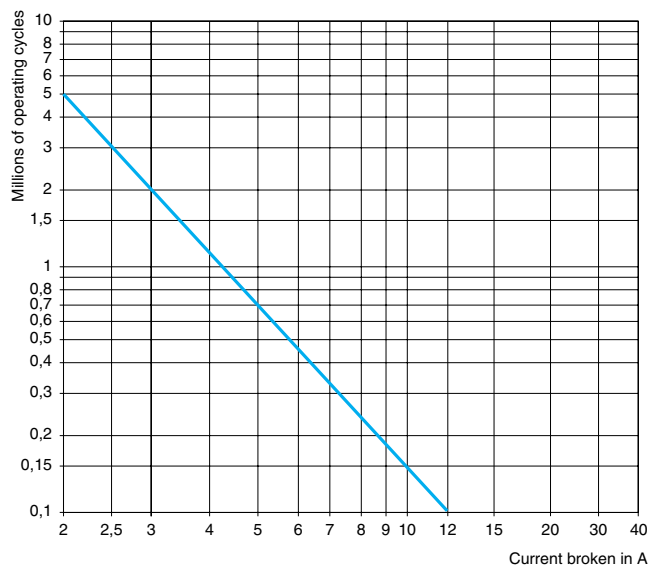
Control of 3-phase asynchronous squirrel cage motors with breaking whilst running.
The current broken (I_c) in category AC-3 is equal to the rated operational current (I_e) of the motor.



----- only up to 415 V

Use in category AC-1 ($U_e \leq 440$ V)

Control of resistive circuits ($\cos \varphi \geq 0.95$).
The current broken (I_c) in category AC-1 is equal to the current (I_e) normally drawn by the load.



- Width of contactor 27 mm.
- Mounting on 35 mm rail.
- Screw clamp terminals.



LC1-SK06

Mini-contactors for motor control (AC-3)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3 (1)			Rated operational voltage in AC-3 up to 400 V	Number of poles	Instantaneous auxiliary contacts		Basic reference. Complete with code indicating control circuit voltage (2)	Weight
220 V	280 V	660 V						
230 V	415 V	690 V						
kW	kW	kW	A					kg
1.1	2.2	2.2	6	2	-	-	LC1-SK0600●●	0.132

Mini-contactors for use in category AC-1

Non inductive loads maximum current ($\theta \leq 55^\circ\text{C}$) utilisation category AC-1	Control circuit supply	Number of poles	Instantaneous auxiliary contacts		Basic reference. Complete with code indicating control circuit voltage (2)	Weight
A						kg
12	a.c.	2	-	-	LC1-SK0600●●	0.132
	d.c.	2	-	-	LP1-SK0600●●	0.132

Add-on block with 1 power pole (for 3-phase circuits)

For use on contactor	Number of poles	Instantaneous auxiliary contacts		Reference	Weight
					kg
LC1-SK06 clip-on front mounting	1	1	-	LA1-SK10	0.022
	1	-	1	LA1-SK01	0.022



LA1-SK10

Note: Auxiliary contact blocks and coil suppressor module, see next page.

(1) For use in AC-3 category and 3-phase circuits, an LA1-SK●● auxiliary contact block should be ordered separately for mounting on the contactor.

(2) Standard control circuit voltages (for other voltages, please call our Customer information centre on 0870 608 8 608).

Mini-contactors LC1-SK

Volts ~	24	48	110	120	220	230	240	380	400
Code	B7	E7	F7	G7	M7	P7	U7	Q7	V7

Mini-contactors LP1-SK

Volts ---	12	24	36	48	72
Code	JD	BD	CD	ED	SD

Contactors

Mini-contactors types LC1-SK and LP1-SK
Instantaneous auxiliary contacts and coil suppressor modules



LA1-SK11

Instantaneous auxiliary contact blocks

Clip-on front mounting

For use on contactors	Maximum number of blocks per contactor	Composition	Reference	Weight
				kg
LC1-SK06	1	2 -	LA1-SK20	0.022
		- 2	LA1-SK02	0.022
		1 1	LA1-SK11	0.022

Coil suppressor module

Clip-on fixing and electrical connection on right-hand side, without use of tools

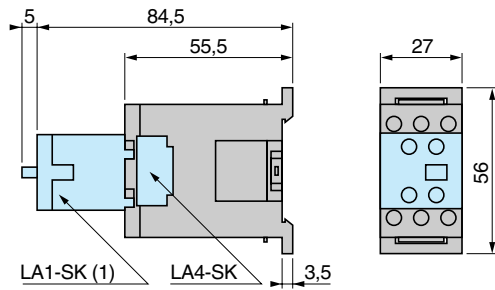
For use on contactors	Type	For voltages	Sold in lots of	Unit reference	Weight
LC1-SK06 and LP1-SK06	Varistor (1)	~ and --- 24 V...48 V	10	LA4-SKE1E	0.003
		~ and --- 110 V...250 V	10	LA4-SKE1U	0.003
	Diode (2)	--- 24 V...250 V	10	LA4-SKC1U	0.003

(1) Protection provided by limiting the transient voltage to 2 Uc max. Maximum reduction of transient voltage peaks. Slight increase in drop-out time (1.1 to 1.5 times the normal time).
 (2) No overvoltage or oscillating frequency. Slight increase in drop-out time (1.1 to 1.5 times the normal time).



LA4-SK01

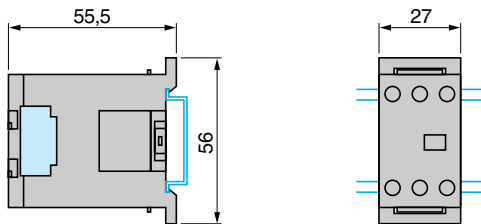
Dimensions
Mini-contactors
LC1, LP1-SK06



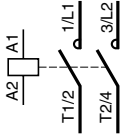
(1) Only on LC1-SK06

Mounting
Mini-contactors
LC1, LP1-SK06

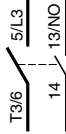
on mounting rail AM1-DP200 or AM1-DE200 (≈35 mm)



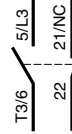
2-pole mini-contactors
LC1 and LP1-SK06



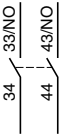
Add-on power pole block
1 pole + 1 N/O aux.
LA1-SK10



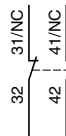
1 pole + 1 N/C aux.
LA1-SK01



Instantaneous auxiliary contacts
2 N/O
LA1-SK20



2 N/C
LA1-SK02



1 N/O + 1 N/C
LA1-SK11

