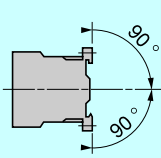
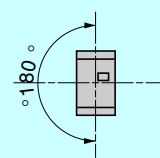
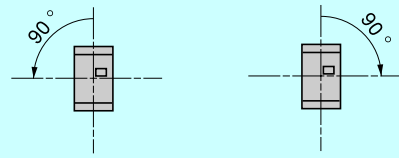


## Environment

<b>Conforming to standards</b>			IEC/EN 60947-1, IEC/EN 60947-4-1, NF C 63-110, VDE 0660		
<b>Approvals</b>	<b>LC● and LP●-K06 to K12</b>		UL, CSA, DEMKO, NEMKO, SEMKO, FI		
<b>Operating positions</b>	<p><b>Vertical axis</b></p>  <p>Without derating</p>	<p><b>Horizontal axis</b></p>  <p>Without derating</p>	 <p>Possible positions for <b>LC●-K</b> only. Contactor energisation voltage: 0.85 U<sub>c</sub></p>		
<b>Cabling</b>			Min	Max	Max to IEC/EN 60947
Screw clamp connections	Solid conductor	mm <sup>2</sup>	1 x 1.5	2 x 4	1 x 4 + 1 x 2.5
	Flexible cable without cable end	mm <sup>2</sup>	1 x 0.75	2 x 4	2 x 2.5
	Flexible cable with cable end	mm <sup>2</sup>	1 x 0.34	1 x 1.5 + 1 x 2.5	1 x 1.5 + 1 x 2.5
Spring terminal connections	Solid conductor	mm <sup>2</sup>	1 x 0.75	1 x 1.5	2 x 1.5
	Flexible conductor without cable end	mm <sup>2</sup>	1 x 0.75	1 x 1.5	2 x 1.5
Faston connectors	Clip	mm	2 x 2.8 or 1 x 6.35		
Solder pins for printed circuit board	With locating device between power and control circuits		4 mm x 35 microns		
<b>Tightening torque</b>	Phillips head n° 2 and Ø 6	N.m	0.8...1.3		
<b>Terminal referencing</b>	Conforming to standards EN 50005 and EN 50012		Up to 5 contacts		
<b>Rated insulation voltage (U<sub>i</sub>)</b>	Conforming to IEC/EN 60947-4-1	V	690		
	Conforming to VDE 0110 gr C	V	750		
	Conforming to NF C 20-040	V	690		
	Conforming to CSA 22-2 n° 14, UL 508	V	600		
<b>Rated impulse withstand voltage (U<sub>imp</sub>)</b>		kV	8		
<b>Protective treatment</b>	Conforming to IEC 68 (DIN 50016)		"TC" (Klimafest, Climateproof)		
<b>Degree of protection</b>	Conforming to VDE 0106		Protection against direct finger contact		
<b>Ambient air temperature around the device</b>	Storage	°C	- 50...+ 80		
	Operation	°C	- 25...+ 50		
<b>Maximum operating altitude</b>	Without derating	m	2000		
<b>Vibration resistance</b> 5 ... 300 Hz	Contactor open		2 gn		
	Contactor closed		4 gn		
<b>Flame resistance</b>	Conforming to UL 94		Self-extinguishing materials V1		
	Conforming to NF F 16-101 and 16-102		Conforming to requirement 2		
<b>Shock resistance</b> (1/2 sine wave, 11 ms)	Contactor open		10 g		
	Contactor closed		15 g		
<b>Safe circuit separation</b>	Conforming to VDE 0106 and IEC 536		VLSV (Very Low Safety voltage), up to 400 V		

**Selection:**  
pages 1/12 to 1/35

**References:**  
pages 2/22 to 2/35

**Dimensions:**  
pages 2/40 and 2/42

**Schemes:**  
pages 2/41 and 2/43

## Pole characteristics

<b>Conventional thermal current (I<sub>th</sub>)</b>	For ambient temperature ≤ 50 °C	<b>A</b>	20							
<b>Rated operational frequency</b>		<b>Hz</b>	50/60							
<b>Frequency limits of operational current</b>		<b>Hz</b>	Up to 400							
<b>Rated operational voltage (U<sub>e</sub>)</b>		<b>V</b>	690							
<b>Rated making capacity</b>	I <sub>rms</sub> to NF C 63-110 and IEC/EN 60947-4-1 <b>LC●-K06, LP●-K06, LC●-K09, LP●-K09</b> <b>LC●-K12, LP●-K12</b>	<b>A</b>	110							
		<b>A</b>	144							
<b>Rated breaking capacity</b>	I <sub>rms</sub> to NF C 63-110 and IEC/EN 60947-4-1 <b>LC●-K06, LP●-K06, LC●-K09, LP●-K09</b> <b>LC●-K12, LP●-K12</b>	<b>V</b>	220/ 240	380/ 400	415	440	500	660/ 690		
		<b>A</b>	110	110	110	110	80	70		
		<b>A</b>	–	–	–	110	80	70		
<b>Permissible short time rating</b>	In free air for a time “t” from cold state (θ ≤ 50 °C) <b>LC●-K06, LP●-K06, LC●-K09, LP●-K09</b> <b>LC●-K12, LP●-K12</b>		1 s	5 s	10 s	30 s	1 min	3 min	≥ 15 min	
		<b>A</b>	90	85	80	60	45	40	20	
		<b>A</b>	115	105	100	75	55	50	25	
<b>Short-circuit protection</b>	gG fuse U ≤ 440 V (aM fuse, see page 2/46)	<b>A</b>	25							
<b>Average impedance per pole</b>	At I <sub>th</sub> and 50 Hz	<b>mΩ</b>	3							
<b>Utilisation in category AC-1</b> resistive circuits, heating, lighting (U <sub>e</sub> ≤ 440 V)	Maximum rated operational current for a temperature ≤ 50 °C	<b>A</b>	20							
	Maximum rated operational current for a temperature ≤ 70 °C	<b>A</b>	16 for U <sub>e</sub> only							
	Rated operational current limits in relation to on-load factor and operating frequency	<b>A</b>	On-load factor 90%	60 %	30 %					
			300 op. cycles/hour	13	15	18				
			120 op. cycles/hour	15	18	19				
Increase in operational current by paralleling of poles		Apply the following coefficients to the current values above. These take into account the often unbalanced current distribution between poles								
		2 poles in parallel: K = 1.60								
		3 poles in parallel: K = 2.25								
		4 poles in parallel: K = 2.80								
<b>Utilisation in category AC-3</b> squirrel cage motors	Operational power according to the voltage	Voltage 50 or 60 Hz	<b>V</b>	115	220	220/ 240	380/ 415	440/ 480	500/ 600	660/ 690
				1-ph	1-ph	3-ph	3-ph	3-ph	3-ph	3-ph
		<b>LC●-K06, LP●-K06</b>	<b>kW</b>	0.37	0.75	1.5	2.2	3	3	3
		<b>LC●-K09, LP●-K09</b>	<b>kW</b>	0.55	1.1	2.2	4	4	4	4
		<b>LC●-K12, LP●-K12</b>	<b>kW</b>	–	–	3	5.5	5.5/ 4 (480)	4	4
	% utilisation of operational power in relation to the maximum operating rate			Op. cycles/hr	600	900	1200			
			Power	100%	75%	50%				

2

2.2

# Contactors

Contactors and reversing contactors  
types LC●-K and LP●-K

## Control circuit characteristics

Contactor type			LC1	LC2	LC7	LC8	LP1	LP2
<b>Rated control circuit voltage (Uc)</b>		<b>V</b>	~ 12...690 (1)		~ 24...240		≡ 12...250 (1)	
<b>Control voltage limits</b> (≤ 50 °C) single voltage coil	Operation		0.8...1.15 Uc		0.85...1.1 Uc		0.8...1.15 Uc	
	Drop-out		≥ 0.20 Uc		≥ 0.10 Uc		≥ 0.10 Uc	
<b>Average consumption</b> at 20 °C and at Uc	Inrush		30 VA		3 VA		3 W	
	Sealed		4.5 VA		3 VA		3 W	
<b>Heat dissipation</b>		<b>W</b>	1.3		3		3	
<b>Operating time</b> at 20 °C and at Uc	Between coil energisation and: - opening of the N/C contacts - closing of the N/O contacts	<b>ms</b> <b>ms</b>	5...15 10...20		25...35 30...40		25...35 30...40	
	Between coil de-energisation and: - opening of the N/O contacts - closing of the N/C contacts	<b>ms</b> <b>ms</b>	10...20 15...25		30 40		10 15	
<b>Maximum immunity to micro-breaks</b>		<b>ms</b>	2		2		2	
<b>Maximum operating rate</b>	In operating cycles per hour		3600		3600		3600	
<b>Mechanical durability at Uc</b> In millions of operating cycles	50/60 Hz coil		10	5	10	5	–	–
	≡ coil		–	–	–	–	10	5

(1) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LAF-KE1UG (130...250 V), see page 2/38.

2

2.2

## Characteristics of contactor auxiliary contacts and instantaneous contact blocks

Number of auxiliary contacts	On LC●-K or LP●-K		1
	On LA1-K		2 or 4
Rated operational voltage (Ue)	Up to	V	690
Rated insulation voltage (Ui)	Conforming to IEC/EN 60947-4-1	V	690
	Conforming to VDE 0110 group C	V	750
	Conforming to CSA C 22-2 n° 14	V	600
Conventional thermal current (Ith)	For ambient temperature ≤ 50 °C	A	10
Frequency of operational current		Hz	Up to 400
Minimum switching capacity	U min (DIN 19 240)	V	17 (2 < 10 <sup>-3</sup> )
	I min	mA	5
Short-circuit protection	Conforming to IEC/EN 60947-4-1 and VDE 0660, gG fuse	A	10
Rated making capacity	Conforming to IEC/EN 60947-4-1	I rms	A 110
Overload current	Permissible for	1 s	A 80
		500 ms	A 90
		100 ms	A 110
Insulation resistance		MΩ	> 10
Non-overlap distance	LA1-K: linked contacts to INRS, BIA and CNA specs.	mm	0.5 (see schemes, pages 2/41 and 2/43)

**Operational power of contacts**  
conforming to IEC/EN 60947

**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).

	24	48	110/ 220/ 380/	230	400	440	600/
V	24	48	110/ 220/ 380/	230	400	440	600/
VA	48	96	240	440	800	880	1200
VA	17	34	86	158	288	317	500
VA	7	14	36	66	120	132	200
VA	1000	2050	5000	10 000	14 000	13 000	9000

- 1 million operating cycles
- 3 million operating cycles
- 10 million operating cycles
- Occasional making capacity

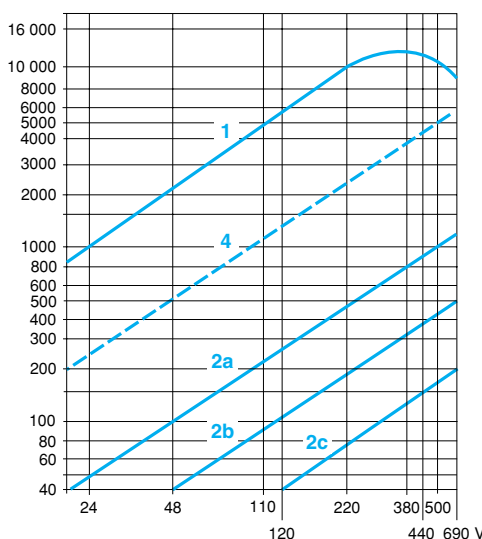
**d.c. supply, category DC-13**

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.

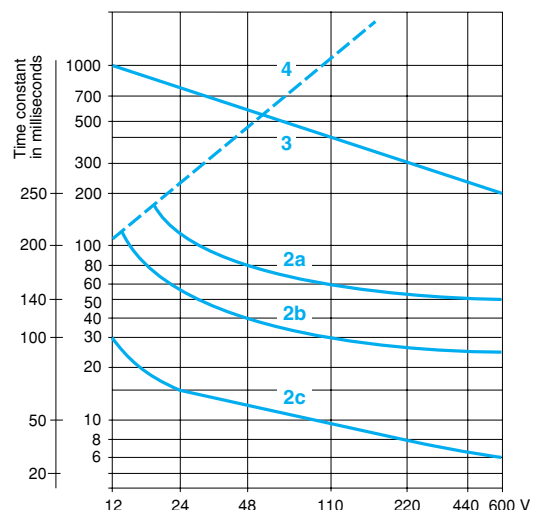
	24	48	110	220	440	600
V	24	48	110	220	440	600
W	120	80	60	52	51	50
W	55	38	30	28	26	25
W	15	11	9	8	7	6
W	720	600	400	300	230	200

- Breaking limit of contacts valid for:
  - maximum of 50 operating cycles at 10 s intervals (breaking current = making current x cos φ 0.7).
- Electrical durability of contacts for:
  - 1 million operating cycles (2a)
  - 3 million operating cycles (2b)
  - 10 million operating cycles (2c).
- Breaking limit of contacts valid for:
  - maximum of 20 operating cycles at 10 s intervals with current passing for 0.5 s per operating cycle.
- Thermal limit.

Power broken in VA

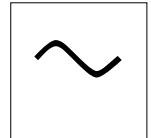


Power broken in W



# Contactors

Contactors for motor control,  
6 to 12 A in utilisation category AC-3  
Control circuit: a.c.



## 3-pole general purpose contactors

- Contactor selection according to the utilisation category, see pages 1/14 to 1/21.
- Mounting on 35 mm rail or Ø 4 screw fixing.
- Screws in open "ready-to-tighten" position.
- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.



LC1-K0610

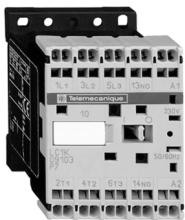
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3	Rated operational voltage in AC-3 up to 440 V	Instantaneous auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1) (2)	Weight
220 V 380 V 440/500 V 240 V 415 V 660/690 V kW kW kW	A	N/O N/C		kg

### Screw clamp connections

1.5	2.2	3	6	1	-	LC1-K0610	0.180
				-	1	LC1-K0601	0.180
2.2	4	4	9	1	-	LC1-K0910	0.180
				-	1	LC1-K0901	0.180
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC1-K1210	0.180
				-	1	LC1-K1201	0.180

### Spring terminal connections

1.5	2.2	3	6	1	-	LC1-K06103	0.180
				-	1	LC1-K06013 <td>0.180</td>	0.180
2.2	4	4	9	1	-	LC1-K09103 <td>0.180</td>	0.180
				-	1	LC1-K09013 <td>0.180</td>	0.180
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC1-K12103 <td>0.180</td>	0.180
				-	1	LC1-K12013 <td>0.180</td>	0.180



LC1-K09103

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

Contactors LC1K (0.8...1.15 Uc) (0.85...1.1 Uc)

Volts ~ 50/60 Hz	12	20	24(3)	36	42	48	110	115	120	127	200/208	220/230	230/240	256	277	380/400	400	
Code	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7	W7	UE7	Q7	V7
Volts ~ 50/60 Hz		400/415		440		480		500		575		600		660/690				
Code		N7		R7		T7		S7		SC7		X7		Y7				

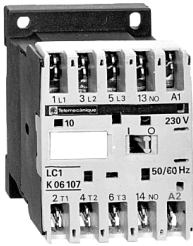
- Up to and including 240 V, coil with integral suppression device available: add 2 to the code required. Example: J72
- (2) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LA4-KE1UG (130...250 V), see page 2/38.

# Contactors

Contactors for motor control,  
6 to 12 A in utilisation category AC-3  
Control circuit: a.c.



## 3-pole general purpose contactors



LC1-K06107●●

- Contactor selection according to the utilisation category, see pages 1/14 to 1/21.
- Mounting on 35 mm rail or Ø 4 screw fixing.
- Screws in open "ready-to-tighten" position.
- [Auxiliary contact blocks and accessories](#), see pages 2/36 to 2/39.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3	Rated operational voltage in AC-3 up to 440 V	Instantaneous auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1) (2)	Weight
220 V 380 V 440/500 V	A			kg
240 V 415 V 660/690 V				
<b>kW kW kW</b>		<b>N/O N/C</b>		

### Faston connectors, 1 x 6.35 or 2 x 2.8

1.5	2.2	3	6	1	-	<b>LC1-K06107●●</b>	0.180
				-	1	<b>LC1-K06017●●</b>	0.180
2.2	4	4	9	1	-	<b>LC1-K09107●●</b>	0.180
				-	1	<b>LC1-K09017●●</b>	0.180
3	5.5	4 (> 440) 5.5 (440)	12	1	-	<b>LC1-K12107●●</b>	0.180
				-	1	<b>LC1-K12017●●</b>	0.180

### Solder pins for printed circuit boards

1.5	2.2	3	6	1	-	<b>LC1-K06105●●</b>	0.210
				-	1	<b>LC1-K06015●●</b>	0.210
2.2	4	4	9	1	-	<b>LC1-K09105●●</b>	0.210
				-	1	<b>LC1-K09015●●</b>	0.210
3	5.5	4 (> 440) 5.5 (440)	12	1	-	<b>LC1-K12105●●</b>	0.210
				-	1	<b>LC1-K12015●●</b>	0.210

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

**Contactors LC1K** (0.8... 1.15 Uc) (0.85... 1.1 Uc)

Volts ~	12	20	24(3)	36	42	48	110	115	120	127	200/	220/	230	230/	256	277	380/	400
50/60 Hz											208	230		240			400	
Code	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7	W7	UE7	Q7	V7
Volts ~		400/		440		480		500		575		600		660/			400	
50/60 Hz		415												690				
Code		N7		R7		T7		S7		SC7		X7		Y7				

Up to and including 240 V, coil with integral suppression device available: add 2 to the code required. Example: **J72**

(2) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50... 129 V) or LA4-KE1UG (130... 250 V), see page 2/38.

# Contactors

Contactors for motor control,  
6 to 12 A in utilisation category AC-3  
Control circuit: a.c.



## 3-pole contactors for use in sensitive environments

Recommended for use in areas sensitive to noise, high interference mains supplies, etc.

- Contactor selection according to utilisation category, see pages 1/14 to 1/21.
- Coil with rectifier incorporated, suppressor fitted as standard.
- Mounting on 35 mm rail or Ø 4 screw fixing.
- Screws in open "ready-to-tighten" position.

- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.



LC7-K06105●●

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3	Rated operational current in AC-3 up to	Instantaneous auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1) (2)	Weight
220 V 380 V 440/500 V	up to			
240 V 415 V 660/690 V	440 V			
<b>kW kW kW</b>	<b>A</b>	<b>N/O N/C</b>		<b>kg</b>

### Screw clamp connections

1.5	2.2	3	6	1	–	LC7-K0610●●	0.225
				–	1	LC7-K0601●●	0.225
2.2	4	4	9	1	–	LC7-K0910●●	0.225
				–	1	LC7-K0901●●	0.225
3	5.5	4 (> 440) 5.5 (440)	12	1	–	LC7-K1210●●	0.225
				–	1	LC7-K1201●●	0.225

### Faston connectors, 1 x 6.35 or 2 x 2.8

1.5	2.2	3	6	1	–	LC7-K06107●●	0.225
				–	1	LC7-K06017●●	0.225
2.2	4	4	9	1	–	LC7-K09107●●	0.225
				–	1	LC7-K09017●●	0.225
3	5.5	4 (> 440) 5.5 (440)	12	1	–	LC7-K12107●●	0.225
				–	1	LC7-K12017●●	0.225

### Solder pins for printed circuit boards

1.5	2.2	3	6	1	–	LC7-K06105●●	0.255
				–	1	LC7-K06015●●	0.255
2.2	4	4	9	1	–	LC7-K09105●●	0.255
				–	1	LC7-K09015●●	0.255
3	5.5	4 (> 440) 5.5 (440)	12	1	–	LC7-K12105●●	0.255
				–	1	LC7-K12015●●	0.255

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

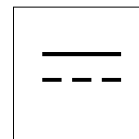
Contactors LC7-K (0.85...1.1 Uc)

Volts ~	24	42	48	110	115	220	230/ 240
Code	B7	D7	E7	F7	FE7	M7	U7

(2) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LA4-KE1UG (130...250 V), see page 2/38.

# Contactors

Contactors for motor control,  
6 to 12 A in utilisation category AC-3  
Control circuit: d.c.



## 3-pole contactors

- Contactor selection according to the utilisation category, see pages 1/14 to 1/21.
- Mounting on 35 mm rail or Ø 4 screw fixing.
- Screws in open "ready-to-tighten" position.
- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3	Rated operational voltage in AC-3 up to 440 V	Instantaneous auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1)	Weight
220 V 380 V 440/500 V 240 V 415 V 660/690 V	A	 N/O N/C		kg
<b>kW kW kW</b>	<b>A</b>			

### Screw clamp connections

1.5	2.2	3	6	1	–	LP1-K0610●●	0.225
				–	1	LP1-K0601●●	0.225
2.2	4	4	9	1	–	LP1-K0910●●	0.225
				–	1	LP1-K0901●●	0.225
3	5.5	4 (> 440 V) 5.5 (440 V)	12	1	–	LP1-K1210●●	0.225
				–	1	LP1-K1201●●	0.225

### Spring terminal connections

1.5	2.2	3	6	1	–	LP1-K06103●●	0.225
				–	1	LP1-K06013●●	0.225
2.2	4	4	9	1	–	LP1-K09103●●	0.225
				–	1	LP1-K09013●●	0.225
3	5.5	4 (> 440 V) 5.5 (440 V)	12	1	–	LP1-K12103●●	0.225
				–	1	LP1-K12013●●	0.225

### Faston connectors, 1 x 6.35 or 2 x 2.8

1.5	2.2	3	6	1	–	LP1-K06107●●	0.225
				–	1	LP1-K06017●●	0.225
2.2	4	4	9	1	–	LP1-K09107●●	0.225
				–	1	LP1-K09017●●	0.225
3	5.5	4 (> 440 V) 5.5 (440 V)	12	1	–	LP1-K12107●●	0.225
				–	1	LP1-K12017●●	0.225

### Solder pins for printed circuit boards

1.5	2.2	3	6	1	–	LP1-K06105●●	0.255
				–	1	LP1-K06015●●	0.255
2.2	4	4	9	1	–	LP1-K09105●●	0.255
				–	1	LP1-K09015●●	0.255
3	5.5	4 (> 440 V) 5.5 (440 V)	12	1	–	LP1-K12105●●	0.255
				–	1	LP1-K12015●●	0.255

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

**Contactors LP1-K (0.8...1.15 Uc)**

Volts ---	12	20	24(2)	36	48	60	72	100	110	125	155	174	200	220	230	240	250
Code	JD	ZD	BD	CD	ED	ND	SD	KD	FD	GD	PD	QD	LD	MD	MPD	MUD	UD

Coil with suppression device available: add 3 to the code required. Example: **JD3**.

(2) When connecting an electronic sensor or timer in series with the coil of the contactor, select a 20 V coil (~ control circuit voltage code Z7, --- control circuit voltage code ZD) so as to compensate for the incurred voltage drop.



LP1-K0610●●



LP1-K06107●●



# Contactors

K 3 and 4-pole contactors for control in utilisation category AC-1  
Control circuit: a.c.



## General purpose contactors

- Mounting on 35 mm rail or by Ø 4 screws.
- Screws in open "ready-to-tighten" position.
- [Auxiliary contact blocks and accessories](#), see pages 2/36 to 2/39.

Non inductive loads	Type of connection	Number of poles	Instantaneous auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1)	Weight		
Category AC-1							
Maximum current at $\theta \leq 50^\circ\text{C}$							
<b>A</b>			N/O N/C		kg		
<b>20</b>	Screw clamp (2)	3	-	1	-	<b>LC1-K0910●●</b>	0.225
		3	-	-	1	<b>LC1-K0901●●</b>	0.225
		4	-	-	-	<b>LC1-K09004●●</b>	0.180
		2	2	-	-	<b>LC1-K09008●●</b>	0.180
	Faston connectors 1 x 6.35 or 2 x 2.8	3	-	1	-	<b>LC1-K09107●●</b>	0.225
		3	-	-	1	<b>LC1-K09017●●</b>	0.225
		4	-	-	-	<b>LC1-K090047●●</b>	0.180
		2	2	-	-	<b>LC1-K090087●●</b>	0.180
	Solder pins for printed circuit boards	3	-	1	-	<b>LC1-K09105●●</b>	0.255
		3	-	-	1	<b>LC1-K09015●●</b>	0.255
		4	-	-	-	<b>LC1-K090045●●</b>	0.210
		2	2	-	-	<b>LC1-K090085●●</b>	0.210

## Contactors for use in sensitive environments

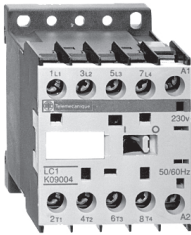
**Recommended for use in areas sensitive to noise, high interference mains supplies, etc.**

- Coil with rectifier incorporated, suppressor fitted as standard.
- Mounting on 35 mm rail or Ø 4 screw fixing.
- Screws in open "ready-to-tighten" position.
- [Auxiliary contact blocks and accessories](#), see pages 2/36 to 2/39.

<b>20</b>	Screw clamp (2)	3	-	1	-	<b>LC7-K0910●●</b>	0.225
		3	-	-	1	<b>LC7-K0901●●</b>	0.225
		4	-	-	-	<b>LC7-K09004●●</b>	0.225
		2	2	-	-	<b>LC7-K09008●●</b>	0.225
	Faston connectors 1 x 6.35 or 2 x 2.8	3	-	1	-	<b>LC7-K09107●●</b>	0.225
		3	-	-	1	<b>LC7-K09017●●</b>	0.225
		4	-	-	-	<b>LC7-K090047●●</b>	0.225
		2	2	-	-	<b>LC7-K090087●●</b>	0.225
	Solder pins for printed circuit boards	3	-	1	-	<b>LC7-K09105●●</b>	0.255
		3	-	-	1	<b>LC7-K09015●●</b>	0.255
		4	-	-	-	<b>LC7-K090045●●</b>	0.255
		2	2	-	-	<b>LC7-K090085●●</b>	0.255

(1) Standard control circuit voltages, see page opposite.

(2) To order a spring terminal version, add **3** immediately before the coil code. Example: **LC1-K09103●●**.



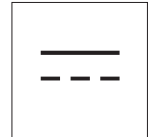
LC1-K09004●●



LC7-K090047●●

# Contactors

K 3 and 4-pole contactors for control in utilisation category AC-1  
Control circuit: d.c.



LP1-K09004●●

## 3 and 4-pole contactors

- Mounting on 35 mm rail or by Ø 4 screws.
- Screws in open "ready-to-tighten" position.
- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.

Non inductive loads	Type of connection	Number of poles	Instantaneous auxiliary contacts		Basic reference. Complete with code indicating control circuit voltage (1)	Weight	
Category AC-1		d b					
Maximum current at $\theta \leq 50^\circ\text{C}$			N/O	N/C		kg	
<b>A</b>							
20	Screw clamp (2)	3	-	1	-	<b>LP1-K0910●●</b>	0.225
		3	-	-	1	<b>LP1-K0901●●</b>	0.225
		4	-	-	-	<b>LP1-K09004●●</b>	0.225
		2	2	-	-	<b>LP1-K09008●●</b>	0.225
	Faston connectors 1 x 6.35 or 2 x 2.8	3	-	1	-	<b>LP1-K09107●●</b>	0.225
		3	-	-	1	<b>LP1-K09017●●</b>	0.225
		4	-	-	-	<b>LP1-K090047●●</b>	0.225
		2	2	-	-	<b>LP1-K090087●●</b>	0.225
	Solder pins for printed circuit boards	3	-	1	-	<b>LP1-K09105●●</b>	0.255
		3	-	-	1	<b>LP1-K09015●●</b>	0.255
		4	-	-	-	<b>LP1-K090045●●</b>	0.255
		2	2	-	-	<b>LP1-K090085●●</b>	0.255

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

### Contactors LC1-K (0.8...1.15 Uc) (0.85...1.1 Uc)

Volts ~	12	20	24	36	42	48	110	120	127	200/	220/	230	230/	256	277	380/	400
50/60 Hz										208	230		240			400	
Code	J7	Z7	B7	C7	D7	E7	F7	G7	FC7	L7	M7	P7	U7	W7	UE7	Q7	V7
Volts ~	400/	440	500	575	600	660/											
50/60 Hz	415					690											
Code	N7	R7	S7	SC7	X7	Y7											

Up to and including 240 V, coil with integral suppression device available: add 2 to the code required. Example: **J72**

### Contactors LC7-K (0.85...1.1 Uc)

Volts ~	24	42	48	110	220	230/
50/60 Hz						240
Code	B7	D7	E7	F7	M7	U7

### Contactors LP1-K (0.8...1.15 Uc)

Volts ---	12	20	24	36	48	60	72	100	110	125	155	174	200	220	230	240	250
Code	JD	ZD	BD	CD	ED	ND	SD	KD	FD	GD	PD	QD	LD	MD	MPD	MUD	UD

Coil with integral suppression device available: add 3 to the code required. Example: **JD3**

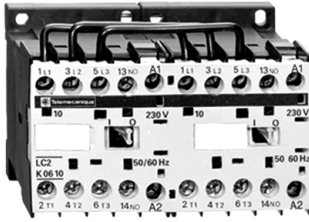
(2) To order a spring terminal version, add 3 immediately before the coil code. Example: **LP1-K09103●●**.

# Contactors

Reversing contactors for motor control  
6 to 12 A in utilisation category AC-3  
Control circuit: a.c.



## 3-pole general purpose reversing contactors



LC2-K0610●●

- Reversing contactor selection according to utilisation category, see pages 1/14 to 1/21.
- Integral mechanical interlock.
- It is essential to link the contacts of the electrical interlock.**
- Pre-wired power circuit connections as standard on screw clamp versions.
- Mounting on 35 mm  $\bar{\text{U}}$  or  $\bar{\text{O}}$  4 mm screw fixing.
- Screws in open "ready-to-tighten" position.

- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3	Rated operational current in AC-3 up to 400 V	Instantan. auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1) (2)	Weight
220 V 380 V 440/500 V 240 V 415 V 660/690 V	A	 N/O N/C		kg

### Screw clamp connections

1.5	2.2	3	6	1	-	LC2-K0610●●	0.390
				-	1	LC2-K0601●●	0.390
2.2	4	4	9	1	-	LC2-K0910●●	0.390
				-	1	LC2-K0901●●	0.390
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC2-K1210●●	0.390
				-	1	LC2-K1201●●	0.390

### Spring terminal connections

1.5	2.2	3	6	1	-	LC2-K06103●●	0.430
				-	1	LC2-K06013●●	0.430
2.2	4	4	9	1	-	LC2-K09103●●	0.430
				-	1	LC2-K09013●●	0.430
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC2-K12103●●	0.430
				-	1	LC2-K12013●●	0.430

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

Reversing contactors LC2-K (0.8...1.15 Uc) (0.85...1.1 Uc)

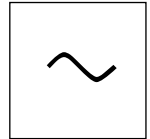
Volts ~	12	20	24	36	42	48	110	115	120	127	200/208	220/230	230/240	256	277	380/400	400	
50/60 Hz																		
Code	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7	W7	UE7	Q7	V7
Volts ~		400/		440		480		500		575		600		660/		690		
50/60 Hz		415																
Code		N7		R7		T7		S7		SC7		X7		Y7				

Up to and including 240 V, coil with integral suppression device available: add 2 to the code required. Example: J72

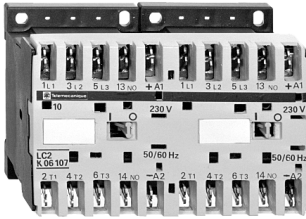
(2) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LA4-KE1UG (130...250 V), see page 2/38.

# Contactors

Reversing contactors for motor control  
6 to 12 A in utilisation category AC-3  
Control circuit: a.c.



## 3-pole general purpose reversing contactors



LC2-K06107●●

- Reversing contactor selection according to utilisation category, see pages 1/14 to 1/21.
- Integral mechanical interlock.
- It is essential to link the contacts of the electrical interlock.**
- Pre-wired power circuit connections as standard on screw clamp versions.
- Mounting on 35 mm  $\sim$  or  $\varnothing$  4 mm screw fixing.
- Screws in open "ready-to-tighten" position.

- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3	Rated operational current in AC-3 up to 400 V	Instantan. auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1) (2)	Weight
220 V 380 V 440/500 V 240 V 415 V 660/690 V	A	 N/O N/C		kg
<b>kW kW kW</b>				

### Faston connectors, 1 x 6.35 or 2 x 2.8

1.5	2.2	3	6	1	-	LC2-K06107●●	0.370
				-	1	LC2-K06017●●	0.370
2.2	4	4	9	1	-	LC2-K09107●●	0.370
				-	1	LC2-K09017●●	0.370
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC2-K12107●●	0.370
				-	1	LC2-K12017●●	0.370

### Solder pins for printed circuit boards

1.5	2.2	3	6	1	-	LC2-K06105●●	0.430
				-	1	LC2-K06015●●	0.430
2.2	4	4	9	1	-	LC2-K09105●●	0.430
				-	1	LC2-K09015●●	0.430
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC2-K12105●●	0.430
				-	1	LC2-K12015●●	0.430

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

**Reversing contactors LC2-K (0.8...1.15 Uc) (0.85...1.1 Uc)**

Volts $\sim$	12	20	24	36	42	48	110	115	120	127	200/208	220/230	230/240	256	277	380/400	400	
Code	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7	W7	UE7	Q7	V7
Volts $\sim$		400/		440		480		500		575		600		660/		690		
50/60 Hz		415																
Code		N7		R7		T7		S7		SC7		X7		Y7				

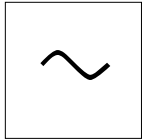
Up to and including 240 V, coil with integral suppression device available: add 2 to the code required. Example: **J72**  
(2) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LA4-KE1UG (130...250 V), see page 2/38.

2

2.2

# Contactors

Reversing contactors for motor control  
6 to 12 A in utilisation category AC-3  
Control circuit: a.c.



## 3-pole reversing contactors for use in sensitive environments



LC8-K06105●●

**Recommended for use in areas sensitive to noise, high interference mains supplies, etc.**

- Reversing contactor selection according to utilisation category, see pages 1/14 to 1/21.
- Coil with rectifier incorporated, suppressor fitted as standard.
- Integral mechanical interlock.

**It is essential to link the contacts of the electrical interlock.**

- Pre-wired power circuit connections as standard on screw clamp versions.
- Mounting on 35 mm rail or Ø 4 mm screw fixing.
- Screws in open, "ready-to-tighten" position.

- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3			Rated operational current in AC-3 up to 400 V	Instantan. auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1) (2)	Weight
220 V	380 V	440/500 V	A			kg
kW	kW	kW				
240 V	415 V	660/690 V		N/O	N/C	

### Screw clamp connections

1.5	2.2	3	6	1	-	LC8-K0610●●	0.480
				-	1	LC8-K0601●●	0.480
2.2	4	4	9	1	-	LC8-K0910●●	0.480
				-	1	LC8-K0901●●	0.480
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC8-K1210●●	0.480
				-	1	LC8-K1201●●	0.480

### Faston connectors 1 x 6.35 or 2 x 2.8

1.5	2.2	3	6	1	-	LC8-K06107●●	0.460
				-	1	LC8-K06017●●	0.460
2.2	4	4	9	1	-	LC8-K09107●●	0.460
				-	1	LC8-K09017●●	0.460
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC8-K12107●●	0.460
				-	1	LC8-K12017●●	0.460

### Solder pins for printed circuit boards

1.5	2.2	3	6	1	-	LC8-K06105●●	0.520
				-	1	LC8-K06015●●	0.520
2.2	4	4	9	1	-	LC8-K09105●●	0.520
				-	1	LC8-K09015●●	0.520
3	5.5	4 (> 440) 5.5 (440)	12	1	-	LC8-K12105●●	0.520
				-	1	LC8-K12015●●	0.520

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

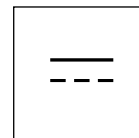
Reversing contactors LC8-K (0.85...1.1 Uc)

Volts ~	24	42	48	110	115	220	230/ 240
50/60 Hz							
Code	B7	D7	E7	F7	FE7	M7	U7

(2) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LA4-KE1UG (130...250 V), see page 2/38.

# Contactors

Reversing contactors for motor control  
6 to 12 A in utilisation category AC-3  
Control circuit: d.c.



## 3-pole reversing contactors



LP2-K0610●●

- Contactor selection according to utilisation category, see pages 1/14 to 1/21.
- Integral mechanical interlock.
- It is essential to link the contacts of the electrical interlock.**
- Pre-wired power circuit connections as standard on screw clamp versions.
- Mounting on 35 mm  $\sim$  or  $\varnothing$  4 mm screw fixing.
- Screws in open "ready-to-tighten" position.

- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3			Rated operational current in AC-3 up to 400 V	Instantan. auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (1) (2)	Weight
220 V	380 V	440/500 V	A			kg
kW	kW	kW				

### Screw clamp connections

1.5	2.2	3	6	1	—		
				—	1	LP2-K0610●●	0.480
						LP2-K0601●●	0.480
2.2	4	4	9	1	—	LP2-K0910●●	0.480
				—	1	LP2-K0901●●	0.480
3	5.5	4 (> 440)	12	1	—	LP2-K1210●●	0.480
		5.5 (440)		—	1	LP2-K1201●●	0.480

### Spring terminal connections

1.5	2.2	3	6	1	—		
				—	1	LP2-K06103●●	0.520
						LP2-K06013●●	0.520
2.2	4	4	9	1	—	LP2-K09105●●	0.520
				—	1	LP2-K09015●●	0.520
3	5.5	4 (> 440)	12	1	—	LP2-K12105●●	0.520
		5.5 (440)		—	1	LP2-K12015●●	0.520

### Faston connectors, 1 x 6.35 or 2 x 2.8

1.5	2.2	3	6	1	—		
				—	1	LP2-K06107●●	0.460
						LP2-K06017●●	0.460
2.2	4	4	9	1	—	LP2-K09107●●	0.460
				—	1	LP2-K09017●●	0.460
3	5.5	4 (> 440)	12	1	—	LP2-K12107●●	0.460
		5.5 (440)		—	1	LP2-K12017●●	0.460

### Solder pins for printed circuit boards

1.5	2.2	3	6	1	—		
				—	1	LP2-K06105●●	0.520
						LP2-K06015●●	0.520
2.2	4	4	9	1	—	LP2-K09105●●	0.520
				—	1	LP2-K09015●●	0.520
3	5.5	4 (> 440)	12	1	—	LP2-K12105●●	0.520
		5.5 (440)		—	1	LP2-K12015●●	0.520

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

Reversing contactors LP2-K (0.8...1.15 Uc)

Volts $\sim$	12	20	24	36	48	60	72	100	110	125	155	174	200	220	230	240	250
Code	JD	ZD	BD	CD	ED	ND	SD	KD	FD	GD	PD	QD	LD	MD	MPD	MUD	UD

Coil with integral suppression device available: add 3 to the code required. Example: JD3.

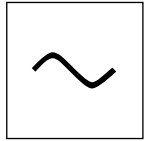
(2) When connecting an electronic sensor or timer in series with the coil of the contactor, select a 20 V coil ( $\sim$  control circuit voltage code Z7,  $\sim$  control circuit voltage code ZD) so as to compensate for the incurred voltage drop.



LP2-K06107●●

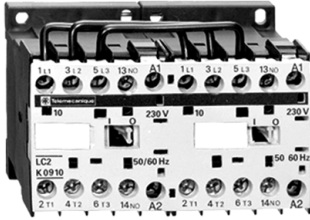
# Contactors

Reversing contactors for control in  
utilisation category AC-1, 20 A  
Control circuit: a.c.



## 3 or 4-pole general purpose reversing contactors (1)

- **Warning:** reversing contactors LC2-K0910●● and LC2-K0901●● are pre-wired for reverse motor operation as standard.
  - Reversing contactor selection according to utilisation category, see pages 1/12 and 1/13.
  - Integral mechanical interlock.
- It is essential to link the contacts of the electrical interlock.**
- Mounting on 35 mm  $\bar{}$  or  $\bar{\varnothing}$  4 mm screw fixing.
  - Screws in open "ready-to-tighten" position.
  - [Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.](#)



LC2-K0910●●

Non inductive loads category AC-1 Maximum current at $\theta \leq 50^\circ\text{C}$	Number of poles	Instantan. auxiliary contacts	Basic reference. Complete with code indicating control circuit voltage (2)	Weight
<b>A</b>				kg

### Screw clamp connections

20	3	-	1	-	LC2-K0910●●	0.390
					or LC2-K1210●●	0.390
3	-	-	-	1	LC2-K0901●●	0.390
					or LC2-K1201●●	0.390
4	-	-	-	-	LC2-K09004●●	0.380
					or LC2-K12004●●	0.380

### Spring terminal connections

20	3	-	1	-	LC2-K09103●●	0.390
					or LC2-K12103●●	0.390
3	-	-	-	1	LC2-K09013●●	0.390
					or LC2-K12013●●	0.390
4	-	-	-	-	LC2-K090043●●	0.380
					or LC2-K120043●●	0.380

(1) Choice between 9 and 12 A depends on number of operating cycles, see AC-1 curve on page 1/12.

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

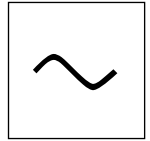
**Reversing contactors LC2-K (0.8...1.15 Uc) (0.85...1.1 Uc)**

Volts $\sim$ 50/60 Hz	20	24(3)	36	42	48	110	115	120	127	200/208	220/230	230/240	256	277	380/400	400		
Code	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7	W7	UE7	Q7	V7
Volts $\sim$ 50/60 Hz	400/415			440		480		500		575		600	660/690					
Code	N7		R7		T7		S7		SC7		X7		Y7					

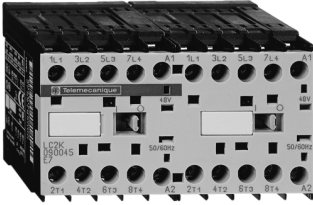
Up to and including 240 V, coil with integral suppression device available: add **2** to the code required. Example: **J72**  
(3) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LA4-KE1UG (130...250 V), see page 2/38.

# Contactors

Reversing contactors for control in  
utilisation category AC-1, 20 A  
Control circuit: a.c.



## 3 or 4-pole general purpose reversing contactors (1)



LC2-K090045●●

- **Warning:** reversing contactors LC2-K0910●● and LC2-K0901●● are pre-wired for reverse motor operation as standard.
- Reversing contactor selection according to utilisation category, see pages 1/12 and 1/13.
- Integral mechanical interlock.
- It is essential to link the contacts of the electrical interlock.**
- Mounting on 35 mm  $\bar{\text{C}}$  or  $\bar{\text{D}}$  4 mm screw fixing.
- Screws in open "ready-to-tighten" position.
- **Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.**

Non inductive loads category AC-1 Maximum current at $\theta \leq 50^\circ\text{C}$ <b>A</b>	Number of poles 	Instantan. auxiliary contacts 	Basic reference. Complete with code indicating control circuit voltage (2)	Weight kg
----------------------------------------------------------------------------------------------------	---------------------	-----------------------------------	----------------------------------------------------------------------------	--------------

### Faston connectors, 1 x 6.35 or 2 x 2.8

20	3	-	1	-	LC2-K09107●●	0.370
					or LC2-K12107●●	0.370
	3	-	-	1	LC2-K09017●●	0.370
					or LC2-K12017●●	0.370
	4	-	-	-	LC2-K090047●●	0.370
					or LC2-K120047●●	0.370

### Solder pins for printed circuit boards

20	3	-	1	-	LC2-K09105●●	0.430
					or LC2-K12105●●	0.430
	3	-	-	1	LC2-K09015●●	0.430
					or LC2-K12015●●	0.430
	4	-	-	-	LC2-K090045●●	0.430
					or LC2-K120045●●	0.430

(1) Choice between 9 and 12 A depends on number of operating cycles, see AC-1 curve on page 1/12.

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

**Reversing contactors LC2-K (0.8...1.15 U<sub>c</sub>) (0.85...1.1 U<sub>c</sub>)**

Volts $\sim$	12	20	24(3)	36	42	48	110	115	120	127	200/ 208	220/ 230	230/ 240	230/ 256	277	380/ 400	400	
50/60 Hz																		
Code	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7	W7	UE7	Q7	V7
Volts $\sim$		400/		440		480		500		575		600		660/				
50/60 Hz		415												690				
Code		N7		R7		T7		S7		SC7		X7		Y7				

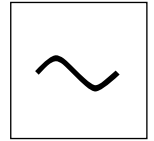
Up to and including 240 V, coil with integral suppression device available: add 2 to the code required. Example: **J72**

(3) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LA4-KE1UG (130...250 V), see page 2/38.



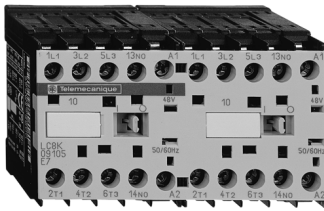
# Contactors

Reversing contactors for control in utilisation category AC-1, 20 A  
Control circuit: a.c.



## 3 or 4-pole reversing contactors for use in sensitive environments (1)

Recommended for use in areas sensitive to noise, high interference mains supplies, etc.



LC8-K09105●●

- **Warning:** reversing contactors LC2-K0910●● and LC2-K0901●● are pre-wired for reverse motor operation as standard.

- Reversing contactor selection according to utilisation category, see pages 1/12 and 1/13.



- Integral mechanical interlock.

**It is essential to link the contacts of the electrical interlock.**

- Mounting on 35 mm  $\bar{\text{U}}$  or  $\bar{\text{O}}$  4 mm screw fixing.

- Screws in open "ready-to-tighten" position.

- Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.

Non inductive loads category AC-1 Maximum current at $\theta \leq 50^\circ\text{C}$ A	Number of poles 	Instantan. auxiliary contacts 	Basic reference. Complete with code indicating control circuit voltage (2) (3)	Weight kg
		N/O N/C		

### Screw clamp connections

20	3	-	1	-	LC8-K0910●●	0.480
					or LC8-K1210●●	0.480
	3	-	-	1	LC8-K0901●●	0.480
					or LC8-K1201●●	0.480
	4	-	-	-	LC8-K09004●●	0.470
					or LC8-K12004●●	0.470

### Faston connectors, 1 x 6.35 or 2 x 2.8

20	3	-	1	-	LC8-K09107●●	0.460
					or LC8-K12107●●	0.460
	3	-	-	1	LC8-K09017●●	0.460
					or LC8-K12017●●	0.460
	4	-	-	-	LC8-K090047●●	0.460
					or LC8-K120047●●	0.460

### Solder pins for printed circuit boards

20	3	-	1	-	LC8-K09105●●	0.520
					or LC8-K12105●●	0.520
	3	-	-	1	LC8-K09015●●	0.520
					or LC8-K12015●●	0.520
	4	-	-	-	LC8-K090045●●	0.520
					or LC8-K120045●●	0.520

(1) Choice between 9 and 12 A depends on number of operating cycles, see AC-1 curve on page 1/12.

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

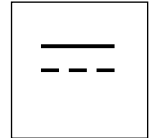
**Reversing contactors LC8-K (0.85...1.1 Uc):** coil with integral rectifier and suppression device as standard.

Volts $\sim$	24	42	48	110	115	220	230/ 240
50/60 Hz							
Code	B7	D7	E7	F7	FE7	M7	U7

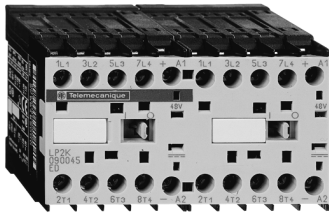
(3) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4-KE1FC (50...129 V) or LA4-KE1UG (130...250 V), see page 2/38.

# Contactors

Reversing contactors for control in utilisation category AC-1, 20 A  
Control circuit: d.c.



## 3 or 4-pole reversing contactors (1)



LP2-K090045

- **Warning:** reversing contactors LP2-K0910 and LP2-K0901 are pre-wired for reverse motor operation as standard.
- Reversing contactor selection according to utilisation category, see pages 1/12 and 1/13.
- Integral mechanical interlock.
- **It is essential to link the contacts of the electrical interlock.**
- Mounting on 35 mm  $\sim$  or  $\varnothing$  4 mm screw fixing.
- Screws in open "ready-to-tighten" position.
- **Auxiliary contact blocks and accessories, see pages 2/36 to 2/39.**

Non inductive loads category AC-1 Maximum current at $\theta \leq 50^\circ\text{C}$ <b>A</b>	Number of poles 	Instantan. auxiliary contacts 	Basic reference. Complete with code indicating control circuit voltage (2) (3)	Weight kg
----------------------------------------------------------------------------------------------------	---------------------	-----------------------------------	--------------------------------------------------------------------------------	--------------

### Screw clamp connections

20	3	-	1	-	LP2-K0910 or LP2-K1210	0.480 0.480
	3	-	-	1	LP2-K0901 or LP2-K1201	0.480 0.480
	4	-	-	-	LP2-K09004 or LP2-K12004	0.480 0.480

### Spring terminal connections

20	3	-	1	-	LP2-K09103 or LP2-K12103	0.480 0.480
	3	-	-	1	LP2-K09013 or LP2-K12013	0.480 0.480
	4	-	-	-	LP2-K090043 or LP2-K120043	0.480 0.480

### Faston connectors, 1 x 6.35 or 2 x 2.8

20	3	-	1	-	LP2-K09107 or LP2-K12107	0.460 0.460
	3	-	-	1	LP2-K09017 or LP2-K12017	0.460 0.460
	4	-	-	-	LP2-K090047 or LP2-K120047	0.460 0.460

### Solder pins for printed circuit boards

20	3	-	1	-	LP2-K09105 or LP2-K12105	0.520 0.520
	3	-	-	1	LP2-K09015 or LP2-K12015	0.520 0.520
	4	-	-	-	LP2-K090045 or LP2-K120045	0.520 0.520

(1) Choice between 9 and 12 A depends on number of operating cycles, see AC-1 curve on page 1/12.

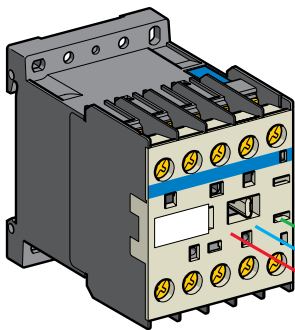
(2) Standard control circuit voltages (for other voltages, please call our Customer information centre on 0870 608 8 608).

### Reversing contactors LP2-K (0.8...1.15 Uc)

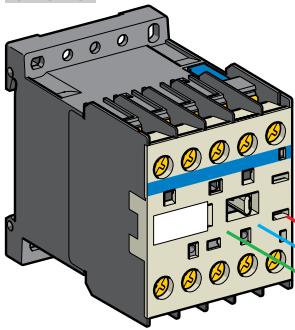
Volts $\sim$	12	20	24(3)	36	48	60	72	100	110	125	155	174	200	220	230	240	250
Code	JD	ZD	BD	CD	ED	ND	SD	KD	FD	GD	PD	QD	LD	MD	MPD	MUD	UD

Coil with suppression device available: add 3 to the code required. Example: **JD3**

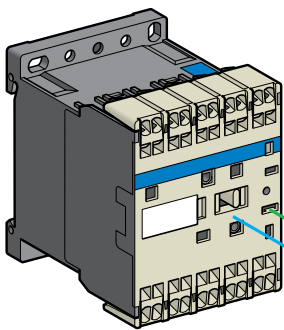
(3) When connecting an electronic sensor or timer in series with the coil of the contactor, select a 20 V coil ( $\sim$  control circuit voltage code Z7,  $\sim$  control circuit voltage code ZD) in order to compensate for the incurred voltage drop



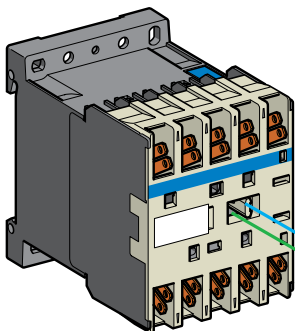
LC1, LC7, LP1-K



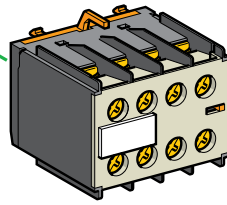
LC1, LC7, LP1-K



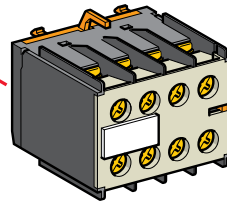
LC1, LP1-K



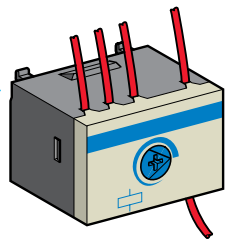
LC1, LC7, LP1-K



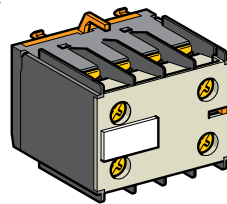
LA1-KN●●M



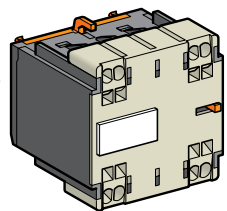
LA1-KN●●



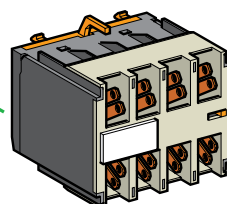
LA2-KT2●



LA1-KN●●P



LA1-KN●●3



LA1-KN●●7




# Contactors

Contactors and reversing contactors, types LC●-K and LP●-K  
Instantaneous and time delay auxiliary contacts

## Instantaneous auxiliary contact blocks

### Recommended for standard applications. Clip-on front mounting, 1 block per contactor

Type of connection	For use with contactors	Composition	Reference	Weight
				
		N/O N/C		kg
<b>Screw clamp</b>	LC1, LC2	2 –	LA1-KN20	0.045
	LC7, LC8	– 2	LA1-KN02	0.045
	LP1, LP2	1 1	LA1-KN11	0.045
	3 or 4-pole	4 –	LA1-KN40	0.045
		3 1	LA1-KN31	0.045
		2 2	LA1-KN22	0.045
		1 3	LA1-KN13	0.045
	– 4	LA1-KN04	0.045	
<b>Spring terminal</b>	LC1, LC2,	2 –	LA1-KN203	0.045
	LP1, LP2	– 2	LA1-KN023	0.045
	3 or 4-pole	1 1	LA1-KN113	0.045
		4 –	LA1-KN403	0.045
		3 1	LA1-KN313	0.045
		2 2	LA1-KN223	0.045
		1 3	LA1-KN133	0.045
		– 4	LA1-KN043	0.045
<b>Faston</b> 1 x 6.35 or 2 x 2.8	LC1, LC2	2 –	LA1-KN207	0.045
	LC7, LC8	– 2	LA1-KN027	0.045
	LP1, LP2	1 1	LA1-KN117	0.045
	3 or 4-pole	4 –	LA1-KN407	0.045
		3 1	LA1-KN317	0.045
		2 2	LA1-KN227	0.045
		1 3	LA1-KN137	0.045
	– 4	LA1-KN047	0.045	


### With terminal referencing conforming to standard EN 50012. Clip-on front mounting, 1 block per contactor

<b>Screw clamp with terminal referencing conforming to standard EN 50012</b>	LC1, LC2	– 2	LA1-KN02M	0.045
	LC7, LC8	1 1	LA1-KN11M	0.045
	LP1, LP2	3 1	LA1-KN31M	0.045
	3-pole + N/O	2 2	LA1-KN22M	0.045
		1 3	LA1-KN13M	0.045
	LC1, LC2	1 1	LA1-KN11P	0.045
	LC7, LC8			
	LP1, LP2			
	4-pole	2 2	LA1-KN22P	0.045

## Electronic time delay auxiliary contact blocks

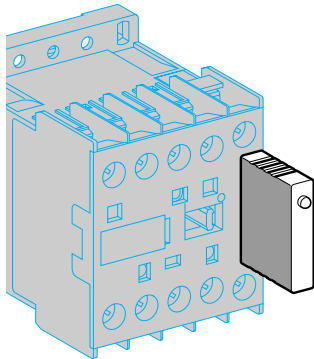
- Relay output, with common point changeover contact, ~ or ≡ 240 V, 2 A maximum.
- Control voltage: 0.85...1.1 Uc.
- Maximum switching capacity: 250 VA or 150 W.
- Operating temperature: -10...+ 60 °C.
- Reset time: 1.5 s during the time delay period, 0.5 s after the time delay period.

### Clip-on front mounting, 1 block per contactor

Voltage	Type	Timing range	Composition	Reference	Weight
					
V		s	C/O		kg
~ or ≡ 24...48	On-delay	1...30	1	LA2-KT2E	0.040
~ 110...240	On-delay	1...30	1	LA2-KT2U	0.040

# Contactors

Contactors and reversing contactors, types LC●-K and LP●-K  
Suppressor modules incorporating LED indicator



LA4-K●●●

Mounting and connection	Type	For voltages:	Sold in lots of	Unit reference	Weight kg
<b>Clip-on fixing on the front of contactors LC1 and LP1, with locating device. No tools required.</b>	Varistor (1)	~ and --- 12...24 V	5	<b>LA4-KE1B</b>	0.010
		~ and --- 32...48 V	5	<b>LA4-KE1E</b>	0.010
		~ and --- 50...129 V	5	<b>LA4-KE1FC</b>	0.010
		~ and --- 201...250 V	5	<b>LA4-KE1UG</b>	0.010
	Diode + Zener diode (2)	--- 12...24 V	5	<b>LA4-KC1B</b>	0.010
		--- 32...48 V	5	<b>LA4-KC1E</b>	0.010
	RC (3)	~ 220...250 V	5	<b>LA4-KA1U</b>	0.010

(1) Protection by limitation of the transient voltage up to 2 U<sub>c</sub> maximum.  
Maximum reduction of transient voltage peaks.

Slight time delay on drop-out (1.1 to 1.5 times the normal time).

(2) No overvoltage or oscillation frequency.

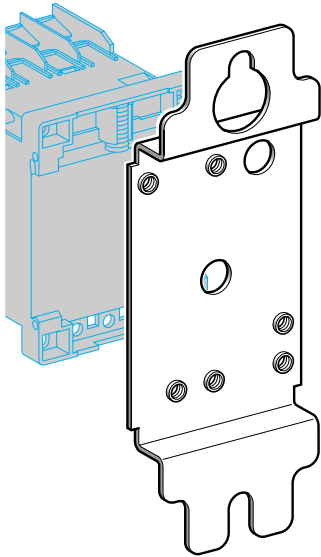
Polarised component.

Slight time delay on drop-out (1.1 to 1.5 times the normal time).

(3) Protection by limitation of the transient voltage up to 3 U<sub>c</sub> maximum and limitation of the oscillation frequency.  
Slight time delay on drop-out (1.2 to 2 times the normal time).

# Contactors

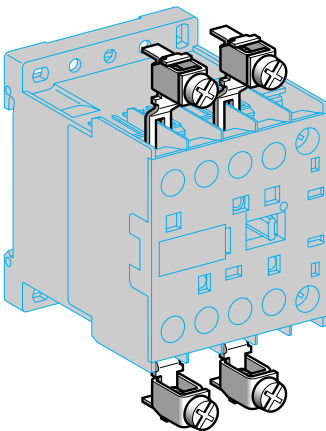
Contactors and reversing contactors, types LC●-K and LP●-K  
Accessories



DX1-AP25

## Mounting and marking accessories

Description	Application		Sold in lots of	Unit reference	Weight kg
<b>Mounting plates (1)</b>	For fixing on 1 □ rail	Clip-on	1	<b>LA9-D973</b>	0.025
	For fixing on 2 □ rails	110/120 mm fixing centres	1	<b>DX1-AP25</b>	0.065
<b>Marker holder</b>	Clip-on	Onto front of contactor	100	<b>LA9-D90</b>	0.001
<b>Clip-in markers</b>	4 maximum per contactor	Strips of 10 identical numbers 0...9	25	<b>AB1-R● (2)</b>	0.002
		Strips of 10 identical capital letters A...Z	25	<b>AB1-G● (2)</b>	0.002



LA9-E01

## Cabling accessories

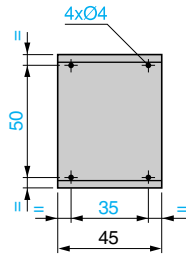
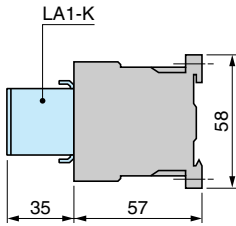
Description	Application		Sold in lots of	Unit reference	Weight kg
<b>Paralleling links</b>	For 2 poles	With screw clamp terminals	4	<b>LA9-E01</b>	0.010
	For 4 poles	With screw clamp terminals	2	<b>LA9-E02</b>	0.015
<b>Set of 6 power connections</b>	For 3-pole reversing contactors for motor control	For contactors with screw clamp terminals	100	<b>LA9-K0969</b>	0.010
<b>Set of 4 power connections</b>	For 4-pole changeover contactor pairs	For contactors with screw clamp terminals	100	<b>LA9-K0970</b>	0.010

(1) Order 1 mounting plate for fixing a contactor and 2 mounting plates for fixing a reversing contactor.  
(2) Complete the reference by replacing the ● with the required character.

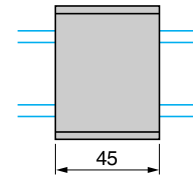
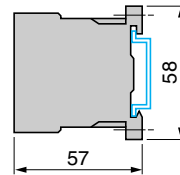
## Contactors

### LC1-K, LC7-K, LP1-K

On panel

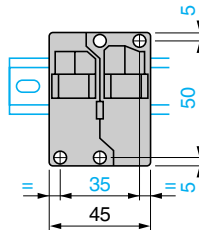
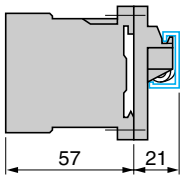


On mounting rail AM1-DP200 or AM1 DE200 (L<sub>r</sub> 35 mm)

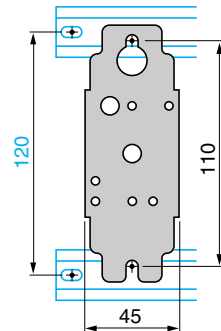
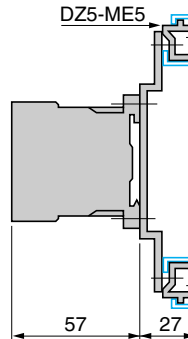


2

On one asymmetrical rail DZ5-MB with clip-on mounting plate LA9-D973

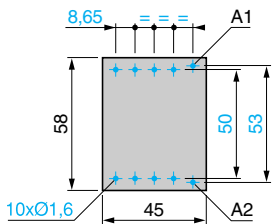


### DX1-AP25

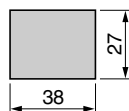
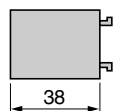


2.2

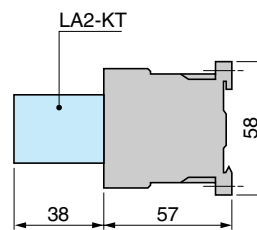
On printed circuit board



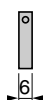
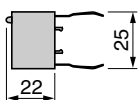
### Electronic time delay auxiliary contact blocks LA2-KT



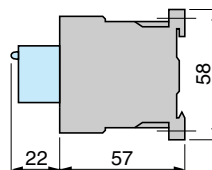
On contactor



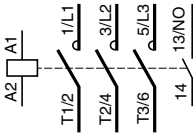
### Suppressor modules LA4-K●



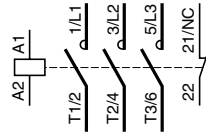
On contactor



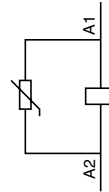
**3-pole contactors**  
LC1-K, LC7-K, LP1-K  
3 P + N/O



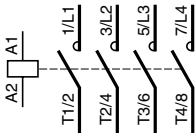
3 P + N/C



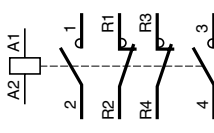
**Integral suppression device**  
LC7-K



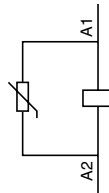
**4-pole contactors, 9 A**  
LC1-K, LC7-K, LP1-K  
4 P



2 P N/O + 2 P N/C

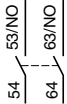


**Integral coil suppression device**  
LC7-K



**Instantaneous auxiliary contacts LA1-K**  
For contactors LC●-K and LP●-K

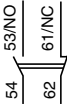
2 N/O  
LA1-KN20  
LA1-KN207



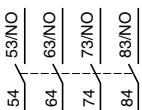
2 N/C  
LA1-KN02  
LA1-KN027



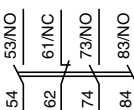
1 N/O + 1 N/C  
LA1-KN11  
LA1-KN117



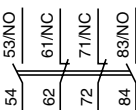
4 N/O  
LA1-KN40  
LA1-KN407



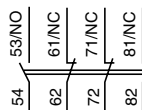
3 N/O + 1 N/C  
LA1-KN31  
LA1-KN317



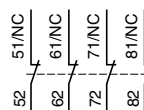
2 N/O + 2 N/C  
LA1-KN22  
LA1-KN227



1 N/O + 3 N/C  
LA1-KN13  
LA1-KN137



4 N/C  
LA1-KN04  
LA1-KN047

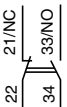


**Terminal referencing conforming to standard EN 50012**  
For 3-pole contactors

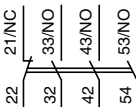
2 N/C  
LA1-KN02M



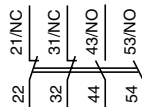
1 N/O + 1 N/C  
LA1-KN11M



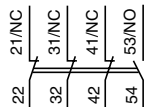
3 N/O + 1 N/C  
LA1-KN31M



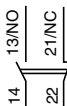
2 N/O + 2 N/C  
LA1-KN22M



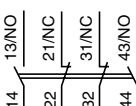
1 N/O + 3 N/C  
LA1-KN13M



**For 4-pole contactors**  
1 N/O + 1 N/C  
LA1-KN11P

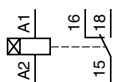


2 N/O + 2 N/C  
LA1-KN22P

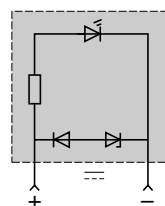


**Electronic time delay auxiliary contact blocks**  
LA2-KT

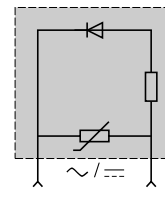
For contactors LC●-K and LP●-K  
1 C/O



**Suppressor modules**  
LA4-KC



LA4-KE



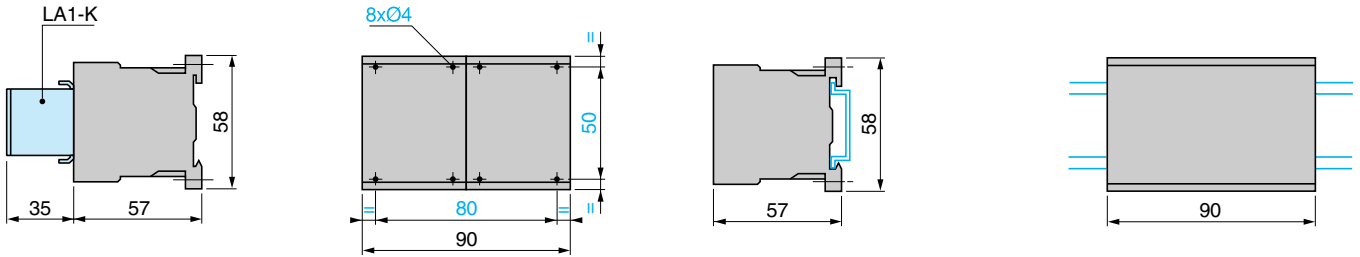


**Reversing contactors**

LC2-K, LC8-K, LP2-K

On panel

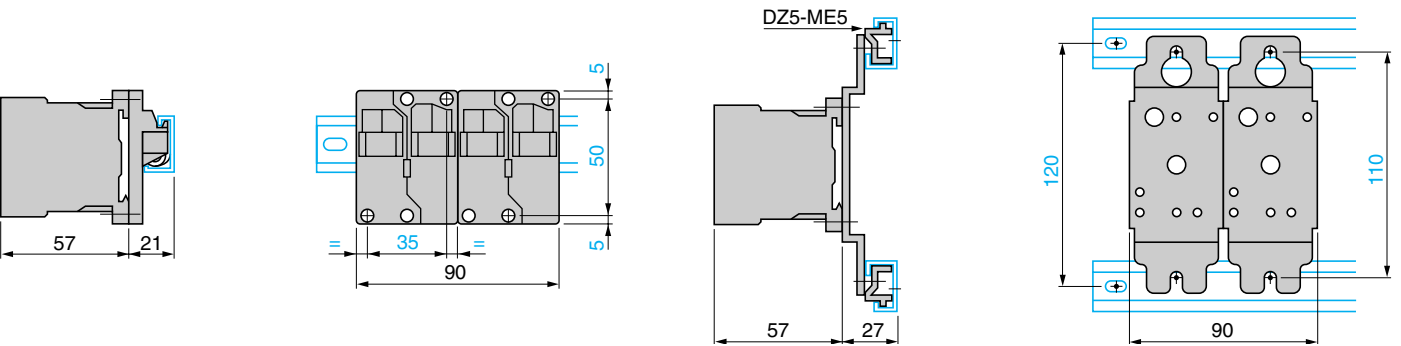
On mounting rail AM1-DP200 or AM1-DE200 (  $\pm$  35 mm)



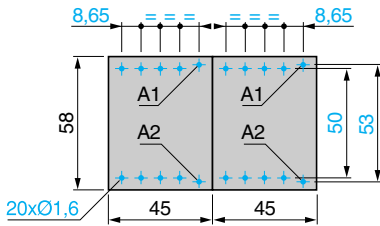
On one asymmetrical rail DZ5-MB with 2 clip-on mounting plates LA9-D973 or on 2 mounting plates DX1-AP25.

2 x LA9-D973

2 x DX1-AP25



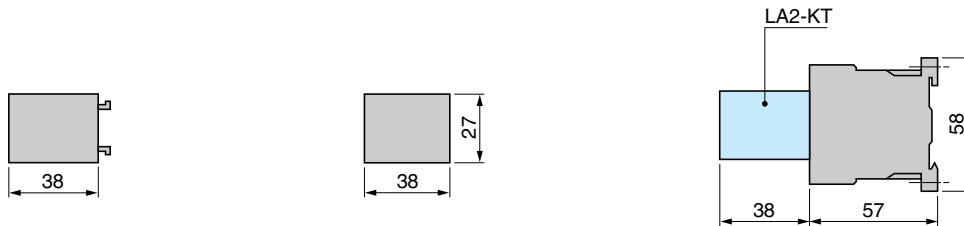
On printed circuit board for reversing contactors or 2 contactors mounted side by side



**Electronic time delay contact blocks**

LA2-KT

On reversing contactors



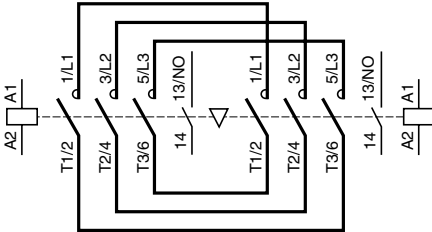
**Suppressor modules**

LA4-K●

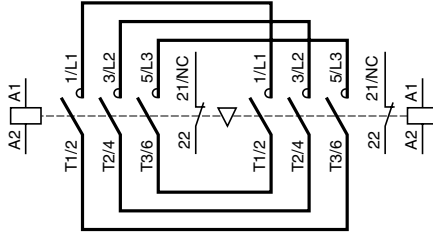
On reversing contactors



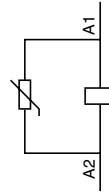
**3-pole reversing contactors**  
**LC2-K, LC8-K, LP2-K**  
 With screw clamp terminals  
 3 P + N/O



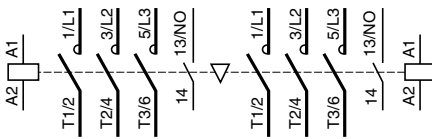
3 P + N/C



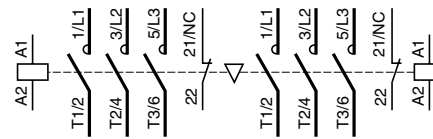
**Integral suppression device**  
**LC8-K**



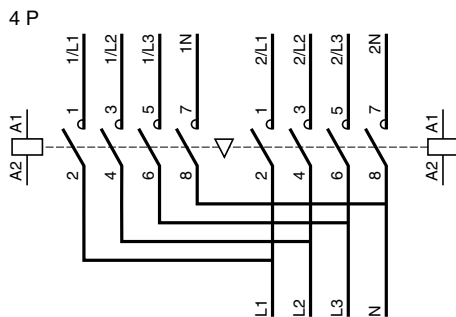
**With Faston connectors or solder pins (printed circuit board)**  
 3 P + N/O



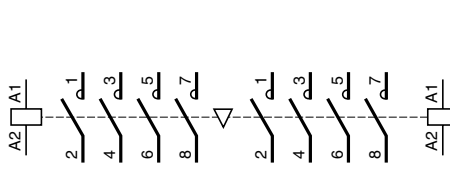
3 P + N/C



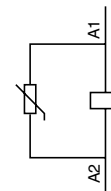
**4-pole reversing contactors**  
**LC2-K, LC8-K, LP2-K**  
 With screw clamp terminals  
 4 P



**With Faston connectors or solder pins (printed circuit board)**  
 4 P

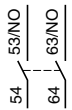


**Integral suppression device**  
**LC8-K**



**Instantaneous auxiliary contact blocks LA1-K**  
 For contactors LC●-K and LP2-K

2 N/O  
**LA1-KN20**  
**LA1-KN207**



2 N/C  
**LA1-KN02**  
**LA1-KN027**



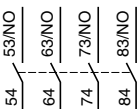
1 N/O + 1 N/C  
**LA1-KN11**  
**LA1-KN117**



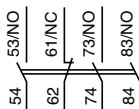
Terminal referencing conforming to standard EN 50012  
 1 N/O + 1 N/C  
**LA1-KN11P**

**For contactors LC●-K, LP2-K**

4 N/O  
**LA1-KN40**  
**LA1-KN407**



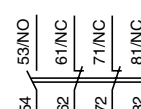
3 N/O + 1 N/C  
**LA1-KN31**  
**LA1-KN317**



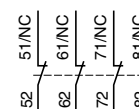
2 N/O + 2 N/C  
**LA1-KN22**  
**LA1-KN227**



1 N/O + 3 N/C  
**LA1-KN13**  
**LA1-KN137**



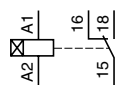
4 N/C  
**LA1-KN04**  
**LA1-KN047**



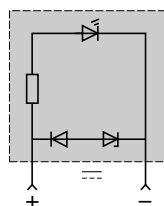
Auxiliary contacts with terminal referencing conforming to standard EN 50012 see page 2/41

**Electronic time delay contact blocks**

**LA2-KT**  
 For contactors LC●-K and LP●-K  
 1 C/O



**Suppressor modules**  
**LA4-KC**



**LA4-KE**

