

TeSys SK, K Relays	
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Control
relays

FONLEE
豐立自動控制器材有限公司
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Mini control relays

- Width of mini control relays 27 mm.
- Mounting on 35 mm rail.
- Connection by connectors.

Control circuit supply	Auxiliary contacts		Basic reference, to be completed by adding the voltage code ⁽¹⁾
a.c. supply			
	2	–	CA2SK20●●
d.c. supply			
	1	1	CA2SK11●●
d.c. supply			
	2	–	CA3SK20●●
d.c. supply			
	1	1	CA3SK11●●

Mini control relay with alternating contacts

This mini control relay with alternating contacts (see function diagram page B7/17) makes it possible to automatically split the operating time between 2 circuits of a redundant system. By regularly energising the “safety circuits”, this device makes it possible to ensure that they are operating correctly.

- Width of mini control relay 45 mm.
- Fixing by Ø4 screws.
- Connection by connectors.
- Cannot be fitted with front-mounted auxiliary contact block.
- Cannot be fitted with coil suppressor module.

Control circuit supply	Auxiliary contacts		Basic reference, to be completed by adding the voltage code ⁽¹⁾
a.c. supply			
	2	–	CA2SKE20●●

(1) Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Mini control relays CA2SK and CA2SKE									
Volts ~ 50/60 Hz	24	48	110	120	220	230	240	380	400
Code	B7	E7	F7	G7	M7	P7	U7	Q7	V7
Mini control relays CA3SK									
Volts —	12	24	36	48	72				
Code	JD	BD	CD	ED	SD				

TeSys Control

SK, SKE Mini control relays - Contact block - Suppressor

Product references



LA1SK●●

Instantaneous auxiliary contact blocks				
Clip-on front mounting				
For use on control relays	Maximum number of blocks per contactor	Composition		Reference
CA2SK20	1			
		2	–	LA1SK20
		–	2	LA1SK02
		1	1	LA1SK11



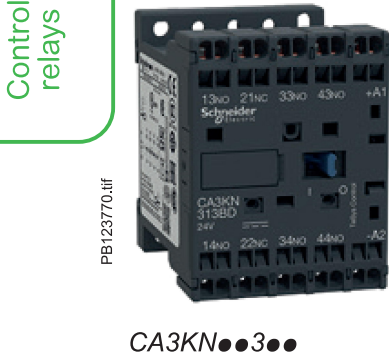
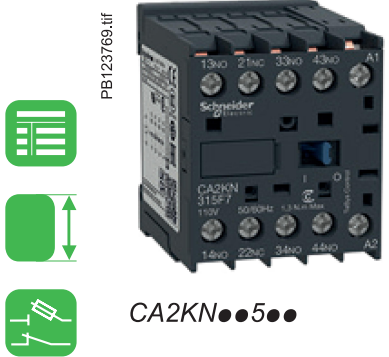
LA4SK●1●

Suppressor modules				
Connection without need for tools by clipping onto right-hand side of contactor				
For use on control relays	Type	For voltages	Sold in lots of	Unit reference
CA2SK and CA3SK	Varistor (1)	~ and ≡ 24 V...48 V	10	LA4SKE1E
		~ and ≡ 110 V...250 V	10	LA4SKE1U
	Diode (2)	≡ 24 V...250 V	10	LA4SKC1U

- (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).



Control relays



Control relays for a.c. control circuit

- Mounting on 35 mm rail or Ø4 screw fixing.
- Screws in the open “ready-to-tighten” position.

Control circuit Consumption	Auxiliary contacts	Basic reference, to be completed by adding the voltage code ⁽¹⁾

Screw clamp connections		
4.5 VA	4 –	CA2KN40●●
	3 1	CA2KN31●●
	2 2	CA2KN22●●

Spring terminal connections		
4.5 VA	4 –	CA2KN403●●
	3 1	CA2KN313●●
	2 2	CA2KN223●●

Faston connectors, 1 x 6.35 or 2 x 2.8		
4.5 VA	4 –	CA2KN407●●
	3 1	CA2KN317●●
	2 2	CA2KN227●●

Solder pins for printed circuit boards		
4.5 VA	4 –	CA2KN405●●
	3 1	CA2KN315●●
	2 2	CA2KN225●●

Control relays for d.c. control circuit

- Mounting on 35 mm rail or Ø4 screw fixing.
- Screws in the open “ready-to-tighten” position.

Screw clamp connections		
3 W	4 –	CA3KN40●●
	3 1	CA3KN31●●
	2 2	CA3KN22●●

Spring terminal connections		
3 W	4 –	CA3KN403●●
	3 1	CA3KN313●●
	2 2	CA3KN223●●

Solder pins for printed circuit boards		
3 W	4 –	CA3KN405●●
	3 1	CA3KN315●●
	2 2	CA3KN225●●

(1) Please check the availability of your variant in the index page B7/12. The SEARCH function of your viewer can be used.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Control relays CA2K (0.8...1.15 Uc) (0.85...1.1 Uc)																		
Volts ~	12	20	24 ⁽²⁾	36	42	48	110	115	127	220/230	230	230/240	380/400	400	400/415	440	500	660/690
50/60 Hz																		
Code	J7	Z7	B7	C7	D7	E7	F7	FE7	FC7	M7	P7	U7	Q7	V7	N7	R7	S7	Y7

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

Control relays CA3K (0.8...1.15 Uc)															
Volts ⎓	12	20	24 ⁽²⁾	36	48	60	72	100	110	125	200	220	230	240	250
Code	JD	ZD	BD	CD	ED	ND	SD	KD	FD	GD	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 control relay, select a 20 V coil (~ code Z7, ⎓ code ZD) so as to compensate for the incurred voltage drop.

PB123771.eps



CA4KN40●●●

Low consumption control relays d.c. control circuit

- Mounting on 35 mm rail or Ø4 screw fixing.
- Screws in the open “ready-to-tighten” position.

Control circuit Consumption	Auxiliary contacts	Basic reference, to be completed by adding the voltage code ⁽¹⁾

Screw clamp connections

1.8 W	4	—	CA4KN40●●
	3	1	CA4KN31●●
	2	2	CA4KN22●●

Spring terminal connections

1.8 W	4	—	CA4KN403●●
	3	1	CA4KN313●●
	2	2	CA4KN223●●

Faston connectors, 1 x 6.35 or 2 x 2.8

1.8 W	4	—	CA4KN407●●
	3	1	CA4KN317●●
	2	2	CA4KN227●●

Solder pins for printed circuit boards

1.8 W	4	—	CA4KN405●●
	3	1	CA4KN315●●
	2	2	CA4KN225●●

(1) Please check the availability of your variant in the index page B7/12. The SEARCH function of your viewer can be used.
Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):
Control relays CA4K (Wide range coil: 0.7...1.3 U_c)

Volts	12	20	24	48	72	110	120
Code	JW3	ZW3	BW3	EW3	SW3	FW3	GW3

Coil with integral suppression device fitted as standard, by bi-directional peak limiting diode.



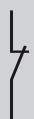
Control
relays

TeSys Control

K Contact blocks - Time delays

Product references



Instantaneous auxiliary contact blocks			
Clip-on front mounting, 1 per control relay			
Connection	Composition		Reference
			
Screw clamp terminals	2	—	LA1KN20
	—	2	LA1KN02
	1	1	LA1KN11
	4	—	LA1KN40 ⁽¹⁾
	3	1	LA1KN31 ⁽¹⁾
	2	2	LA1KN22 ⁽¹⁾
	1	3	LA1KN13 ⁽¹⁾
	—	4	LA1KN04 ⁽¹⁾
Spring terminals	2	—	LA1KN203
	—	2	LA1KN023
	1	1	LA1KN113
	4	—	LA1KN403 ⁽¹⁾
	3	1	LA1KN313 ⁽¹⁾
	2	2	LA1KN223 ⁽¹⁾
	1	3	LA1KN133 ⁽¹⁾
	—	4	LA1KN043 ⁽¹⁾
Faston connectors 1 x 6.35 or 2 x 2.8	2	—	LA1KN207
	4	—	LA1KN407 ⁽¹⁾
	3	1	LA1KN317 ⁽¹⁾

Electronic time delay contact blocks				
■ Relay output with common point changeover contact, ~ or — 240 V, 2 A maximum ■ Control voltage 0.85...1.1 U_c ■ 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 per control relay				
Voltage	Type	Timing range	Composition	Reference
				
V		s		
~ or — 24...48	On-delay	1...30	1	LA2KT2E
~ 110...240	On-delay	1...30	1	LA2KT2U

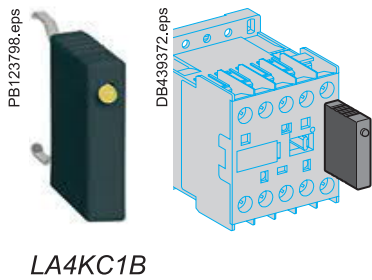
Other versions	Electronic timers type RE4. Please consult your Regional Sales Office.
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⁽¹⁾ Block of 4 contacts for use on CA2K and CA3K.
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TeSys Control

K Accessories

Product references



Suppressor modules incorporating LED indicator

Mounting and connection	Type	For voltages	Sold in lots of	Unit reference
Clips onto front of relay with locating device. No tools required.	Varistor ⁽¹⁾	~ and --- 12...24 V	5	LA4KE1B
		~ and --- 32...48 V	5	LA4KE1E
		~ and --- 50...129 V	5	LA4KE1FC
		~ and --- 130...250 V	5	LA4KE1UG
	Diode + Zener diode ⁽²⁾	--- 12...24 V	5	LA4KC1B
		--- 32...48 V	5	LA4KC1E
	RC ⁽³⁾	~ 110...250 V	5	LA4KA1U

Mounting accessories

Description	Application		Sold in lots of	Unit reference
Mounting plates	On 2 □ rails	110/120 mm fixing centres	10	DX1AP25

Marking accessories

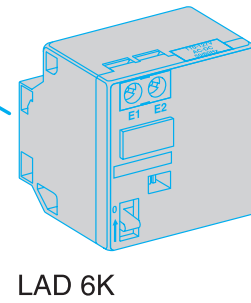
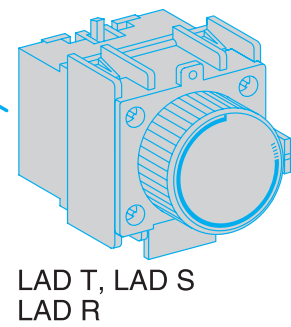
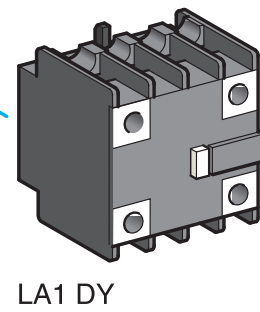
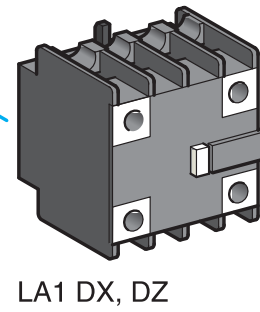
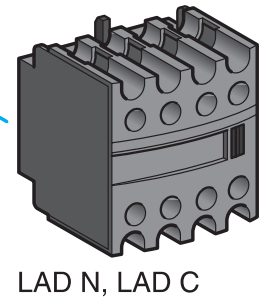
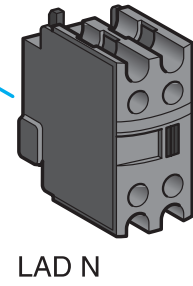
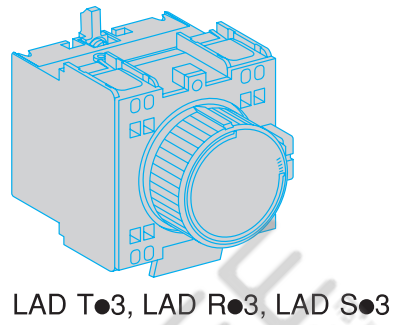
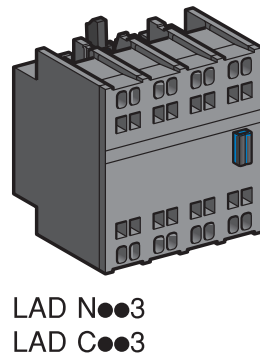
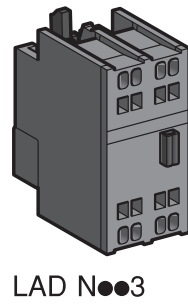
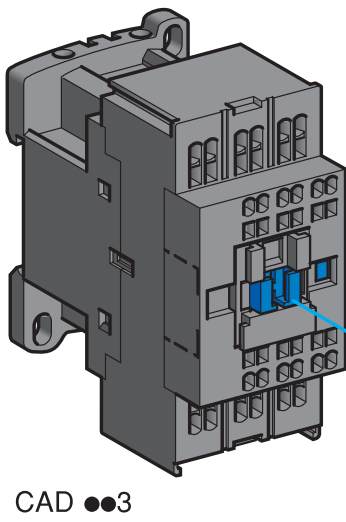
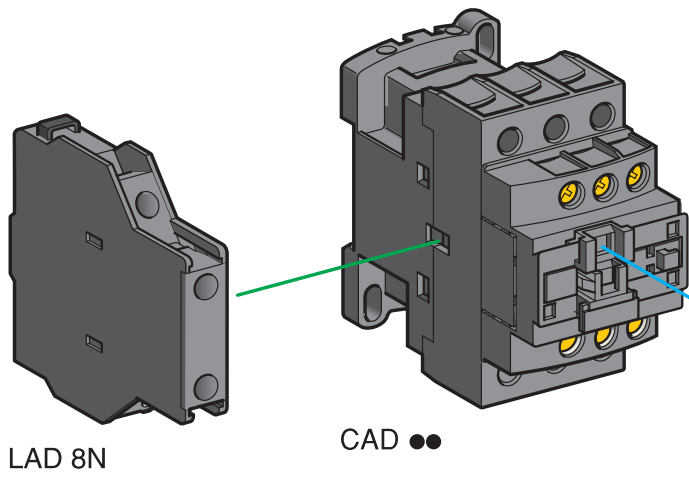
Description	Application		Sold in lots of	Unit reference
Marker holder	Clip-on fixing on front face	—	100	LA9D90
Clip-in markers	4 maximum per relay	Strips of 10 identical numbers 0 to 9	25	AB1R● ⁽⁴⁾
		Strips of 10 identical capital letters A to Z	25	AB1G● ⁽⁴⁾



- (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.
Polarised component.
Slight increase in drop-out time (1.1 to 1.5 times the normal time).
- (3) Protection by limiting the transient voltage to 3 Uc max. and limitation of the oscillating frequency.
Slight increase in drop-out time (1.2 to 2 times the normal time).
- (4) Complete the reference by replacing the dot with the required character.



Control
relays



Control
relays

See page opposite for mounting possibilities
according to control relay type and rating

TeSys Control

Deca Control relays

Product references

PB121687.eps



CAD50●●

PB121688.eps



CAD503●●

PB121689.eps



LADN22

PB123800.eps



LA1DY20

Control relays for connection by screw clamp terminals

Type	Number of contacts	Composition		Basic reference, to be completed by adding the control voltage code ⁽¹⁾
Instantaneous	5	5	—	CAD50●● ⁽³⁾
		3	2	CAD32●● ⁽³⁾

Control relays for connection by spring terminals

Instantaneous	5	5	—	CAD503●●
		3	2	CAD323●●

Instantaneous auxiliary contact blocks for connection by screw clamp terminals

For use in normal operating environments

Number of contacts	Maximum number per relay		Composition		Reference
	Clip-on mounting front	side			
2	1	—	1	1	LADN11
	—	1 on LH side	1	1	LAD8N11 ⁽⁶⁾
	1	—	2	—	LADN20
	—	1 on LH side	2	—	LAD8N20 ⁽⁶⁾
	1	—	—	2	LADN02
	—	1 on LH side	—	2	LAD8N02 ⁽⁶⁾
4 ⁽⁴⁾	1	—	2	2	LADN22
			1	3	LADN13
			4	—	LADN40
			—	4	LADN04
			3	1	LADN31
			2	2	LADC22

Including 1 N/O and 1 N/C make before break.

With dust and damp protected contacts, for use in particularly harsh industrial environments

Number of contacts	Maximum number per relay	Composition		Reference
	Front mounting	protected ⁽⁵⁾	not protected	
2	1	2 — —	— —	LA1DX20
		— 2 —	— —	LA1DX02
		2 — 2	— —	LA1DY20 ⁽⁸⁾
4 ⁽⁴⁾	1	2 — —	2 —	LA1DZ40
		2 — —	1 1	LA1DZ31

Instantaneous auxiliary contact blocks for connection by spring terminals

This type of connection is not possible for contact blocks LAD 8 and blocks with dust and damp protected contacts.

For all other instantaneous auxiliary contact blocks, add the digit **3** to the end of the references selected above.

Example: **LADN11** becomes **LADN113**.

⁽¹⁾ Please check the availability of your variant in the index page B7/12. The SEARCH function of your viewer can be used.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office).

a.c. supply

Volts ~	24	42	48	110	115	220	230	240	380	400	415	440
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7

d.c. supply (coils with integral suppression device fitted as standard)

Volts —	12	24	36	48	60	72	110	125	220	250	440
U from 0.7 to 1.25 U _c	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD

Low consumption (coils with integral suppression device fitted as standard)

Volts —	5	12	20	24	48	110	220	250
Code	AL	JL	ZL	BL	EL	FL	ML	UL

⁽²⁾ LC: low consumption.

⁽³⁾ To order control relays with connection by lugs, add the digit **6** to the end of the selected reference.

Example: CAD50●● becomes CAD506●●.

⁽⁴⁾ Blocks with 4 auxiliary contacts cannot be used on low consumption control relays.

⁽⁵⁾ Product fitted with 4 earth screen continuity terminals.

⁽⁶⁾ These contact blocks are allowed with AC coil control relay only.

⁽⁷⁾ With red front face - for safety chain indication.

⁽⁸⁾ With 2 earth screen continuity poles.

Characteristics:
pages B7/22 to B7/24

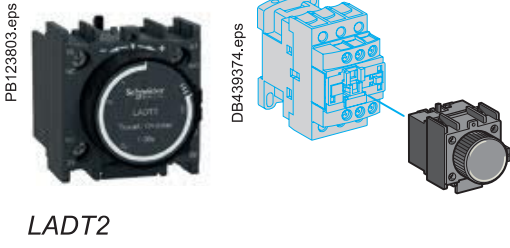
Curves:
page B7/25

Dimensions:
page B7/26

Schemes:
page B7/27



Control
relays

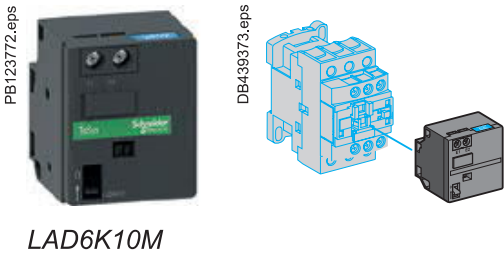


Time delay auxiliary contact blocks for connection by screw clamp terminals ⁽¹⁾				
Number and type of contacts	Maximum number per relay	Time delay		Reference
		Type	Range	
1 N/C and 1 N/O	1	On-delay	0.3...3 s ⁽²⁾	LADT0
			1...30 s	LADT2
			10...180 s	LADT4
			1...30 s ⁽³⁾	LADS2
		Off-delay	0.3...3 s ⁽²⁾	LADR0
			1...30 s	LADR2
			10...180 s	LADR4

(Sealing cover: see page B8/42)

Time delay auxiliary contact blocks for connection by spring terminals

Add the digit **3** to the references selected above. Example: **LADT0** becomes **LADT03**.



Mechanical latch blocks ⁽⁴⁾		
Unlatching control	Maximum number per relay	Basic reference to be completed ⁽⁵⁾
Front mounting		
Manual or electric	1	LAD6K10●

Suppressor modules

These modules clip onto the top of the control relay and the electrical connection is instantly made. Fitting of an input module is still possible.

RC circuits (Resistor-Capacitor)

- Effective protection for circuits highly sensitive to “high frequency” interference.
- Voltage limited to 3 Uc maximum and oscillating frequency limited to 400 Hz maximum.
- Slight time delay on drop-out (1.2 to 2 times the normal time).

For mounting on	Operational voltage	Reference
CAD ~	~ 24...48 V	LAD4RCE
	~ 50...127 V	LAD4RCG
	~ 110...250 V	LAD4RCU

Varistors (peak limiting)

- Protection provided by limiting the transient voltage value to 2Uc maximum.
- Maximum reduction of transient voltage peaks.
- Slight time delay on drop-out (1.1 to 1.5 times the normal time).

CAD ~	~ 24...48 V	LAD4VE
	~ 50...127 V	LAD4VG
	~ 110...250 V	LAD4VU

Freewheel diode

- No overvoltage or oscillating frequency.
- Increase in drop-out time (6 to 10 times the normal time).
- Polarised component.

CAD ---	--- 5...600 V	LAD4DDL ⁽⁶⁾
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Bidirectional peak limiting diode ⁽⁷⁾

- Protection provided by limiting the transient overvoltage value to 2Uc maximum.
- Maximum reduction of transient voltage peaks.

CAD ~	~ 24 V	LAD4TB
	~ 72 V	LAD4TS

CAD ---	--- 24 V	LAD4TBDL
	--- 72 V	LAD4TSDL
	--- 125 V	LAD4TGDL
	--- 250 V	LAD4TUDL

(1) These contact blocks cannot be used on low consumption control relays.

(2) With extended scale from 0.1 to 0.6 s.

(3) With switching time of 40 ms ±15 ms between opening of the N/C contact and closing of the N/O contact.

(4) Power should not be simultaneously applied or maintained to the mechanical latching block of the CADN. The duration of the control signal to the mechanical latching block and the CADN should be ≥ 100 ms.

(5) Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts ~ and ---	24	32/36	42/48	60/72	100	110/127	220/240	256/277	380/415
Code	B	C	E	EN	K	F	M	U	Q

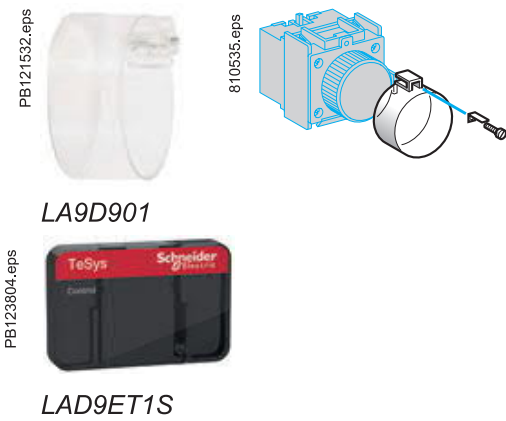
(6) Not compatible with low consumption control relays.

(7) **CAD●●** --- and low consumption control relays are fitted with a built-in bi-directional peak limiting diode suppressor as standard. On control relays produced after 15th July 2004, this diode is removable. It can therefore be replaced by the user (see references **LAD4T●●●** above). It can also be replaced by a freewheel diode **LAD4DDL**.

TeSys Control

Deca Accessories, spare coils

Product references



Accessories (to be ordered separately)

Description	For mounting on	Sold in lots of	Unit reference
For marking			
Sheet of 64 blank legends, self-adhesive, 8 x 33 mm	CAD, LAD (4 contacts)	10	LAD21
Sheet of 112 blank legends, self-adhesive, 8 x 12 mm	LAD (2 contacts), LADT		LAD22
"SIS Label" labelling software for legends LAD21 and LAD22, supplied on CD-Rom	Multi-language version: English, French, German, Italian, Spanish	1	XBY2U
Legend holder, snap-in, 8 x 18 mm	LC1D09...38 LC1DT20...40 LADN (4 contacts) LADT, LADR	100	LAD90

For protection

Sealing cover	LADT, LADR	1	LA9D901
Safety cover preventing access to the moving contact carrier	CAD	1	LAD9ET1
Red cover (for safety chain indication)	CAD	1	LAD9ET1S

Spare parts: coils

Specifications			
■ Average consumption at 20 °C:			
- inrush (cos φ = 0.75) 50/60 Hz: 70 VA at 50 Hz,			
- sealed (cos φ = 0.3) 50/60 Hz: 8 VA at 60 Hz,			
■ Operating range (θ < 60 °C): 0.85 to 1.1 Uc			
Control circuit voltage Uc	Average resistance at 20 °C ±10 %	Inductance of closed circuit	Reference ⁽¹⁾
V	Ω	H	
			50/60 Hz
12	1.33	0.05	LXD1J7
24	5.37	0.22	LXD1B7
32	10.1	0.39	LXD1C7
42	17	0.67	LXD1D7
48	21.7	0.87	LXD1E7
110	124.1	4.6	LXD1F7
115	129.8	5	LXD1FE7
120	150.6	5.4	LXD1G7 ⁽²⁾
200	410.7	15	LXD1L7
208	430.4	16	LXD1LE7 ⁽²⁾
220	515.4	18	LXD1M7 ⁽³⁾
230	538.6	20	LXD1P7
240	562.3	22	LXD1U7
277	800.7	29	LXD1W7 ⁽²⁾
380	1551	55	LXD1Q7 ⁽⁴⁾
400	1633	60	LXD1V7
415	1694	65	LXD1N7
440	1993	73	LXD1R7
480	2398	87	LXD1T7 ⁽²⁾
500	2499	95	LXD1S7
575	3294	125	LXD1SC7
600	3810	136	LXD1X7
660	4656	165	LXD1YC7
690	5020	180	LXD1Y7

(1) The last 2 digits in the reference represent the voltage code.

(2) Coil for use only on 60 Hz.

(3) Suitable for use on 230 V / 50 Hz. In this case, apply a coefficient of 0.6 to the mechanical durability of the contactor (see pages B8/84 and B8/86).

(4) Suitable for use on 400 V / 50 Hz. In this case, apply a coefficient of 0.6 to the mechanical durability of the contactor (see pages B8/84 and B8/86).

Control relays

TeSys Control

SK, K, Deca Control relays

Product references

CA2KN223B7	CA2SK20E7	CA3SK20BD	CAD32JD
CA2KN223F7	CA2SK20F7	CA3SK20JD	CAD32JL
CA2KN223P7	CA2SK20G7	CA4KN223BW3	CAD32L7
CA2KN223P72	CA2SK20M7	CA4KN225BW3	CAD32M7
CA2KN22B7	CA2SK20P7	CA4KN22BW3	CAD32MD
CA2KN22B72	CA2SK20Q7	CA4KN22EW3	CAD32N7
CA2KN22D7	CA2SK20T7	CA4KN22FW3	CAD32P7
CA2KN22E7	CA2SK20U7	CA4KN22SW3	CAD32Q7
CA2KN22F7	CA2SK20UE7	CA4KN313BW3	CAD32R7
CA2KN22F72	CA2SKE20B7	CA4KN31BW3	CAD32SD
CA2KN22FC7	CA2SKE20G7	CA4KN31FW3	CAD32T7
CA2KN22FE7	CA2SKE20M7	CA4KN31SW3	CAD32U7
CA2KN22G7	CA2SKE20P7	CA4KN403BW3	CAD32UD
CA2KN22G72	CA2SKE20Q7	CA4KN40BW3	CAD32V7
CA2KN22L7	CA2SKE20T7	CA4KN40EW3	CAD32X7
CA2KN22M7	CA2SKE20U7	CA4KN40FW3	CAD32XD
CA2KN22M72	CA3KN223BD	CAD323B7	CAD32Y7
CA2KN22N7	CA3KN223BD3	CAD323BD	CAD503BD
CA2KN22P7	CA3KN22BD	CAD323BL	CAD503BL
CA2KN22P72	CA3KN22BD3	CAD323E7	CAD503FD
CA2KN22Q7	CA3KN22ED	CAD323F7	CAD503FE7
CA2KN22R7	CA3KN22ED3	CAD323FE7	CAD503P7
CA2KN22T7	CA3KN22FD	CAD323G7	CAD506B7
CA2KN22U7	CA3KN22FD3	CAD323JD	CAD506BD
CA2KN22V7	CA3KN22GD	CAD323P7	CAD506ED
CA2KN313P72	CA3KN22GD3	CAD326B7	CAD506F7
CA2KN315F7	CA3KN22JD	CAD326BD	CAD506FD
CA2KN31B7	CA3KN22MD	CAD326BL	CAD506KD
CA2KN31D7	CA3KN22MD3	CAD326CD	CAD506M7
CA2KN31E7	CA3KN22ND	CAD326E7	CAD506MD
CA2KN31F7	CA3KN22SD	CAD326F7	CAD506P7
CA2KN31G7	CA3KN313BD	CAD326FD	CAD506R7
CA2KN31K7	CA3KN313BD3	CAD326G7	CAD50B7
CA2KN31M7	CA3KN315BD	CAD326GD	CAD50BD
CA2KN31M72	CA3KN317SD	CAD326K7	CAD50BL
CA2KN31P7	CA3KN31BD	CAD326KD	CAD50D7
CA2KN31P72	CA3KN31BD3	CAD326L7	CAD50E7
CA2KN31U7	CA3KN31ED	CAD326M7	CAD50ED
CA2KN31V7	CA3KN31ED3	CAD326MD	CAD50F7
CA2KN40B7	CA3KN31FD	CAD326P7	CAD50FD
CA2KN40B72	CA3KN31FD3	CAD326Q7	CAD50FE7
CA2KN40E7	CA3KN31GD	CAD326R7	CAD50G7
CA2KN40F7	CA3KN31GD3	CAD326SD	CAD50GD
CA2KN40FC72	CA3KN31JD	CAD326SL	CAD50K7
CA2KN40G7	CA3KN31MD	CAD326U7	CAD50L7
CA2KN40M7	CA3KN31MD3	CAD326V7	CAD50M7
CA2KN40N7	CA3KN31ND3	CAD326VD	CAD50MD
CA2KN40P7	CA3KN31UD	CAD32B7	CAD50N7
CA2KN40T7	CA3KN403BD	CAD32BD	CAD50P7
CA2KN40U7	CA3KN403BD3	CAD32BL	CAD50Q7
CA2SK11B7	CA3KN40BD	CAD32CD	CAD50R7
CA2SK11E7	CA3KN40BD3	CAD32D7	CAD50SD
CA2SK11F7	CA3KN40ED	CAD32E7	CAD50U7
CA2SK11G7	CA3KN40ED3	CAD32ED	CAD50UD
CA2SK11M7	CA3KN40EPD	CAD32EL	CAD50Y7
CA2SK11P7	CA3KN40FD	CAD32F7	
CA2SK11T7	CA3KN40FD3	CAD32FC7	
CA2SK11U7	CA3KN40GD	CAD32FD	
CA2SK11UE7	CA3KN40GD3	CAD32FE7	
CA2SK11V7	CA3KN40MD	CAD32FL	
CA2SK20B7	CA3KN40MD3	CAD32G7	
CA2SK20D7	CA3SK11BD	CAD32GD	

Control relays

This document is current. Click on the product reference to get the most recent availability status (hyperlink to [se.com](#) product datasheet). If your product variant is no longer available, please consult your distributor or regional sales office.

Technical Data for Designers

Contents

TeSys SK Mini control relays:

- > characteristics..... B7/14 and B7/15
- > dimensionsB7/16
- > schemes.....B7/17

TeSys K Control relays:

- > characteristics..... B7/18 and B7/19
- > dimensionsB7/20
- > schemes.....B7/21

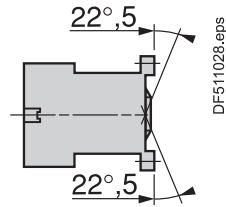
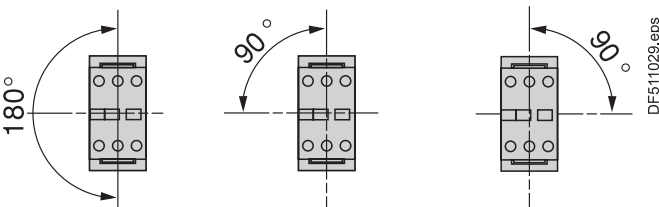
Deca Control relays:

- > characteristics..... B7/22 to B7/24
- > curvesB7/25
- > dimensionsB7/26
- > schemes.....B7/27

TeSys Control

SK, SKE Mini control relays

Characteristics

Environment				
Rated insulation voltage (Ui)	Conforming to IEC 60947, CSA 22-2 n° 14, UL 508	V	690	
Conforming to standards			IEC/EN 60947-5-1, UL 60947-5-1, CSA C22.2 n° 60947-5-1, GB/T 14048.5	
Approvals			cULus, EAC, UKCA, CB certification	
Degree of protection	Conforming to IEC 60529		Protection against direct finger contact IP2X	
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  Without derating		Horizontal axis  Without derating
Connection by connectors			Min.	Max.
	Solid cable	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 and EN 50011		Up to 4 contacts	
Control circuit characteristics				
Control relay			CA2SK	CA2SKE
Rated control circuit voltage (Uc)		V	~ 24...400	CA3SK
Control voltage limits (≤ 50 °C)	For operation		0.85...1.1 Uc	0.85...1.1 Uc
	For drop-out		≤ 0.20 Uc	≤ 0.10 Uc
Average consumption at 20 °C and at Uc	Inrush		16 VA	23 VA
	Sealed		4.2 VA	4.9 VA
Heat dissipation		W	1.4	1.5
Operating time at 20 °C and at Uc	Between coil energisation and opening of the N/C contacts	ms	8...16	10...18
	closing of the N/O contacts	ms	7...14	8...12
	Between coil de-energisation and opening of the N/O contacts	ms	6...8	4...6
	closing of the N/C contacts	ms	8...10	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	—
	Standard — coil		—	10

TeSys Control

SK, SKE Mini control relays

Characteristics

Auxiliary contact characteristics of mini control relays and instantaneous contact blocks

Rated operational voltage (Ue)		V	Up to 690
Rated insulation voltage (Ui)	Conforming to IEC 96047	V	690
Conventional rated thermal current (Ith)	For ambient temperature ≤ 55 °C	A	10
Frequency of the operational current		Hz	Up to 400
Short-circuit protection	Conforming to IEC 60947, gI fuse	A	10

Operational power of contacts conforming to IEC 60947

	a.c. supply, category AC-15							d.c. supply, category DC-13					
	Electrical durability (valid for up to 3600 operating cycles/hour) on an inductive load such as the coil of an electromagnet: making current (cos φ 0.7) = 10 times the power broken (cos φ 0.4).							Electrical durability (valid for up to 1200 operating cycles/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/ 127	220/ 230	380/ 400	440	V	24	48	110	220	440
1 million operating cycles	VA	48	96	240	440	800	880	W	120	80	60	52	51
3 million operating cycles	VA	17	34	86	158	288	317	W	55	38	30	28	26
10 million operating cycles	VA	7	14	36	66	120	132	W	15	11	9	8	7
Occasional making capacity	VA	1000	2050	5000	10000	14000	13 000	W	720	600	400	300	230

Ref.



Control relays

TeSys Control

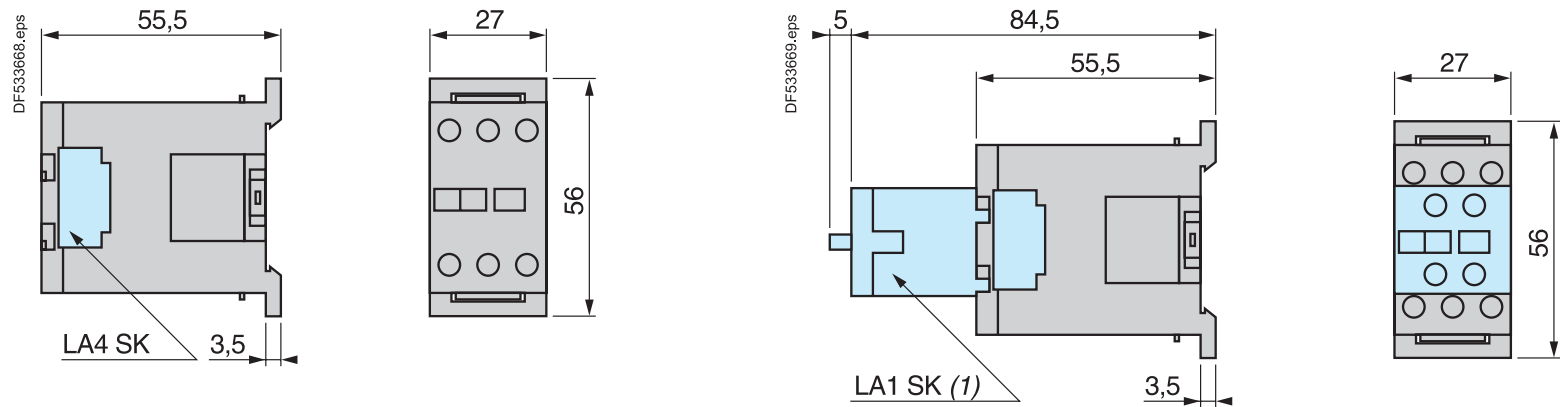
SK, SKE Mini control relays

Dimensions and mounting

Dimensions

Mini control relays

CA2SK and CA3SK



(1) Only on CA2SK20.

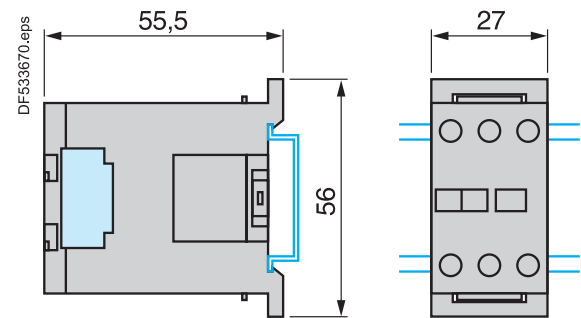
Mounting

Mini control relays

CA2SK and CA3SK

On mounting rail NSYDR200BD or NSYDR200 (└ 35 mm)

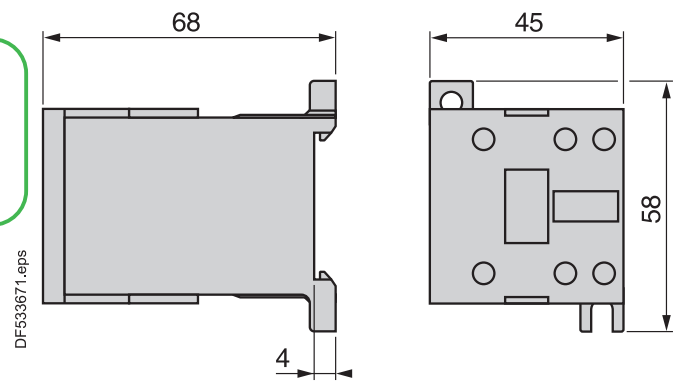
Ref.



Dimensions

CA2SKE

Control relays

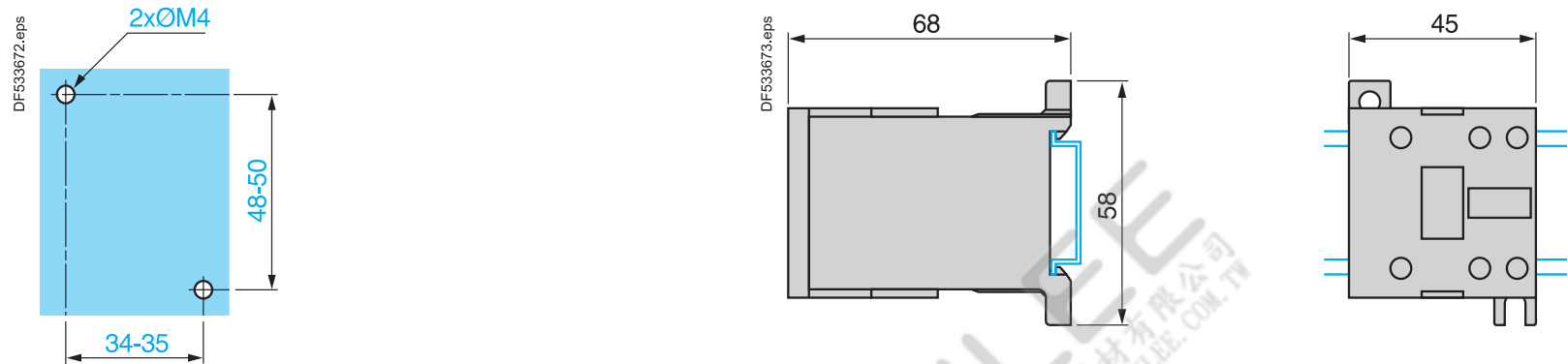


Mounting

CA2SKE

On panel

On mounting rail NSYDR200BD or NSYDR200 (└ 35 mm)



TeSys Control

SK, SKE Mini control relays

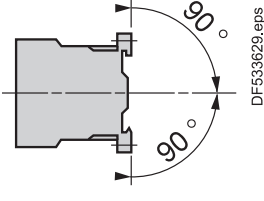
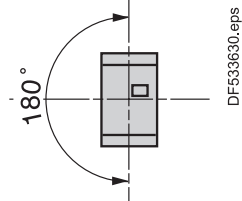
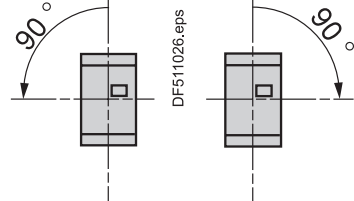
Schemes

Schemes		
CA2SK20, CA3SK20		CA2SK11, CA3SK11
2 N/O		1 N/O + 1 N/C
CA2SKE		CA2SKE
2 N/O		Function diagram
Instantaneous auxiliary contacts		
2 N/O		2 N/C
LA1SK20		LA1SK02
		1 N/O + 1 N/C
		LA1SK11

TeSys Control

K Control relays

Characteristics

Environment					
Conforming to standards			IEC/EN 60947-5-1, UL 60947-5-1, CSA C22.2 n° 60947-5-1, GB/T 14048.5		
Product certifications			UL, CSA, CCC, EAC, UKCA, CB certification		
Operating positions			Vertical axis  Without derating Horizontal axis  Without derating  Possible positions for CA2K only, with derating, please consult your Regional Sales Office.		
Connection					
Screw clamp connections	Solid cable	mm ²	Min.	Max.	Max. to IEC 60947
	Flexible cable without cable end	mm ²	1 x 1.5	2 x 4	1 x 4 + 1 x 2.5
	Flexible cable with cable end	mm ²	1 x 0.75	2 x 4	2 x 2.5
Spring terminals	Solid cable	mm ²	1 x 0.34	1 x 1.5 + 1 x 2.5	1 x 1.5 + 1 x 2.5
	Flexible cable without cable end	mm ²	1 x 0.75	1 x 1.5	2 x 1.5
Faston connectors	Clip	mm	1 x 1.5	1 x 1.5	2 x 1.5
Solder pins for printed circuit board	With locating device between power and control circuits		2 x 2.8 or 1 x 6.35		
Tightening torque	Philips head n° 2 and Ø6	N.m	4 mm x 35 microns		
Terminal referencing	Conforming to standards EN 50005 and EN 50011		0.8		
Degree of protection	Conforming to IEC 60529		Up to 8 contacts		
Ambient air temperature around the device	Storage	°C	Protection against direct finger contact IP2x (devices with screw clamp terminals or pins for printed circuit board)		
	Operation	°C	-50...+80		
Maximum operating altitude	Without derating	m	-25...+50		
Vibration resistance	Control relay open		2000		
5...300 Hz	Control relay closed		2 gn		
Conforming to IEC/EN 60068-2-27			4 gn		
Flame resistance	Conforming to IEC 60695-2-11		850 °C		
Shock resistance (1/2 sine wave, 11 ms)	Control relay open		10 gn		
Conforming to IEC/EN 60068-2-27	Control relay closed		15 gn		
Control circuit characteristics					
Control relay type			CA2K	CA3K	CA4K
Rated control circuit voltage (Uc)		V	~ 12...690	~ 12...250	~ 12...120
Control voltage limits (y 50 °C) single voltage coil	For operation		0.8...1.15 Uc	0.8...1.15 Uc	0.7...1.3 Uc
	For drop-out		≤ 0.2 Uc	≤ 0.1 Uc	≤ 0.1 Uc
Mechanical durability at Uc In millions of operating cycles	50/60 Hz coil		10	–	–
	Standard ~ coil		–	20	–
	Wide range, low consumption ~ coil		–	–	30
Maximum operating rate	In operating cycles per hour		10 000	10 000	6000
Average consumption at 20 °C and at Uc	Inrush		30 VA	3 W	1.8 W
	Sealed		4.5 VA	3 W	1.8 W
Heat dissipation		W	1.3	3	1.8
Operating time at 20 °C and at Uc	Between coil energisation and opening of the N/C contacts	ms	5...15	25...35	25...35
		ms	10...20	30...40	30...40
	Between coil de-energisation and opening of the N/O contacts	ms	10...20	10	10...20
		ms	15...25	15	15...25
	Maximum immunity to microbreaks		ms	2	2

TeSys Control

K Control relays & contact blocks

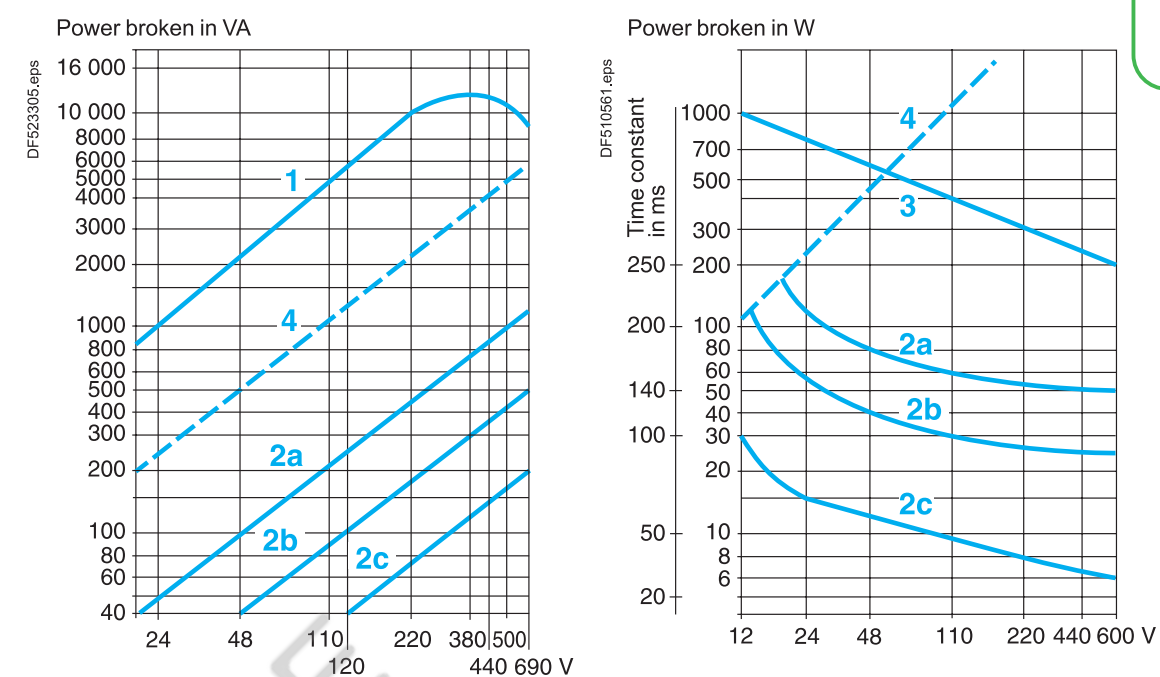
Characteristics

Contact characteristics of control relays and instantaneous contact blocks				
Number of auxiliary contacts	On CA●K			4
	On LA1K			2 or 4 for CA2K and CA3K , 2 for CA4K
Rated operational voltage (Ue)	Up to	V		690
Rated insulation voltage (Ui)	Conforming to IEC 60947	V		690
	Conforming to UL 60947-5-1, CSA C22.2 n° 60947-5-1	V		600
Conventional thermal current (Ith)	For ambient temperature ≤ 50 °C	A		10
Frequency of the operational current		Hz		Up to 400
Minimum switching capacity	U min	V		17
	I min	mA		5
Short-circuit protection	Conforming to IEC 60947, gG fuse	A		10
Rated making capacity	Conforming to IEC 60947			
	I rms	A		110
Short-time rating	Permissible for			
	1 s	A		80
	500 ms	A		90
	100 ms	A		110
Insulation resistance		MΩ		> 10
Non-overlap distance	CA●K and LA1K: linked contacts conforming to INRS, BIA and CNA specifications	mm		0.5 (see schemes page B7/21)

Operational power of contacts conforming to IEC 60947		
	a.c. supply, category AC-15	d.c. supply, category DC-13

	Electrical durability (valid for up to 3600 operating cycles/hour) on an inductive load such as the coil of an electromagnet: making current (cos φ 0.7) = 10 times the power broken (cos φ 0.4)								Electrical durability (valid for up to 1200 operating cycles/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	110/127	220/230	380/400	440	600/690	V	24	48	110	220	440	600
1 million operating cycles	VA	48	96	240	440	800	880	1200	W	120	80	60	52	51	50
3 million operating cycles	VA	17	34	86	158	288	317	500	W	55	38	30	28	26	25
10 million operating cycles	VA	7	14	36	66	120	132	200	W	15	11	9	8	7	6
Occasional making capacity	VA	1000	2050	5000	10000	14000	13000	9000	W	720	600	400	300	230	200

- 1 Breaking limit of contacts valid for:
- maximum of 50 operating cycles at 10 s intervals (power broken = making current x cos φ 0.7).
- 2 Electrical durability of contacts for:
- 1 million operating cycles (2a)
 - 3 million operating cycles (2b)
 - 10 million operating cycles (2c).
- 3 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.
- 4 Thermal limit



TeSys Control

K Control relays

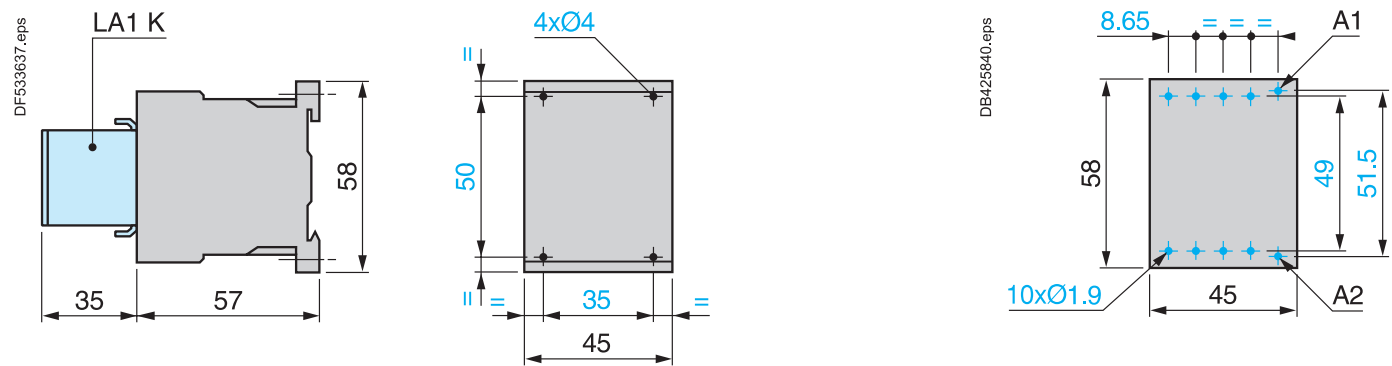
Dimensions and mounting

Control relays

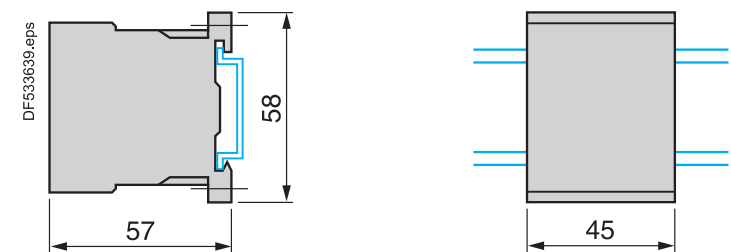
CA2K, CA3K, CA4K

On panel

On printed circuit board



On mounting rail NSYDR200BD or NSYDR200 (35 mm)



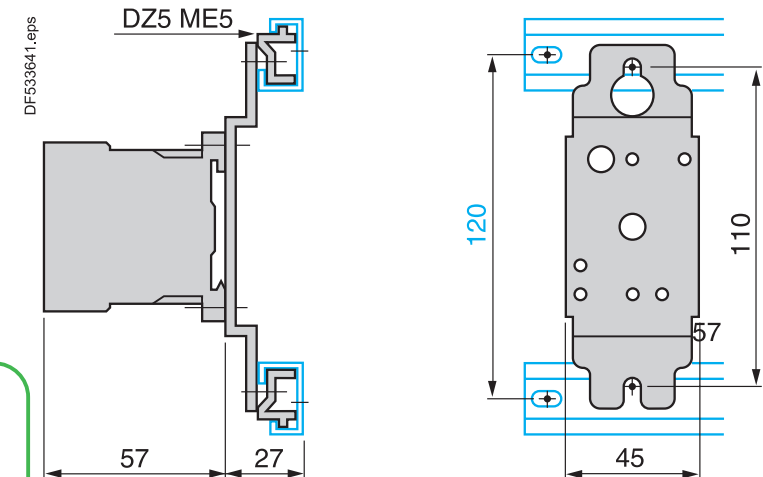
DX1AP25

On asymmetrical rail with clip-on mounting plates

Ref.



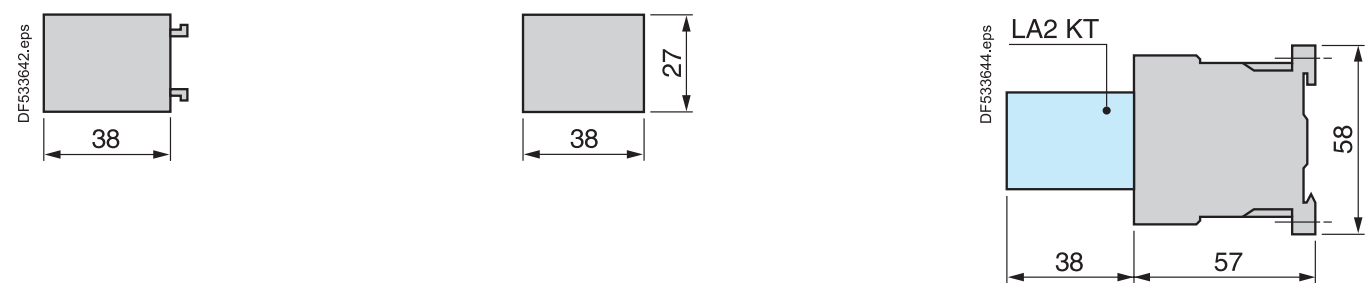
Control relays



Electronic time delay contact blocks

LA2KT

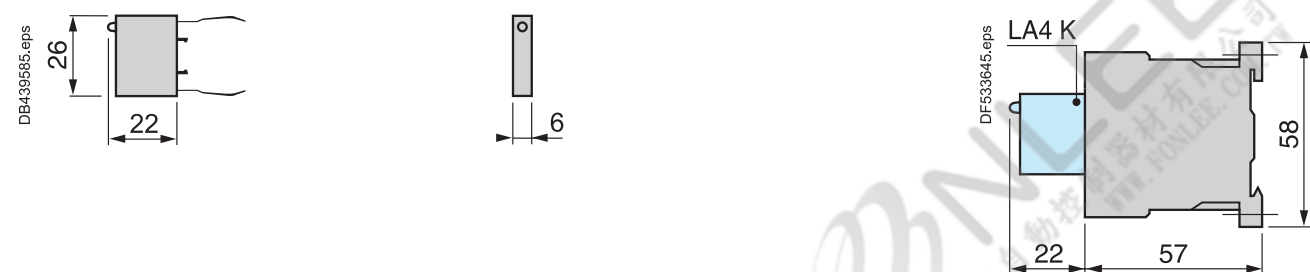
On control relay



Suppressor modules

LA4K

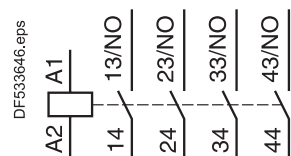
On control relay



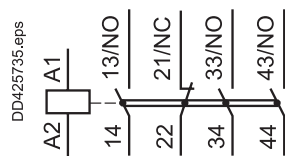
Control relays

CA2K, CA3K, CA4K

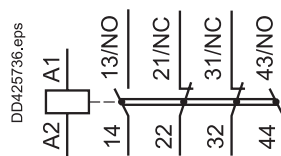
4 N/O



3 N/O + 1 N/C

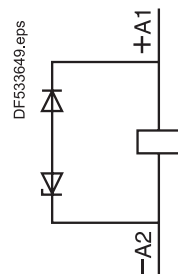


2 N/O + 2 N/C

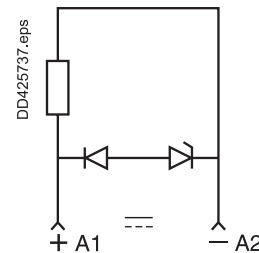


With integral suppression device

CA3K



CA4K



Instantaneous auxiliary contact blocks LA1K

For CA2K, CA3K, CA4K

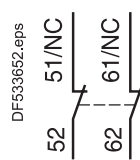
2 N/O

LA1KN20, LA1 KN207



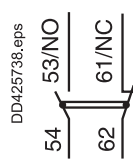
2 N/C

LA1KN02, LA1 KN027



1 N/O + 1 N/C

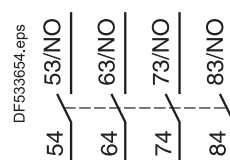
LA1KN11, LA1 KN117



For CA2K, CA3K

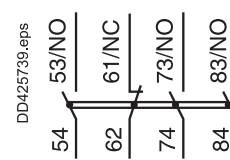
4 N/O

LA1KN40, LA1 KN407



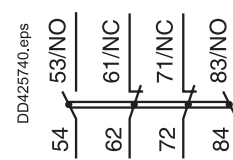
3 N/O + 1 N/C

LA1KN31, LA1 KN317



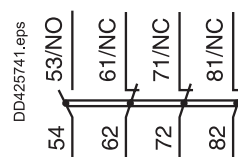
2 N/O + 2 N/C

LA1KN22



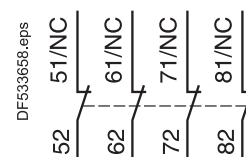
1 N/O + 3 N/C

LA1KN13



4 N/C

LA1KN04

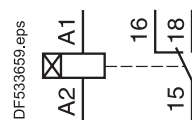


Electronic time delay contact blocks LA2KT

For CA2K, CA3K, CA4K

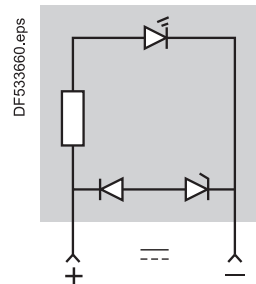
1 C/O

LA2KT2

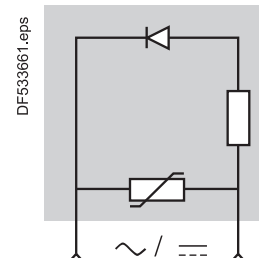


Suppressor modules

LA4KC



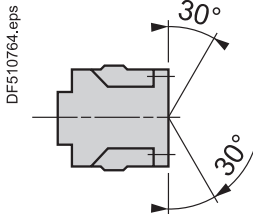
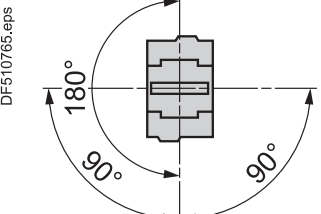
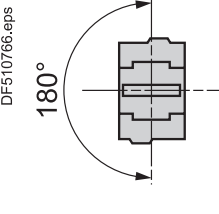
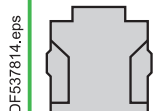
LA4KE



TeSys Control

Deca Control relays

Characteristics

Environment					
Control relay type			CAD ~	CAD ---	CAD --- low consumption
Rated insulation voltage (Ui)	Conforming to IEC 60947-5-1 Overvoltage category III and degree of pollution 3	V	690	690	690
	Conforming to UL, CSA	V	600	600	600
Rated impulse withstand voltage (Uimp)	Conforming to IEC 60947	kV	6	6	6
Separation of electrical circuits	Conforming to IEC 60536		Reinforced insulation up to 400 V		
Conforming to standards			IEC/EN 60947-5-1, UL 60947-5-1, CSA C22.2 n° 60947-5-1, GB/T 14048.5		
Product certifications			UL, CSA, CCC, EAC, UKCA, CB certification, EU-RO-MR by DNV-GL		
Degree of protection	Conforming to IEC 60529		Front face protected against direct finger contact IP 2X		Protection against direct finger contact IP 2X
Ambient air temperature around the device	Storage	°C	-60...+80		
	Operation ⁽¹⁾	°C	-40...+60		
	Allowed ⁽¹⁾	°C	+60...+70 at Uc to 1,●● x Uc		
Maximum operating altitude	Without derating	m	3000	3000	3000
Operating positions	Without derating in the following positions				
	Positions that are not allowed				
Shock resistance ⁽²⁾ half sine wave for 11ms	Control relay open		10 gn	10 gn	10 gn
	Control relay closed		15 gn	15 gn	15 gn
Vibration resistance ⁽²⁾ 5...300 Hz	Control relay open		2 gn	2 gn	2 gn
	Control relay closed		4 gn	4 gn	4 gn
Screw clamp connections	Flexible conductor without cable end	1 conductor	mm ²	1...4	1...4
		2 conductors	mm ²	1...4	1...4
	Flexible conductor with cable end	1 conductor	mm ²	1...4	1...4
		2 conductors	mm ²	1...2.5	1...2.5
	Solid conductor without cable end	1 conductor	mm ²	1...4	1...4
		2 conductors	mm ²	1...4	1...4
	Tightening torque		N.m	1.7	1.7
Spring terminal connections	1 or 2 flexible or rigid conductors without cable end	mm ²	1...2.5	1...2.5	1...2.5

(1) As per IEC60947-1, operating time and drop out voltage given and tested for -5...+40 °C.

(2) In the least favourable direction, without change of contact state, with coil supplied at Uc.

TeSys Control

Deca Control relays

Characteristics

Control circuit characteristics					
Control relay type			CAD ~	CAD ≡	CAD low consumption
Rated control circuit voltage (Uc)		V	12...690	12...440	≡ 5...72
Control voltage limits					
Operation	With coil 50/60 Hz		0.8...1.1 Uc at 50 Hz	—	—
			0.85...1.1 Uc at 60 Hz	—	—
	With standard coil, wide range		—	0.7...1.25 Uc	0.7...1.25 Uc
Drop-out			0.3...0.6 Uc	0.1...0.25 Uc	0.1...0.25 Uc
Average consumption at 20 °C and at Uc		~ 50/60 Hz (at 50 Hz)	VA	Inrush: 70	—
				sealed: 8	—
		With standard coil	W	—	Inrush or sealed: 5.4
Operating time (at rated control circuit voltage and at 20 °C)	Between coil energisation and - opening of the N/C contacts	ms	4...19	55 ± 15 %	67 ± 15 %
	- closing of the N/O contacts	ms	12...22	63 ± 15 %	77 ± 15 %
	Between coil de-energisation and - opening of the N/O contacts	ms	4...12	20 ± 20 %	27 ± 20 %
	- closing of the N/C contacts	ms	6...17	25 ± 20 %	35 ± 20 %
Short supply failure	Maximum duration without affecting hold-in of the device	ms	2	2	2
Maximum operating rate	In operating cycles per second		3	3	3
Mechanical durability In millions of operating cycles	With coil 50/60 Hz (at 50 Hz)		30	—	—
	With standard coil ≡ wide range		—	30	30
Time constant L/R		ms	—	28	40

Ref.



Control relays

TeSys Control

Deca Control relays

Characteristics

Characteristics of instantaneous contacts incorporated in the control relay				
Number of contacts				5
Rated operational voltage (Ue)	Up to		V	690
Rated insulation voltage (Ui)	Conforming to IEC 60947-5-1		V	690
	Conforming to UL, CSA		V	600
Conventional thermal current (Ith)	For ambient temperature ≤ 60 °C		A	10
Frequency of the operational current			Hz	25...400
Minimum switching capacity	U min		V	17
	I min		mA	5
Short-circuit protection	Conforming to IEC 60947-5-1			gG fuse: 10 A
Rated making capacity	Conforming to IEC 60947-5-1	I rms		~ 140, --- 250
Short-time rating	Permissible for	1 s	A	100
		500 ms	A	120
		100 ms	A	140
Insulation resistance			MΩ	> 10
Non-overlap time	Guaranteed between N/C and N/O contacts		ms	1.5 (on energisation and on de-energisation)
Tightening torque	Philips head n° 2 and Ø6		N.m	1.7
Non-overlap distance				Linked contacts in association with auxiliary contacts LADN
Mechanically linked contacts	Conforming to IEC 60947-5-1			The 3 N/O contacts and the 2 N/C contacts of CAD N32 are linked mechanically by one mobile contact carrier.

Ref.



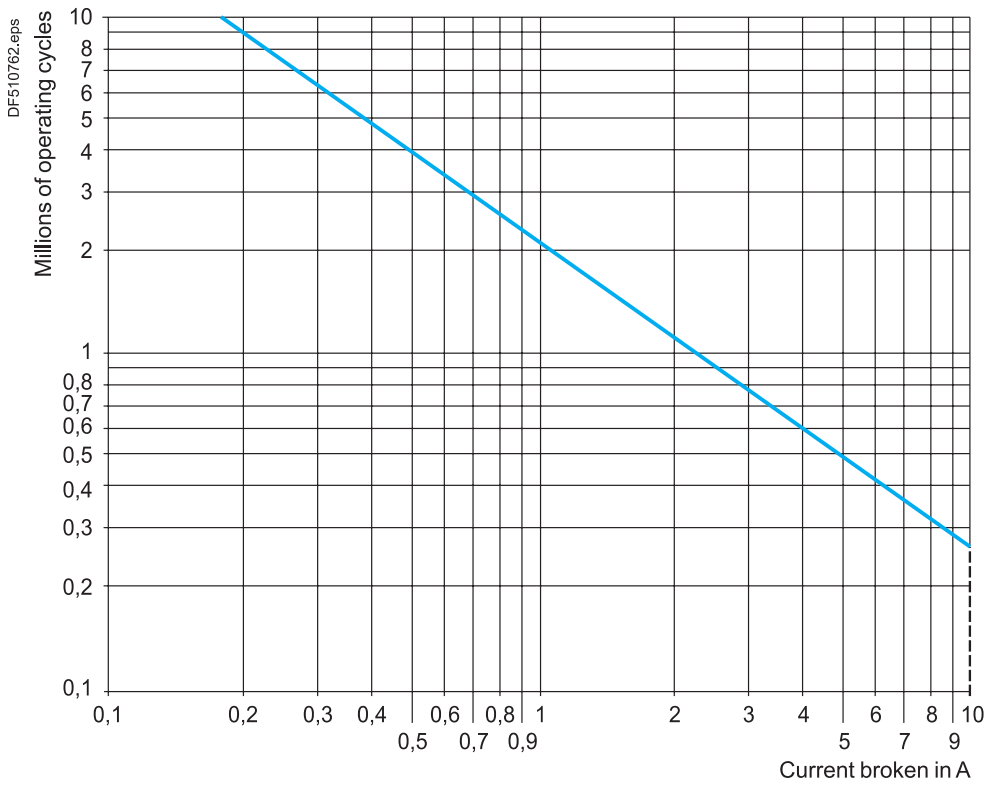
Control relays

Rated operational power of contacts (conforming to IEC 60947-5-1)

a.c. supply, categories AC-14 and AC-15

Electrical durability (valid for up to 3600 operating cycles/hour) on an inductive load such as the coil of an electromagnet:
making current ($\cos \varphi 0.7$) = 10 times the power broken ($\cos \varphi 0.4$).

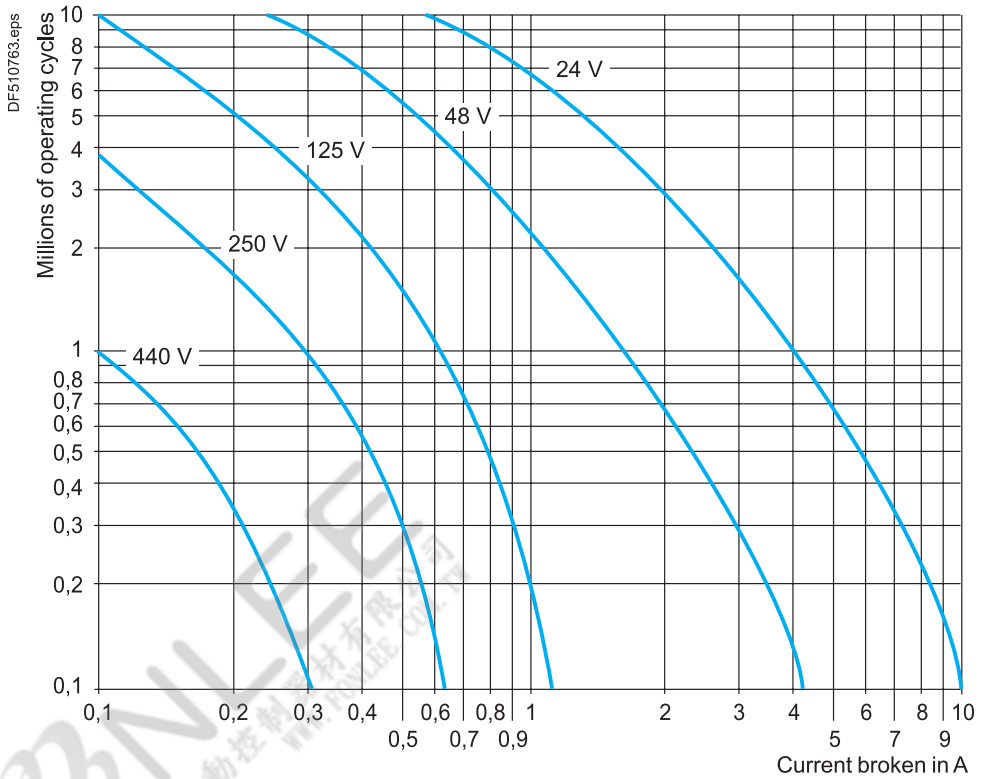
	V	24	48	115	230	400	440	600
1 million operating cycles	VA	60	120	280	560	960	1050	1440
3 million operating cycles	VA	16	32	80	160	280	300	420
10 million operating cycles	VA	4	8	20	40	70	80	100



d.c. supply, category DC-13

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

Operating cycles	V	24	48	125	250	440
1 million	W	96	76	76	76	44
3 million	W	48	38	38	32	—
10 million	W	14	12	12	—	—



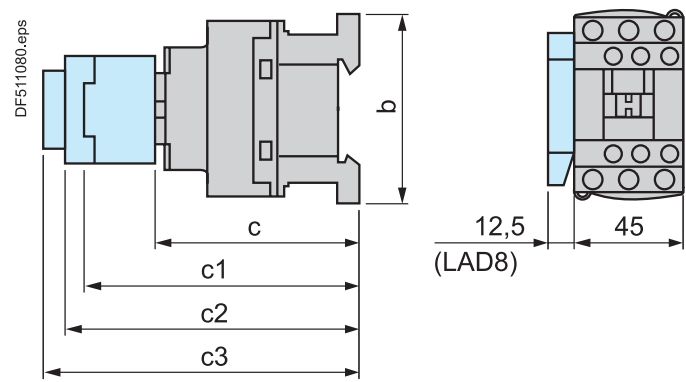
TeSys Control

Deca Control relays

Dimensions and mounting

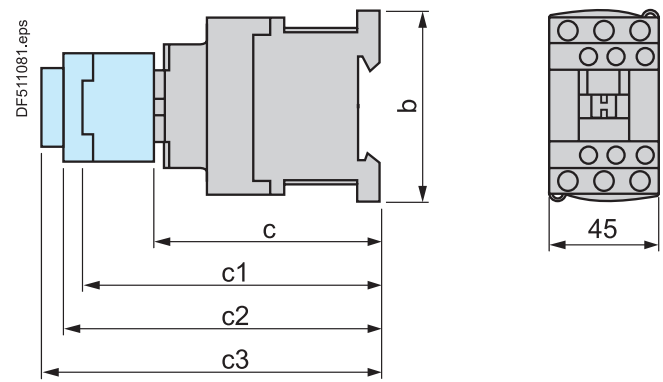
Dimensions

CAD ~



CAD	32 50	323 503
b	77	99
c without cover or add-on blocks	84	84
with cover, without add-on blocks	86	86
c1 with LADN or C (2 or 4 contacts)	117	117
c2 with LAD6K10	129	129
c3 with LADT, R, S	137	137
with LADT, R, S and sealing cover	141	141

CAD ⎓ or LC (low consumption)



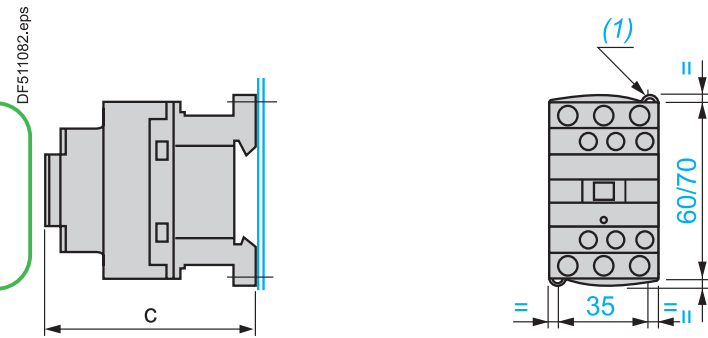
CAD	32 50	323 503
b	77	99
c without cover or add-on blocks	93	93
with cover, without add-on blocks	95	95
c1 with LADN or C (2 or 4 contacts)	126	126
c2 with LAD6K10	138	138
c3 with LADT, R, S	146	146
with LADT, R, S and sealing cover	150	150

Operating cycles	V	24	48	125	250	440
1 million	W	120	90	75	68	61
3 million	W	70	50	38	33	28
10 million	W	25	18	14	12	10

Mounting

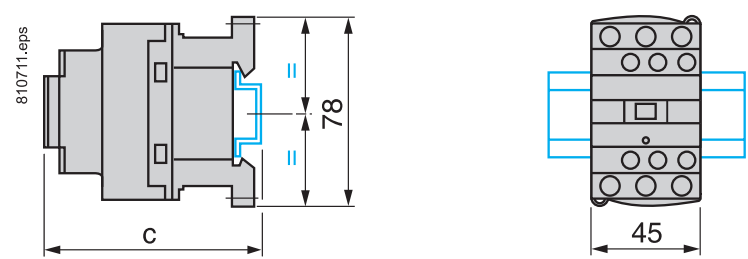
CAD

Panel mounted



	CAD ~	CAD ⎓ or LC
c with cover	86	95

Mounted on rail NSYDR200BD or NSYDR200

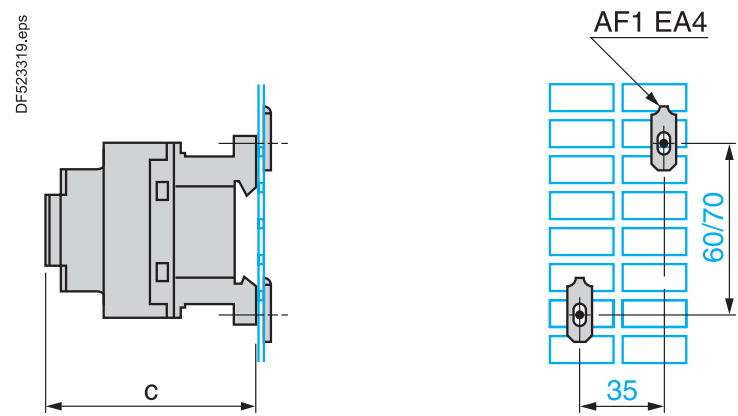


	CAD ~	CAD ⎓ or LC
c (NSYDR200BD) ⁽²⁾	88	97
c (NSYDR200BD) ⁽²⁾	96	105

(1) 2 elongated holes 4.5 x 9.

(2) With cover.

Mounted on plate AM1P



	CAD ~	CAD ⎓ or LC
c with cover	86	95

References:
pages B7/9 to B7/11

Illustration:
page B7/8

Characteristics:
pages B7/22 to B7/24

Curves:
page B7/25

Schemes:
page B7/27

TeSys Control

Deca Control relays

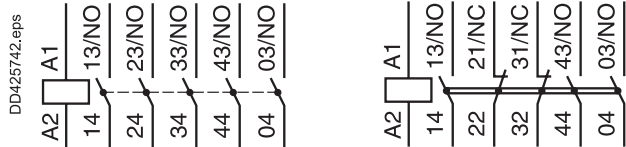
Schemes

Instantaneous auxiliary contacts

5 N/O 3 N/O + 2 N/C

CAD50

CAD32



Instantaneous auxiliary contact blocks

1 N/O + 1 N/C

LADN11

LAD8N11 (1)

2 N/O

LADN20

LAD8N20 (1)

2 N/C

LAD8N02

LADN02



(1) The figures in brackets are for the device mounted on the RH side of the control relay.

2 N/O + 2F N/C

LADN22

1 N/O + 3 N/C

LADN13

4 N/O

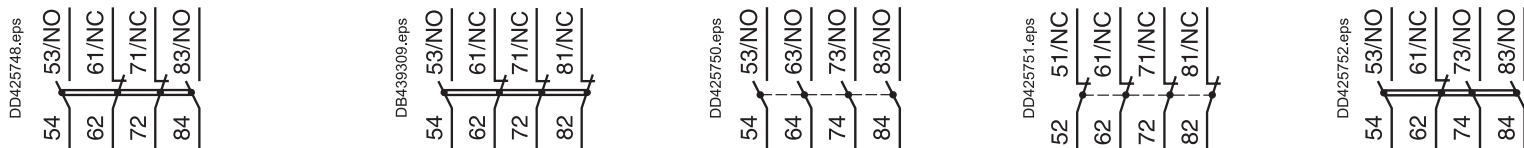
LADN40

4 N/C

LADN04

3 N/O + 1 N/C

LADN31



2 N/O + 2 N/C including
1 N/O + 1 N/C
make before break

LADC22

With dust and damp protected contacts
2 N/O protected 2 N/C protected

LA1DX20

LA1DX02

2 N/O protected (2)
with 2 cable screen
terminals

LA1DY20

2 N/O protected +
2 N/O non protected

LA1DZ40

2 N/O protected +
1 N/O + 1 N/C
non protected

LA1DZ31



(2) Product fitted with 4 earth screen continuity terminals.

Time delay auxiliary contact blocks

On-delay 1 N/O + 1 N/C

LADT

LADS

Off-delay
1 N/O + 1 N/C

LADR

Mechanical latch blocks

LAD6K10



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TeSys SK, K contactors

Type of product	Range		Pages
Contactors 27 and 45 mm width for use in modular panels TeSys SK	From 12 to 20 A		B8/2
Contactors TeSys K	From 6 to 16 A		B8/4
Reversing pre-assembled contactors TeSys K	From 6 to 16 A		B8/8
Auxiliary contact blocks - accessories			B8/13



TeSys S207 series contactors
for railways applications.
Click on image to download.



TeSys S335 series contactors
for electrodomestic application.
Click on image to download.

TeSys Deca contactors

AC-3, AC-1, UL CSA applications- TeSys Deca green contactors (with AC/DC compatible coil)	From 9 to 80 A		B8/16
AC-3 applications - 3-pole, 4-pole TeSys Deca contactors	From 9 to 150 A		B8/22
AC-1 applications - 3-pole, 4-pole TeSys Deca contactors	From 25 to 200 A		B8/23
UL CSA application - 3-pole TeSys Deca contactors	From 25 to 200 A		B8/28
Reversing, changeover pre-assembled TeSys Deca contactors	From 9 to 150 A		B8/29
Reversing contactors TeSys Deca green contactors (with AC/DC compatible coil)	From 9 to 80 A		B8/33
Contactors for switching capacitor banks	From 12.5 to 60 kVAR		B8/34
Auxiliary contact blocks – accessories – spare coils for TeSys Deca			B8/36

Modular contactors

Modular contactors	From 16 to 100 A		B8/51
Modular Dual tariff contactors	16, 25, 40 or 100 A		B8/52
Modular Impulse relay	Up to 16 A		B8/53
Auxiliary contact blocks - accessories			B8/54

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

LC1SK contactors can be fitted with an add-on block or auxilliary contact block, LP1SK and LC1SKGC contactors can't.

Mini-contactors for motor in category 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) (3)}
220 V	380 V	660 V					
230 V	415 V	690 V					
kW	kW	kW	A				
1.1	2.2	2.2	6	2	—	—	LC1SK0600●●

Mini-contactors for motor 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) (3)}
					
A					
2	a.c.	2	—	—	LC1SK0600●●
	d.c.	2	—	—	LP1SK0600●●

(1) For use in AC-3 category and 3-phase circuits, an **LA1SK●●** auxiliary contact block should be ordered separately for mounting on the contactor.

(2) Standard control circuit voltages (variable delivery times, please consult your Regional Sales Office):

Mini-contactors LC1SK									
Volts ~ 50/60 Hz	24	48	110	120	220	230	240	380	400
Code	B7	E7	F7	G7	M7	P7	U7	Q7	V7

Mini-contactors LP1SK					
Volts ~	12	24	36	48	72
Code	JD	BD	CD	ED	SD

(3) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

Add-on power pole (for 3-phase circuits) with aux. contact				
For use on contactor LC1SK0600●● with 1 NO power pole (6 AAC-3, 10 A AC-1) and with 1 NC aux. contact (lth 10 A). Ue 690 V AC 50/60 Hz for both contacts	Number of poles	Instantaneous auxiliary contacts	Reference	
				
Clip-on front mounting	1	–	1	LA1SK01

Instantaneous auxiliary contact blocks				
For use on contactor LC1SK0600●● Aux. contacts: lth 10 A. Ue: 690 V AC 50/60 Hz	Maximum number of blocks per contactor	Composition		Reference
				
Clip-on front mounting	1	2	–	LA1SK20
		–	2	LA1SK02
		1	1	LA1SK11

Coil suppressor modules				
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
LC1SK0600●●	Varistor ⁽¹⁾	~ and ~ 24 V...48 V	10	LA4SKE1E
LP1SK0600●●, LC1SKGC	Diode ⁽²⁾	~ and ~ 110 V...250 V	10	LA4SKE1U
		~ 24 V...250 V	10	LA4SKC1U

(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).

TeSys Control

SKGC Contactors

Product references



LC1SKGC200



LC1SKGC300

- Mini-contactors 25 and 47 mm pitch for use in modular panels.
- Mounting on 35 mm rail or fixing by four Ø4 screws, except for LC1SKGC200.
 - Connection by connectors.
 - Mini-contactor fitted with transparent, sealable protective cover to prevent front face access.

Mini-contactors, width 27 mm								
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3			Rated operational current in AC-3 up to 400 V	Non inductive loads category AC-1 maximum current $\theta \leq 50\text{ }^{\circ}\text{C}$	No. of poles			Basic reference, to be completed by adding the voltage code ⁽¹⁾ ⁽²⁾
220 V	380 V	660 V						
230 V	415 V	690 V						
kW	kW	kW	A	A				
–	–	–	5	20	2	–	–	LC1SKGC200●●

Mini-contactors, width 45 mm								
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3			Rated operational current in AC-3 up to 400 V	Non inductive loads category AC-1 maximum current $\theta \leq 50\text{ }^{\circ}\text{C}$	No. of poles			Basic reference, to be completed by adding the voltage code ⁽¹⁾ ⁽²⁾
220 V	380 V	660 V						
230 V	415 V	690 V						
kW	kW	kW	A	A				
1.1	4	4	9	20	3	1	–	LC1SKGC310●●
					3	–	1	LC1SKGC301●●

(1) Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts ~ 50/60 Hz	24	48	110	120	220	230	240	380	400
Code	B7	E7	F7	G7	M7	P7	U7	Q7	V7

(2) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.



Contactors

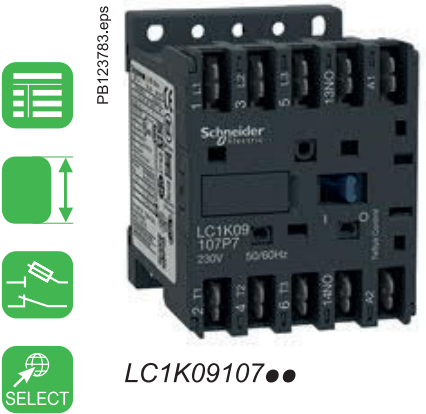
TeSys Control
K Contactors
Product references



LC1K0910●●



LC1K09103●●



LC1K09107●●



LC1K09105●●



LC7K0910●●

Mounting on 35 mm rail or Ø4 screw fixing.
Screws in the open “ready-to-tighten” position.
Add-on auxiliary contact blocks and accessories, see pages B8/13 to B8/15.

3-pole contactors - Motor control 6 to 16 A in categories AC-3 AC-4 - a.c. coil

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3				Rated operational current in category AC-3 440 V up to	Instantaneous auxiliary contacts	Basic reference, to be completed by adding the voltage code ^{(1) (2)}
220 V	380 V	440/500 V				
230 V	415 V	660/690 V				
kW	kW	kW	A			
Screw clamp connections						
1.5	2.2	3	6	1	-	LC1K0610●●
				-	1	LC1K0601●●
2.2	4	4	9	1	-	LC1K0910●●
				-	1	LC1K0901●●
3	5.5	4 (> 440)	12	1	-	LC1K1210●●
		5.5 (440)		-	1	LC1K1201●●
4	7.5	4 (> 440)	16	1	-	LC1K1610●●
		5.5 (440)		-	1	LC1K1601●●

Spring terminal connections ⁽³⁾

For 6 to 12 A ratings only, in the references selected above, insert a figure **3** before the voltage code.
Example: LC1K0610●● becomes LC1K06103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

For 6 to 16 A ratings, in the references selected above, insert a figure **7** before the voltage code.
Example: LC1K0610●● becomes LC1K06107●●.

Solder pins for printed circuit boards

For 6 to 16 A ratings, in the references selected above, insert a figure **5** before the voltage code.
Example: LC1K0610●● becomes LC1K06105●●.

3-pole silent contactors

Recommended for use in areas sensitive to noise, high interference mains supplies, etc.
Coil with rectifier incorporated, suppressor fitted as standard.

Screw clamp connections						
1.5	2.2	3	6	1	-	LC7K0610●●
				-	1	LC7K0601●●
2.2	4	4	9	1	-	LC7K0910●●
				-	1	LC7K0901●●
3	5.5	4 (> 440)	12	1	-	LC7K1210●●
		5.5 (440)		-	1	LC7K1201●●

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure **7** before the voltage code.
Example: LC7K0610●● becomes LC7K06107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure **5** before the voltage code.
Example: LC7K0610●● becomes LC7K06105●●.

Standard control circuit voltages (for other voltages, please consult your Regional Sales office)

Coil voltage codes - a.c. ⁽⁴⁾

Contactors LC1K (0.8...1.15 Uc) (0.85...1.1 Uc)														
Volts	12	20	24 ⁽¹⁾	36	42	48	110	115	120	127	200/208	220/230	230	230/240
50 Hz ⁽⁵⁾			B5		D5	E5							P5	
50/60 Hz	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7
Volts	256	277	380/400		400	400/415	440	480	500	575	600	660/690		
50/60 Hz	W7	UE7	Q7	-	V7	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**.

Contactors LC7K (0.85...1.1 Uc)							
Volts	24	42	48	110	115	220	230/240
50/60 Hz	B7	D7	E7	F7	FE7	M7	U7

- (1) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module **LA4KE1FC** (50...129 V) or **LA4KE1UG** (130...250 V), see page B8/14.
- (2) Please check the availability of your variant in the index page B8/55. The **SEARCH** function of your viewer can be used.
- (3) For **LC●K●●●●3/LP●K●●●●3** with spring terminal, I_{th} max = 10 A.
- (4) (0.8...1.15 Uc) for single voltage coil; (0.85...1.1 Uc) for dual voltage coil, exemple 200/208 V AC.
- (5) Only available for 'screw clamp terminals' versions.

TeSys Control
K Contactors
Product references



LP1K0910●●



LP1K09103●●



LP1K09105●●



LP4K0910●●

Contactors selection according to utilisation category, see pages A5/34 to A5/39 and A5/42 to A5/45.
Mounting on 35 mm rail or Ø4 screw fixing.
Screws in the open “ready-to-tighten” position.
Add-on auxiliary contact blocks and accessories, see pages B8/13 to B8/15.

3-pole contactors - Motor control 6 to 12 A in categories AC-3 AC-4 - d.c. coil

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3			Rated operational current in category AC-3 440 V up to	Instantaneous auxiliary contacts	Basic reference, to be completed by adding the voltage code ^{(1) (2)}	
220 V	380 V	440/500 V				
230 V	415 V	660/690 V				

kW	kW	kW	A			
Screw clamp connections						
1.5	2.2	3	6	1	—	LP1K0610●●
				—	1	LP1K0601●●
2.2	4	4	9	1	—	LP1K0910●●
				—	1	LP1K0901●●
3	5.5	4 (> 440)	12	1	—	LP1K1210●●
		5.5 (440)		—	1	LP1K1201●●

Spring terminal connections ⁽³⁾

In the references selected above, insert a figure 3 before the voltage code.
Example: LP1K0610●● becomes LP1K06103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.
Example: LP1K0610●● becomes LP1K06107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure 5 before the voltage code.
Example: LP1K0610●● becomes LP1K06105●●.

3-pole low consumption contactors

Compatible with programmable controller outputs.
Wide range coil (0.7...1.30 Uc), suppressor fitted as standard, consumption 1.8 W.

Screw clamp connections						
1.5	2.2	3	6	1	–	LP4K0610●●
				–	1	LP4K0601●●
2.2	4	4	9	1	–	LP4K0910●●
				–	1	LP4K0901●●
3	5.5	4 (> 440)	12	1	–	LP4K1210●●
		5.5 (440)		–	1	LP4K1201●●

Spring terminal connections

In the references selected above, insert a figure 3 before the voltage code.
Example: LP4K0610●● becomes LP4K06103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.
Example: LP4K0610●● becomes LP4K06107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure 5 before the voltage code.
Example: LP4K0610●● becomes LP4K06105●●.

Standard control circuit voltages (for other voltages, please consult your Regional Sales office)
d.c. supply (contactors LP1K: 0.8...1.15 Uc)

Volts	12	20	24 ⁽¹⁾	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

Low consumption (contactors LP4K: 0.7...1.3 Uc)

Volts	12	20	24	48	72	110	120
Code	JW3	ZW3	BW3	EW3	SW3	FW3	GW3

Coil with integral suppression device fitted as standard, by bi-directional peak limiting diode.

- (1) For LP1K only, when connecting an electronic sensor or timer in series with the contactor coil, select a 20 V coil (~ control circuit voltage code Z7, ≡ control circuit voltage code ZD) so as to compensate for the incurred voltage drop.
(2) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
(3) For LC●K●●●●3 / LP●K●●●●3 with spring terminal), I_{th} max = 10 A.



Contactors selection according to utilisation category, see pages A5/40 and A5/41.
Mounting on 35 mm  rail or Ø4 screw fixing.
Screws in the open “ready-to-tighten” position.
Add-on auxiliary contact blocks and accessories, see pages B8/13 to B8/15.

3 or 4-pole contactors - Load control up to 20 A in category AC-1 - a.c. coil ⁽¹⁾

Non-inductive loads Category AC-1 Maximum current at $\theta \leq 50\text{ }^{\circ}\text{C}$	Number of poles 	Instantaneous auxiliary contacts 	Basic reference, to be completed by adding the voltage code ^{(2) (3)}
--	---	--	--

A
Screw clamp connections

20	3	—	1	—	LC1K0910●● or LC1K1210●● LC1K0901●● or LC1K1201●● LC1K09004●● or LC1K12004●● LC1K09008●●
	3	—	—	1	
	4	—	—	—	
	2	2	—	—	

Spring terminal connections ⁽⁴⁾

In the references selected above, insert a figure 3 before the voltage code.
Example: LC1K0910●● becomes LC1K09103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.
Example: LC1K0910●● becomes LC1K09107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure 5 before the voltage code.
Example: LC1K0910●● becomes LC1K09105●●.

3 or 4-pole silent contactors ⁽¹⁾

Recommended for use in areas sensitive to noise, high interference mains supplies, etc.
Coil with rectifier incorporated, suppressor fitted as standard.

Screw clamp connections

20	3	—	1	—	LC7K0910●● or LC7K1210●● LC7K0901●● or LC7K1201●● LC7K09004●● or LC7K12004●● LC7K09008●●
	3	—	—	1	
	4	—	—	—	
	2	2	—	—	

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.
Example: LC7K0910●● becomes LC7K09107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure 5 before the voltage code.
Example: LC7K0910●● becomes LC7K09105●●.

⁽¹⁾ Coordination tables between 9 and 12 A ratings according to number of operating cycles, see AC-1 curve on page A5/40.

Standard control circuit voltages (for other voltages, please consult your Regional Sales office)

Coil voltage codes - a.c. ⁽⁵⁾

Contactors LC1K (0.8...1.15 Uc) (0.85...1.1 Uc)														
Volts	12	20	24 ⁽²⁾	36	42	48	110	115	120	127	200/208	220/230	230	230/240
50 Hz ⁽⁶⁾			B5		D5	E5							P5	
50/60 Hz	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7
Volts	256	277	380/400		400	400/415		440	480	500	575	600	660/690	
50/60 Hz	W7	UE7	Q7		V7	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.

Contactors LC7K (0.8...1.1 Uc)							
Volts	24	42	48	110	115	220	230/240
50/60 Hz	B7	D7	E7	F7	FE7	M7	U7

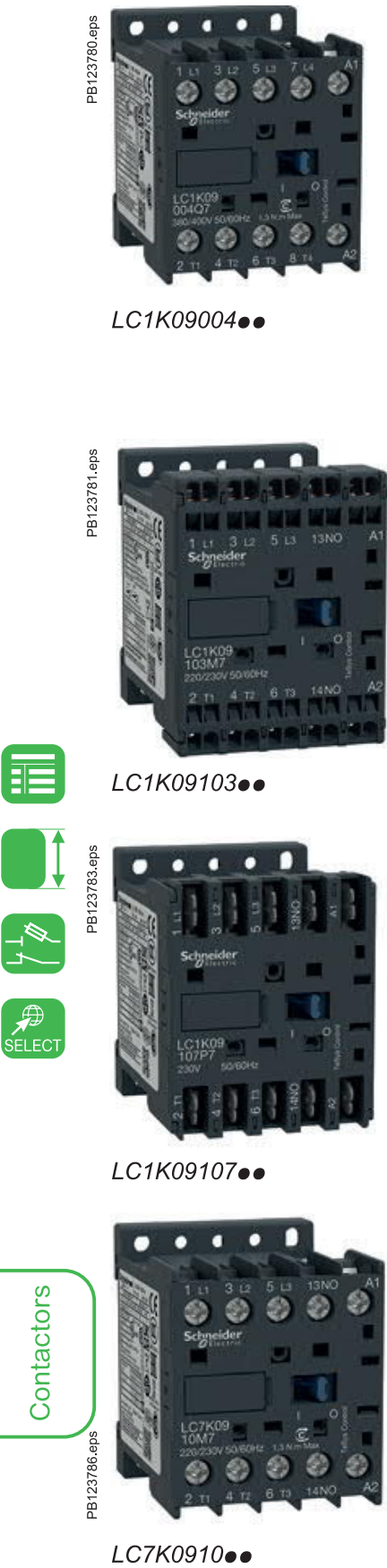
⁽²⁾ For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4KE1FC (50...129 V) or LA4KE1UG (130...250 V), see page B8/14.

⁽³⁾ Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

⁽⁴⁾ For LC●K●●●●3 / LP●K●●●●3 with spring terminal, I_{th} max = 10 A.

⁽⁵⁾ (0.8...1.15 Uc) for single voltage coil; (0.85...1.1 Uc) for dual voltage coil, exemple 200/208 V AC.

⁽⁶⁾ Only available for ‘screw clamp terminals’ versions.



TeSys Control
K Contactors
Product references

Contactor selection according to utilisation category, see pages A5/40 and A5/41.
Mounting on 35 mm  rail or Ø4 screw fixing.
Screws in the open “ready-to-tighten” position.
Add-on auxiliary contact blocks and accessories, see pages B8/13 to B8/15.



LP1K09004●●



LP1K09103●●



LP1K09105●●



LP4K0910●●●

3 and 4-pole contactors - Load control - 20 A in category AC-1 - d.c. coil ⁽¹⁾

Non-inductive loads Category AC-1 Maximum current at $\theta \leq 50\text{ }^{\circ}\text{C}$	Number of poles 		Instantaneous auxiliary contacts 		Basic reference, to be completed by adding the voltage code ^{(2) (3)}
A					
Screw clamp connections					
20	3	—	1	—	LP1K0910●● or LP1K1210●●
	3	—	—	1	LP1K0901●● or LP1K1201●●
	4	—	—	—	LP1K09004●● or LP1K12004●●
	2	2	—	—	LP1K09008●●

Spring terminal connections ⁽⁴⁾

In the references selected above, insert a figure 3 before the voltage code.
Example: LP1K0910●● becomes LP1K09103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.
Example: LP1K0910●● becomes LP1K09107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure 5 before the voltage code.
Example: LP1K0910●● becomes LP1K09105●●.

3 or 4-pole 20 A / AC-1 - d.c. low consumption coil ⁽¹⁾

Compatible with programmable controller outputs.
Wide range coil (0.7...1.30 Uc), suppressor fitted as standard, consumption 1.8 W.

Screw clamp connections				
20	3	—	1 —	LP4K0910●●● or LP4K1210●●●
	3	—	— 1	LP4K0901●●● or LP4K1201●●●
	4	—	— —	LP4K09004●●● or LP4K12004●●●
	2	2	— —	LP4K09008●●●

Spring terminal connections

In the references selected above, insert a figure 3 before the voltage code.
Example: LP4K0910●● becomes LP4K09103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.
Example: LP4K0910●● becomes LP4K09107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure 5 before the voltage code.
Example: LP4K0910●● becomes LP4K09105●●.

⁽¹⁾ Coordination tables between 9 and 12 A ratings according to number of operating cycles, see AC-1 curve on page A5/40.

Standard control circuit voltages (for other voltages, please consult your Regional Sales office)

Coil voltage codes - d.c. (contactors LP1K: 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 integral suppression device available: add 3 to the code required. Example: JD3.

Coil voltage codes - low consumption d.c. (contactors LP4K: 0.7...1.3 Uc)							
Volts 	12	20	24	48	72	110	120
Code	JW3	ZW3	BW3	EW3	SW3	FW3	GW3

Coil with integral suppression device fitted as standard, by bi-directional peak limiting diode.
⁽²⁾ For LP1K only, when connecting an electronic sensor or timer in series with the contactor coil, 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.
⁽³⁾ Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
⁽⁴⁾ For LC●K●●●●3 / LP●K●●●●3 with spring terminal, I_{th} max = 10 A.



Reversing contactor selection according to utilisation category, see pages A5/34 to A5/39 and A5/42 to A5/45.

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 Ø4 screw fixing. Screws in the open “ready-to-tighten” position.

Add-on auxiliary contact blocks and accessories, see pages B8/13 to B8/15.

3-pole reversing contactors - Motor control 6 to 16 A in categories AC-3 AC-4 - a.c. coil

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3			Rated operational current in category AC-3 440 V up to	Instantaneous auxiliary contacts per contactor 		Basic reference, to be completed by adding the voltage code ^{(1) (2)}
220 V 230 V	380 V 415 V	440/500 V 660/690 V				
kW	kW	kW				
Screw clamp connections						
1.5	2.2	3	6	1	—	LC2K0610●●
				—	1	LC2K0601●●
2.2	4	4	9	1	—	LC2K0910●●
				—	1	LC2K0901●●
3	5.5	4 (> 440)	12	1	—	LC2K1210●●
		5.5 (440)		—	1	LC2K1201●●
4	7.5	4 (> 440)	16	1	—	LC2K1610●●
		5.5 (440)		—	1	LC2K1601●●

Spring terminal connections ⁽³⁾

For 6 to 12 A ratings only, in the references selected above, insert a figure 3 before the voltage code.

Example: LC2K0610●● becomes LC2K06103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

For 6 to 16 A ratings, in the references selected above, insert a figure 7 before the voltage code.

Example: LC2K0610●● becomes LC2K06107●●.

Solder pins for printed circuit boards

For 6 to 16 A ratings, in the references selected above, insert a figure 5 before the voltage code.

Example: LC2K0610●● becomes LC2K06105●●.

Standard control circuit voltages (for other voltages, please consult your Regional Sales office)

Coil voltage codes - a.c. ⁽⁴⁾

Reversing contactors LC2K (0.8...1.15 Uc) (0.85...1.1 Uc)														
Volts	12	20	24 ⁽¹⁾	36	42	48	110	115	120	127	200/208	220/230	230	230/240
50/60 Hz	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7
Volts	256	277	380/400	400	400/415	440	480	500	575	600	660/690			
50/60 Hz	W7	UE7	Q7	V7	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.

(1) For mains supplies with a high level of interference (voltage surge > 800 V), use a suppressor module LA4KE1FC (50...129 V) or LA4KE1UG (130...250 V), see page B8/14.

(2) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

(3) For LC●K●●●●3 / LP●K●●●●3 with spring terminal, lth max = 10 A.

(4) (0.8...1.15 Uc) for single voltage coil; (0.85...1.1 Uc) for dual voltage coil, exemple 200/208 V AC.

TeSys Control

K Reversing contactors

Product references

Reversing contactor selection according to utilisation category, see pages A5/34 to A5/39 and A5/42 to A5/45.
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 Ø4 screw fixing.
Screws in the open “ready-to-tighten” position.
Add-on auxiliary contact blocks and accessories, see pages B8/13 to B8/15.

3-pole reversing contactors - Motor control 6 to 12 A in categories AC-3 AC-4 - d.c. coil

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3			Rated operational current in category AC-3 440 V up to	Instan- taneous auxiliary contacts per contactor		Basic reference, to be completed by adding the voltage code ^{(1) (2)}
220 V	380 V	440/500 V				
230 V	415 V	660/690 V				
kW	kW	kW	A			
Screw clamp connections						
1.5	2.2	3	6	1	—	LP2K0610●●
				—	1	LP2K0601●●
2.2	4	4	9	1	—	LP2K0910●●
				—	1	LP2K0901●●
3	5.5	4 (> 440)	12	1	—	LP2K1210●●
		5.5 (440)		—	1	LP2K1201●●

Spring terminal connections ⁽³⁾

In the references selected above, insert a figure 3 before the voltage code.
Example: LP2K0610●● becomes LP2K06103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.
Example: LC2K0610●● becomes LC2K06107●●.

Solder pins for printed circuit boards

For 6 to 16 A ratings, in the references selected above, insert a figure 5 before the voltage code.
Example: LC2K0610●● becomes LC2K06105●●.

3-pole low consumption reversing contactors

Compatible with programmable controller outputs.
Wide range coil (0.7... 1.30 Uc), suppressor fitted as standard, consumption 1.8 W.

Screw clamp connections						
1.5	2.2	3	6	1	—	LP5K0610●●
				—	1	LP5K0601●●
2.2	4	4	9	1	—	LP5K0910●●
				—	1	LP5K0901●●
3	5.5	4 (> 440)	12	1	—	LP5K1210●●
		5.5 (440)		—	1	LP5K1201●●

Spring terminal connections

In the references selected above, insert a figure 3 before the voltage code.
Example: LP5K0610●● becomes LP5K06103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.
Example: LP5K0610●● becomes LP5K06107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure 5 before the voltage code.
Example: LP5K0610●● becomes LP5K06105●●.

Standard control circuit voltages (for other voltages, please consult your Regional Sales office)

Coil voltage codes - d.c.

Reversing contactors LP2K (0.8... 1.15 Uc)																		
Volts	12	20	24 ⁽¹⁾	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.

Coil voltage codes - low consumption d.c.

Reversing contactors LP5K (0.7... 1.3 Uc)							
Volts	12	20	24	48	72	110	120
Code	JW3	ZW3	BW3	EW3	SW3	FW3	GW3

Coil with integral suppression device fitted as standard, by bi-directional peak limiting diode.
⁽¹⁾ For LP2K only, when connecting an electronic sensor or timer in series with the contactor coil, select a 20 V coil (~ control circuit voltage code Z7, --- control circuit voltage code ZD) so as to compensate for the incurred voltage drop.
⁽²⁾ Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
⁽³⁾ For LC●K●●●●3 / LP●K●●●●3 with spring terminal, Ith max = 10 A.

TeSys Control

K Reversing contactors

Product references

PB123784.tif



LC2K0910●●

PB123785.eps



LC2K09105●●



Contactors

Warning: reversing contactors LC2K0910●● and LC2K0901●● are pre-wired for reverse motor operation as standard.

Reversing contactor selection according to utilisation category, see pages A5/40 and A5/41.

Integral mechanical interlock.

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

Mounting on 35 mm rail or Ø4 screw fixing.

Screws in the open “ready-to-tighten” position.

Add-on auxiliary contact blocks and accessories, see pages B8/13 to B8/15.

3 or 4-pole reversing contactors - Load control - 20 A in category AC-1 - a.c. coil ⁽¹⁾

Non-inductive loads Category AC-1 Maximum current at θ ≤ 50 °C	Number of poles	Instantaneous auxiliary contacts per contactor	Basic reference, to be completed by adding the voltage code ^{(2) (3)}

A						
Screw clamp connections						
20	3	—	1	—		LC2K0910●●
					or	LC2K1210●●
	3	—	—	1		LC2K0901●●
					or	LC2K1201●●
	4	—	—	—		LC2K09004●●
					or	LC2K12004●●

Spring terminal connections ⁽⁴⁾

In the references selected above, insert a figure 3 before the voltage code.

Example: LC2K0910●● becomes LC2K09103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure 7 before the voltage code.

Example: LC2K0910●● becomes LC2K09107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure 5 before the voltage code.

Example: LC2K0910●● becomes LC2K09105●●.

⁽¹⁾ Coordination tables between 9 and 12 A ratings according to number of operating cycles, see AC-1 curve on page A5/40.

Standard control circuit voltages (for other voltages, please consult your Regional Sales office)

Coil voltage codes - a.c. ⁽⁵⁾

Reversing contactors LC2K (0.8...1.15 Uc) (0.85...1.1 Uc)														
Volts	12	20	24 ⁽²⁾	36	42	48	110	115	120	127	200/208	220/230	230	230/240
50/60 Hz	J7	Z7	B7	C7	D7	E7	F7	FE7	G7	FC7	L7	M7	P7	U7
Volts	256	277	380/400	400	400/415	440	480	500	575	600	660/690			
50/60 Hz	W7	UE7	Q7		V7	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 LA4KE1FC (50...129 V) or LA4KE1UG (130...250 V), see page B8/14.

⁽³⁾ Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

⁽⁴⁾ For LC●K●●●●3 / LP●K●●●●3 with spring terminal, I_{th} max = 10 A.

⁽⁵⁾ (0.8...1.15 Uc) for single voltage coil; (0.85...1.1 Uc) for dual voltage coil, exemple 200/208 V AC.

Warning: reversing contactors LP2K0910●● and LP2K0901●● are pre-wired for reverse motor operation as standard.

Reversing contactor selection according to utilisation category, see pages A5/40 and A5/41.

Integral mechanical interlock.

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

Mounting on 35 mm rail or Ø4 screw fixing.

Screws in the open “ready-to-tighten” position.

Add-on auxiliary contact blocks and accessories, see pages B8/13 to B8/15.

3 or 4-pole reversing contactors - Load control - 20 A in category AC-1 - d.c. coil ⁽¹⁾

Non-inductive loads Category AC-1 Maximum current at $\theta \leq 50\text{ }^{\circ}\text{C}$	Number of poles	Instantaneous auxiliary contacts per contactor	Basic reference, to be completed by adding the voltage code ^{(2) (3)}
			

A

Screw clamp connections

20	3	—	1	—	LP2K0910●●
				or	LP2K1210●●
	3	—	—	1	LP2K0901●●
				or	LP2K1201●●
	4	—	—	—	LP2K09004●●
				or	LP2K12004●●

Spring terminal connections ⁽⁴⁾

In the references selected above, insert a figure **3** before the voltage code.

Example: LP2K0910●● becomes LP2K09103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure **7** before the voltage code.

Example: LP2K0910●● becomes LP2K09107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure **5** before the voltage code.

Example: LP2K0910●● becomes LP2K09105●●.

3 or 4-pole reversing contactors - 20 A / AC-1 - d.c. low consumption coil ⁽¹⁾

Compatible with programmable controller outputs.

Wide range coil (0.7...1.30 Uc), suppressor fitted as standard, consumption 1.8 W.

Screw clamp connections

20	3	—	1	—	LP5K0910●●●
				or	LP5K1210●●●
	3	—	—	1	LP5K0901●●●
				or	LP5K1201●●●
	4	—	—	—	LP5K09004●●●
				or	LP5K12004●●●

Spring terminal connections

In the references selected above, insert a figure **3** before the voltage code.

Example: LP5K0910●● becomes LP5K09103●●.

Faston connectors, 1 x 6.35 or 2 x 2.8

In the references selected above, insert a figure **7** before the voltage code.

Example: LP5K0910●● becomes LP5K09107●●.

Solder pins for printed circuit boards

In the references selected above, insert a figure **5** before the voltage code.

Example: LP5K0910●● becomes LP5K09105●●.

⁽¹⁾ Coordination tables between 9 and 12 A ratings according to number of operating cycles, see AC-1 curve on page A5/40.

Standard control circuit voltages (for other voltages, please consult your Regional Sales office)

Coil voltage codes - d.c. (reversing contactors LP2K: 0.8...1.15 Uc)

Volts $\overline{\text{---}}$	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 integral suppression device available: add **3** to the code required. Example: **JD3**.

Coil voltage codes - low consumption d.c. (reversing contactors LP5K: 0.7...1.3 Uc)

Volts $\overline{\text{---}}$	12	20	24	48	72	110	120
Code	JW3	ZW3	BW3	EW3	SW3	FW3	GW3

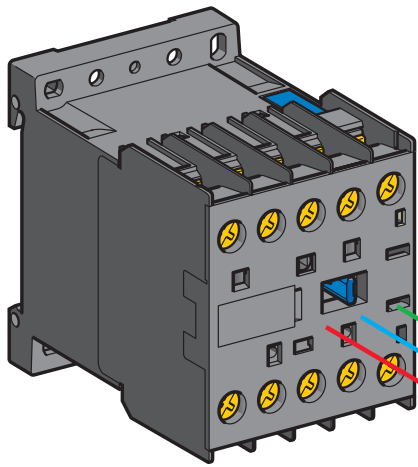
Coil with integral suppression device fitted as standard, by bi-directional peak limiting diode.

⁽²⁾ For LP2K only, when connecting an electronic sensor or timer in series with the contactor coil, select a 20 V coil ($\sim$ control circuit voltage code Z7, $\overline{\text{---}}$ control circuit voltage code ZD) so as to compensate for the incurred voltage drop.

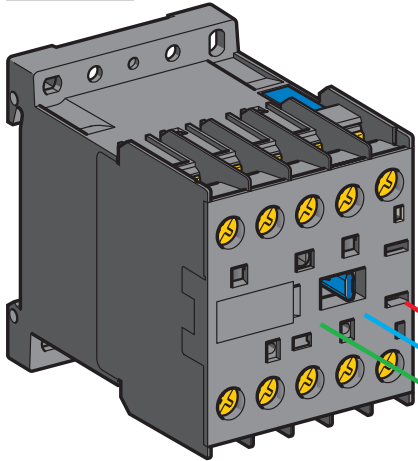
⁽³⁾ Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

⁽⁴⁾ For LC●K●●●●3 / LP●K●●●●3 with spring terminal, lth max = 10 A.

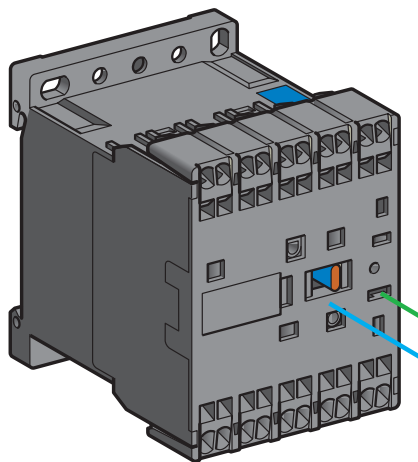




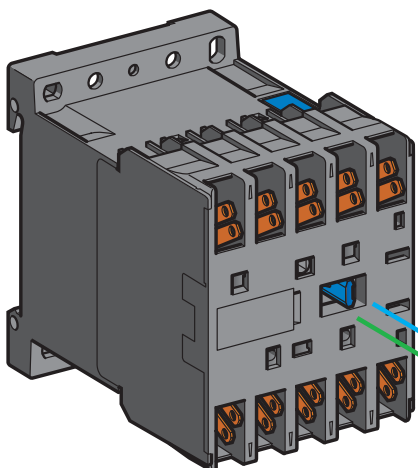
LC1, LC7, LP1 K



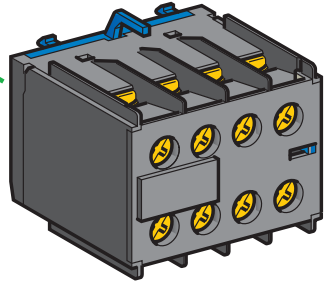
LC1, LC7, LP1 K



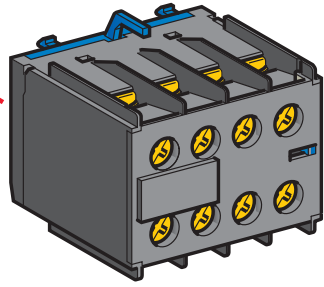
LC1, LP1 K



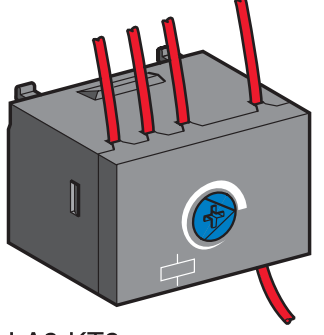
LC1, LC7, LP1 K



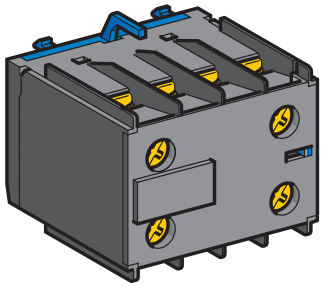
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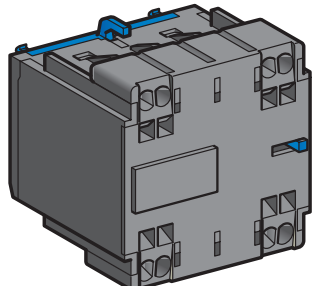
LA1 KN...



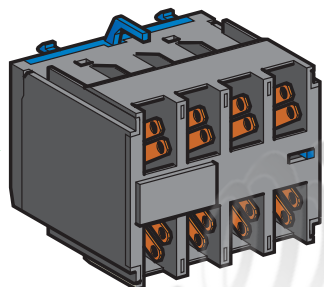
LA2 KT2...



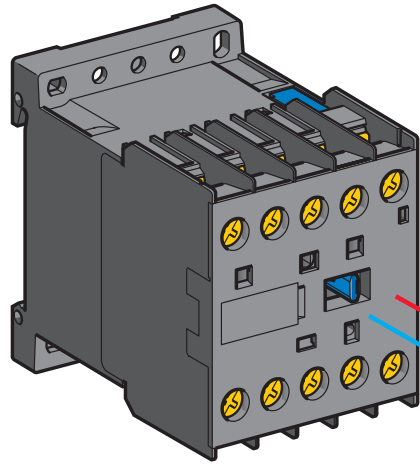
LA1 KN...P



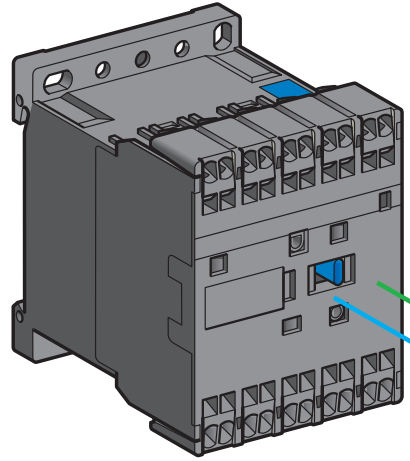
LA1 KN...3



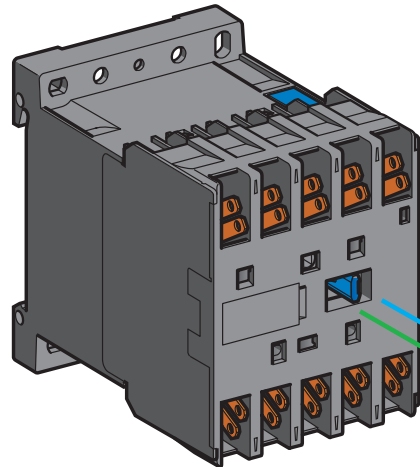
LA1 KN...7



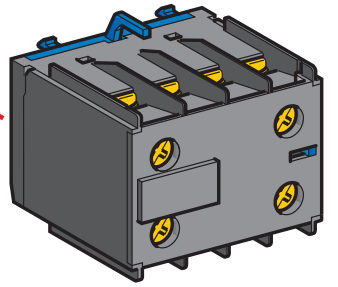
LP4



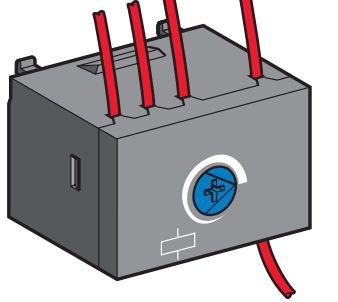
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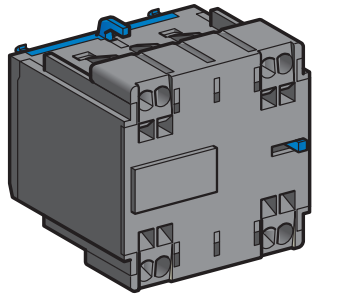
LP4



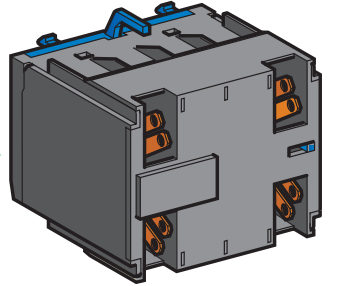
LA1 KN...



LA2 KT2...



LA1 KN...3



LA1 KN...7

Contactors

PNL-EE
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WWW.PONLEE.COM.TW

TeSys Control

K Contactors - Auxiliary contacts blocks

Product references



LA1KN22



LA1KN223



LA1KN407

Instantaneous auxiliary contact blocks

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

Connection	For use on contactors	Composition		Reference
				
Screw clamp terminals	All products with screw clamp terminals	2	–	LA1KN20
		–	2	LA1KN02
		1	1	LA1KN11
	All products with screw clamp terminals except low consumption	4	–	LA1KN40
		3	1	LA1KN31
		2	2	LA1KN22
Spring terminals	All products with spring terminals	1	3	LA1KN13
		–	4	LA1KN04
		2	–	LA1KN203
		–	2	LA1KN023
		1	1	LA1KN113
		4	–	LA1KN403
	All products with spring terminals except low consumption	3	1	LA1KN313
		2	2	LA1KN223
		1	3	LA1KN133
		–	4	LA1KN043
	Faston connectors, 1 x 6.35 or 2 x 2.8	2	–	LA1KN207
		4	–	LA1KN407
Faston connectors, 1 x 6.35 or 2 x 2.8	All products with Faston connectors except low consumption	3	1	LA1KN317

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

Screw clamp terminals with referencing conforming to standard EN 50012	All 3-pole + N/O products with screw clamp terminals except LP4 and LP5K12	–	2	LA1KN02M
		1	1	LA1KN11M
	All 3-pole + N/O products with screw clamp terminals except LP4 or LP5K06, K09 and K12	3	1	LA1KN31M
		2	2	LA1KN22M

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
					
V		s			
~ or 24...48	On-delay	1...30	1		LA2KT2E
~ 110...240	On-delay	1...30	1		LA2KT2U



Contactors

TeSys Control

K Contactors - Suppressor modules

Product references



References				
Mounting and connection	Type	For voltages	Sold in lots of	Unit reference
Clip-on fixing on the front of contactors LC1 and LP1, with locating device. No tools required.	Varistor ⁽¹⁾	~ and ≡ 12...24 V	5	LA4KE1B
		~ and ≡ 32...48 V	5	LA4KE1E
		~ and ≡ 50...129 V	5	LA4KE1FC
		~ and ≡ 130...250 V	5	LA4KE1UG
	Diode + Zener diode ⁽²⁾	≡ 12...24 V	5	LA4KC1B
		≡ 32...48 V	5	LA4KC1E
	RC ⁽³⁾	~ 110...250 V	5	LA4KA1U

- (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.
Polarised component.
Slight increase in drop-out time (1.1 to 1.5 times the normal time).
- (3) Protection by limiting the transient voltage to 3 Uc max. and limitation of the oscillating frequency.
Slight increase in drop-out time (1.2 to 2 times the normal time).

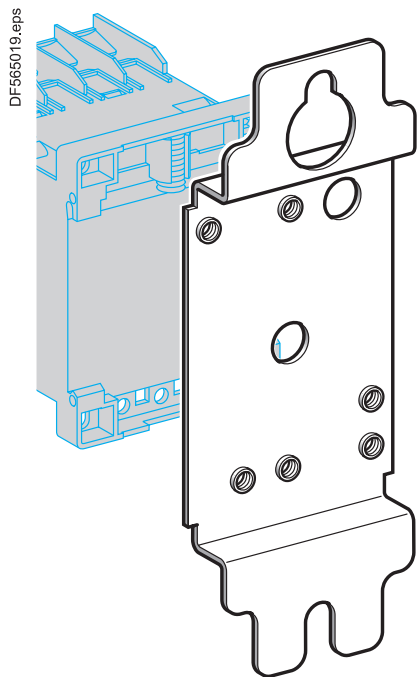


Contactors

TeSys Control

K Contactors - Accessories

Product references



DX1AP25



LA9E01

Mounting and marking accessories				
Description	Application		Sold in lots of	Unit reference
Mounting plates ⁽¹⁾	For fixing on 2 rails	110/120 mm fixing centres	10	DX1AP25
Marker holder	Clip-on	Onto front of contactor	100	LA9D90
Clip-in markers	4 maximum per contactor	Strips of 10 identical numbers 0...9	25	AB1R● ⁽²⁾
		Strips of 10 identical letters A...Z	25	AB1G● ⁽²⁾

Connection accessories				
Description	Application		Sold in lots of	Unit preference
Paralleling links	For 2 poles	With screw clamps	4	LA9E01
	For 4 poles	With screw clamps	2	LA9E02
Set of 6 power connections	For 3-pole reversing contactors for motor control	For contactors with screw clamp terminals	100	LA9K0969

- (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 dot with the required character.



Contactors



Control Panel Technical Guide:
Mounting and wiring accessories for TeSys K, Deca, F contactors. Star-delta, reverser, low-high speed control motor starters and changeover applications - Product references and details on all kits and wiring accessories.

> Ref. Document: CPTG011_EN



> Click on QR code to download

TeSys Control

Deca Contactors

Introduction

Deca green, enriching Deca family

Deca conventional contactors 9 to 150 A, for motor control and other applications.

Deca green delivers a consistent low consumption range of contactors from 9 A to 80 A, covering control voltage from 24 to 250 V, with same coils for AC and DC.



When implemented with other Schneider Electric products*, Deca green contactors are part of a comprehensive solution that is ideal for all types of industrial machines and processes.

Deca Overload relay

By combining a Deca green contactor with our new Deca electronic overload relay, you will have less heat generation, and further reduce energy consumption.



* such as PLC I/O type M580, M340, M221 or M241 or extended I/O type Advantys STB range, or in association with Deca electronic overload relays or Tera Motor management system.

TeSys Control

Deca Contactors

Introduction



Highly competitive coil consumption

Small changes can generate big savings. The new Deca green contactor is equipped with an innovative electronic coil. These electronic-coil contactors require **up to 80 % less energy** than electro-mechanical contactors. This innovation results in concrete values: for example, large plants can noticeably reduce their energy bills and heat dissipation in cabinet.

Available in



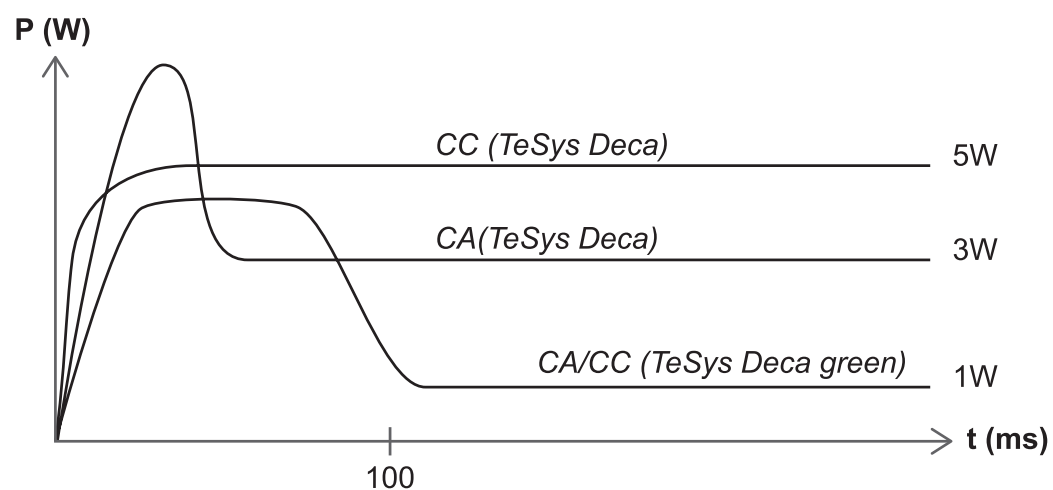
09-12-18 A

25-32-38 A

40-50-65-80 A

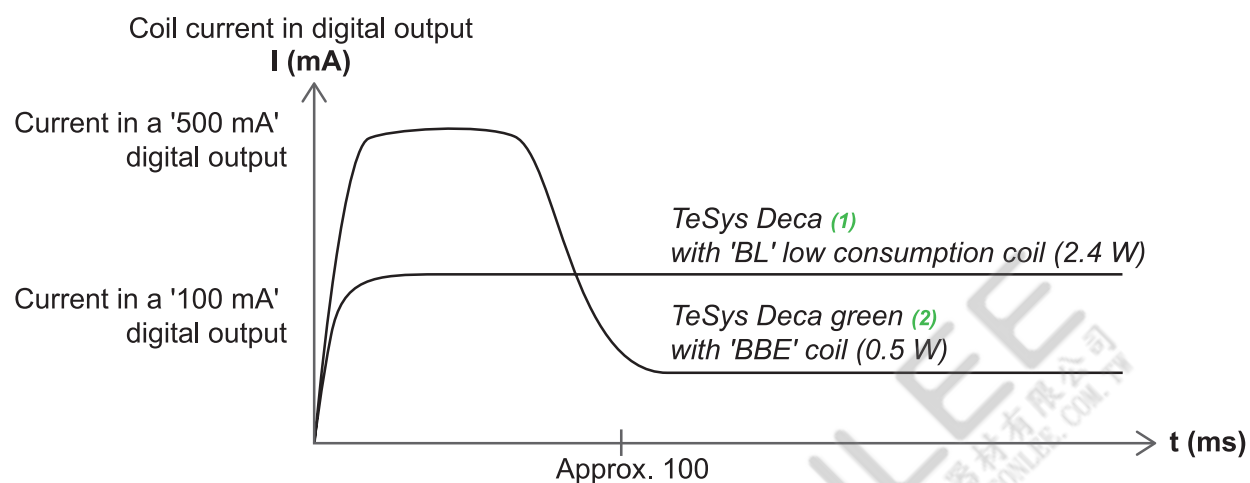
Coil currents comparison

Deca green contactors (AC/DC coil) vs Deca contactors (AC, DC coils)



Deca green brings a significant reduction of energy consumption.

Deca green contactors ("BBE" coil) vs Deca contactors (low consumption "BL" coil)



(1) Up to 38 A.
(2) 40 to 80 A.

Deca green contactor is well adapted to direct control by PLC static outputs, even in its high ratings.

Contactors

TeSys Control

Deca green Contactors

Product references

PB121708.tif



LC1D09●●●

PB121710.tif



LC1D40A●●●



Contactors

Deca green contactors have a dark grey casing and a 3-character code voltage.

3-pole contactors - Motor control up to 37 kW / 400 V - Category AC-3										
Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 (θ ≤ 60 °C)						Rated opera- tional current in AC-3 440 V up to	Instan- taneous auxiliary contacts		Basic reference, to be completed by adding the control voltage code ⁽¹⁾	Weight
220 V 230 V	380 V 400 V	415 V	440 V	500 V	660 V 690 V					
kW	kW	kW	kW	kW	kW		A			
Connection by screw clamp terminals										
2.2	4	4	4	5.5	5.5	9	1	1	LC1D09●●●	0.368
3	5.5	5.5	5.5	7.5	7.5	12	1	1	LC1D12●●●	0.373
4	7.5	9	9	10	10	18	1	1	LC1D18●●●	0.378
5.5	11	11	11	15	15	25	1	1	LC1D25●●●	0.433
7.5	15	15	15	18.5	18.5	32	1	1	LC1D32●●●	0.438
9	18.5	18.5	18.5	18.5	18.5	38	1	1	LC1D38●●●	0.442
Power connections by EverLink® BTR ⁽³⁾ screw connectors and control by screw clamp terminal										
11	18.5	22	22	22	30	40	1	1	LC1D40A●●●	0.992
15	22	25	30	30	33	50	1	1	LC1D50A●●●	0.997
18.5	30	37	37	37	37	65	1	1	LC1D65A●●●	1.002
22	37	37	37	37	37	66	1	1	LC1D80A●●●	1.002

Connection for lugs or bars

For LC1D40A to LC1D80A, insert a figure 6 before the voltage code.

Example: LC1D40A●●● becomes LC1D40A6●●●

Auxiliary contact blocks and add-on modules

See pages B8/36 to B8/42.

Control voltage codes				
AC/DC or 24 V DC supply				
Volts	24 (DC only)	24-60	48-130	100-250
LC1D09 ...D38, LC1D40A ... D80A				
U 0.85...1.1 Uc		BNE	EHE	KUE
LC1D09 ... D38				
U 0.8 ... 1.2 Uc	BNE			
LC1D40A ... D80A				
U 0.8...1.2 Uc	BBE			

- (1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
- (2) LC1D09 to D80A: clip-on mounting on 35 mm rail NSYSDR or screw fixing.
- (3) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see B8/42).

TeSys Control

Deca green Contactors

Product references



LC1D09●●●

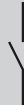


LC1D40A●●●



LC1DT60A●●●

Deca green contactors have a dark grey casing and a 3-character code voltage.

3-pole contactors - Load control from 25 to 80 A - Category AC-1						
Non inductive loads maximum current (θ ≤ 60 °C) utilisation category AC-1	Number of poles	Instan- taneous auxiliary contacts		Partial reference, to be completed by adding the control voltage code ⁽¹⁾	Weight	
				Fixing ⁽²⁾		
						
A					kg	
Connection by screw clamp terminals						
25	3	1	1	LC1D09●●●	0.368	
				or LC1D12●●●	0.373	
32	3	1	1	LC1D18●●●	0.378	
40	3	1	1	LC1D25●●●	0.433	
50	3	1	1	LC1D32●●●	0.438	
				or LC1D38●●●	0.442	
Connection by EverLink®, BTR screw connectors ⁽³⁾						
60	3	1	1	LC1D40A●●●	0.992	
80	3	1	1	LC1D50A●●●	0.997	
				or LC1D65A●●● ⁽⁴⁾	1.002	
				or LC1D80A●●● ⁽⁴⁾	1.002	

Connection for lugs or bars

For LC1D40A to LC1D80A, insert a figure 6 before the voltage code.
Example: LC1D40A●●● becomes LC1D40A6●●●

4-pole contactors						
Connection by EverLink®, BTR ⁽³⁾ screw connectors						
60	4	1	1	LC1DT60A●●●	1.230	
80	4	1	1	LC1DT80A●●●	1.290	
Connection for lugs or bars						
For LC1DT60A to LC1DT80A, insert a figure 6 before the voltage code. Example: LC1DT60A●●● becomes LC1DT60A6●●●						
4-pole changeover contactors						
Connection by EverLink®, BTR ⁽³⁾ screw connectors						
60	4	1	1	LC2DT60A●●●	2.460	
80	4	1	1	LC2DT80A●●●	2.580	

Control voltage codes				
AC/DC 24 V DC supply				
Volts	24 (DC only)	24-60	48-130	100-250
LC1D09...D80A and LC●DT60A...DT80A				
U 0.85 1.1 Uc		BNE	EHE	KUE
LC1D09 D38				
U 0.8 1.2 Uc	BNE			
LC1D40 to LC1D80A, LC●DT60A to LC●DT80A				
U 0.8...1.2 Uc	BBE			

- (1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
- (2) LC1D09 to D80A, LC●DT60A and LC●DT80A: clip-on mounting on 35 mm rail NSYSDR or screw fixing.
- (3) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see page B8/42).
- (4) Coordination tables according to the number of operation cycles, consult online datasheets for values.



Contactors

TeSys Control

Deca green Contactors

Product references



LC1D09●●●



LC1D40A●●●



Contactors

Deca green contactors have a dark grey casing and a 3-character code voltage.

3-pole contactors conforming to UL and CSA standards (North American market) - 25 to 80 A

Standard power ratings of motors 50/60 Hz						Associated cable type 75 °C-Cu	Continuous current	Type of contactor required Partial reference, to be completed by adding the control voltage code ⁽¹⁾ Fixing, connection ⁽²⁾
Single-phase 1 Ø		3-phase 3 Ø						
115 V	230 V 240 V	200 V 208 V	230 V 240 V	460 V 480 V	575 V 600 V			

Connection by screw clamp terminals

1/3	1	2	2	5	7.5	AWG 18 - 10	25	LC1D09●●●
0.5	2	3	3	7.5	10	AWG 18 - 10	25	LC1D12●●●
1	3	5	5	10	15	AWG 18 - 8	32	LC1D18●●●
2	3	7.5	7.5	15	20	AWG 14 - 6	40	LC1D25●●●
2	5	10	10	20	25	AWG 14 - 6	50	LC1D32●●●

Power connections by EverLink® BTR ⁽³⁾ screw connectors and control by spring terminals

3	5	10	10	30	30	AWG 16 - 2	60	LC1D40A●●●
3	7.5	15	15	40	40	AWG 16 - 2	70	LC1D50A●●●
5	10	20	20	40	50	AWG 16 - 2	80	LC1D65A●●●
5	10	20	20	40	50	AWG 16 - 2	80	LC1D80A●●●

Connection for lugs or bars

For LC1D40A to LC1D80A, insert a figure 6 before the voltage code.

Example: LC1D40A●●● becomes LC1D40A6●●●

Applications with High-Fault Short-Circuit Current ratings

High-fault short-circuit current ratings are: 100 kA at 600 V with Class J fuses and 85 kA (D09-38), 100 kA (D40A-65A) at 480 V and 50 kA at 600 V with circuit breakers.

Control voltage codes

AC/DC 24 V DC supply				
Volts	24 (DC only)	24-60	48-130	100-250
LC1D09 ... D32, LC1D40A ... D80A				
U 0.85 1.1 Uc		BNE	EHE	KUE
LC1D09 ... D38				
U 0.8 1.2 Uc	BNE			
LC1D40A ... D80A				
U 0.8...1.2 Uc	BBE			

(1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

(2) LC1D09 to D80: clip-on mounting on 35 mm rail NSYS DR or screw fixing.

(3) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see page B8/42).

Deca green contactors - Coordination with PLC output modules (static/relay/triac)

Selection of PLC coordinated contactors

Laboratory tests have been carried out in order to validate trouble free contactor closings and openings with different PLC output modules.
The coil must be defined according to the contactor rating range and output module.
See selection table below.

The PLC your are using				>>>	Compatible contactors ⁽¹⁾	Coil code
PLC type	Output type	Output I (A)	Output module commercial reference			
M221 / M241 / M251	Static output: 24 V DC	0.5	TM3DQ8●●● and Q16●●● (T, TG, U, UG)	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A, LC1DT60A●●● to LC1DT80A●●●	BL, BNE BBE
		0.3 (sealed) 0.8 (inrush)	TM3XTYS4	>>>	LC1D40A●●● to LC1D80A, LC1DT60A●●● to LC1DT80A●●●	BBE, BD, BNE
		0.1	TM3DQ16●● and Q32●● (TK, UK)	>>>	LC1D09●● to LC1D38●●	BL
	Relay output: 24 V DC / 230 V AC	2	TM3DQ8 and DQ16 (R,RG), TM3DM8 and DM24 (R,RG)	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A, LC1DT60A●●● to LC1DT80A●●●	Code of any DC coil up to 24 V or any AC coil up to 230 V
M340 / M580	Static output: 24 V DC	0.5	BMXDDO1602 and DM16022	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A, LC1DT60A●●● to LC1DT80A●●●	BL, BNE BBE
		0.1	BMXDDO3202, BMXDDM3202K, BMXDDO6402K	>>>	LC1D09●● to LC1D38●●	BL
	Relay output: 24 V DC / 230 V AC	2	BMXDRA0805 and DM16025	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A, LC1DT60A●●● to LC1DT80A●●●	Code of any DC coil up to 24 V or any AC coil up to 230 V
	Triac output: 230 V AC	0.6	BMXDAO1605	>>>	LC1D09●● to LC1D38●●, LC1D40●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	Code of any AC coil up to 230 V (P7 code = 230 V)
ADVANTYS	Static output: 24 V DC	0.5	STBDDO3200	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A, LC1DT60A●●● to LC1DT80A●●●	BL, BNE BBE
	Triac output: 230 V AC	2	STBDAO8210	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A, LC1DT60A●●● to LC1DT80A●●●	Code of any AC coil up to 230 V (P7 code = 230 V AC)

Coils consumption characteristics

Coil type	Uc DC - min -max	Average consumption at UC DC / 20 °C	
		Inrush	Sealed
BL	24 V - 0.8 Uc to 1.1 Uc	2.4 W - 2.4 VA	2.4 W - 2.4 VA
BNE		14 W - 14 VA	0.7 W - 0.7 VA
BBE		11 W - 11 VA	0.5 W - 0.5 VA

(1) Replace dot by coil code. Ex LC1D09●● becomes LC1D09BL.

TeSys Control

Deca Contactors

Product references



LC1D09●●



LC1D25●●



LC1D80A●●



LC1D95●●



LC1D115●●

3-pole contactors - Motor control up to 75 kW at 400 V, in category AC-3

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 (θ ≤ 60 °C)							Rated opera- tional current in AC-3 440 V up to	Instan- taneous auxiliary contacts		Basic reference, to be completed by adding the control voltage code ⁽¹⁾		Weight ⁽³⁾ kg
										Fixing ⁽²⁾		
220 V 230 V	380 V 400 V	415 V	440 V	500 V	660 V 690 V	1000 V	A					
kW	kW	kW	kW	kW	kW	kW	A					kg
Connection by screw clamp terminals												
2.2	4	4	4	5.5	5.5	—	9	1	1	LC1D09●●		0.320
3	5.5	5.5	5.5	7.5	7.5	—	12	1	1	LC1D12●●		0.325
4	7.5	9	9	10	10	—	18	1	1	LC1D18●●		0.330
5.5	11	11	11	15	15	—	25	1	1	LC1D25●●		0.370
7.5	15	15	15	18.5	18.5	—	32	1	1	LC1D32●●		0.375
9	18.5	18.5	18.5	18.5	18.5	—	38	1	1	LC1D38●●		0.380
Power connections by EverLink® BTR screw connectors ⁽⁴⁾ and control by screw clamp terminal												
11	18.5	22	22	22	30	—	40	1	1	LC1D40A●●		0.850
15	22	25	30	30	33	—	50	1	1	LC1D50A●●		0.855
18.5	30	37	37	37	37	—	65	1	1	LC1D65A●●		0.860
22	37	37	37	37	37	—	66	1	1	LC1D80A●●		0.860
Connection by screw clamp terminals or connectors												
22	37	45	45	55	45	45	80	1	1	LC1D80●●		1.590
25	45	45	45	55	45	45	95	1	1	LC1D95●●		1.610
30	55	59	59	75	80	65	115	1	1	LC1D115●●		2.500
40	75	80	80	90	100	75	150	1	1	LC1D150●●		2.500

Connection by lugs or bars

In the references selected above, insert a figure 6 before the voltage code.
Example: LC1D09●● becomes LC1D096●●.

Separate components

Auxiliary contact blocks and add-on modules: see pages B8/36 to B8/42.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)

a.c. supply													
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500
LC1D09...D150 (D115 and D150 coils with built-in suppression as standard, by bi-directional peak limiting diode).													
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	S7
LC1D09...D65 (not available with "connection for lugs or bars")													
50 Hz	B5	D5	E5	P5									
LC1D80...D115													
50 Hz	B5	D5	E5	F5	FE5	M5	P5	U5	Q5	V5	N5	R5	S5
60 Hz	B6	—	E6	F6	—	M6	—	U6	Q6	—	—	R6	—

d.c. supply

Volts	12	24	36	48	60	72	110	125	220	250	440
LC1D09...D38 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)											
U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
LC1D40A ...D65A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)											
U 0.75...1.25 Uc	JD	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	RD
LC1D80...D95											
U 0.85...1.1 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
U 0.75...1.2 Uc	JW	BW	CW	EW	—	SW	FW	—	MW	—	—
LC1D115 and D150 (coil with built-in suppression device as standard)											
U 0.75...1.2 Uc	—	BD	—	ED	ND	SD	FD	GD	MD	UD	RD

Low consumption DC (for low consumption AC/DC: Deca green contactors, page B8/18)

Volts ---	5	12	20	24	48	110	220	250							
LC1D09...D38 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)															
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL							

- For other voltages between 5 and 690 V, see pages B8/45 to B8/48.
- (1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
- (2) LC1D09 to D80A: clip-on mounting on 35 mm rail NSYSR or screw fixing.
LC1D80 to D95 ~: clip-on mounting on 35 mm rail NSYSR or 75 mm rail AM1DL or screw fixing.
LC1D80 to D95 ---: clip-on mounting on 75 mm rail AM1DL or screw fixing.
LC1D115 and D150: clip-on mounting on 2 x 35 mm rails NSYSR or screw fixing.
- (3) The weights indicated are for contactors with a.c. control circuit. For d.c. or low consumption control circuit, add 0.160 kg from LC1D09 to D38, 0.075 kg from LC1D40A to D80A and 1 kg for LC1D80 and D95.
- (4) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see page B8/42).
- (5) For these coil voltages, choose from Deca green contactors. Same product ref. radical, just add BBE coil voltage code for 24 V DC, BNE for 24-60V AC/DC, EHE for 48-130 V AC/DC, KUE for 100-250 V AC/DC. Exemple: LC1D40ABBE.

TeSys Control

Deca Contactors

Product references



LC1D123●●



LC1D80A3●●

3-pole contactors - Motor control up to 30 kW at 400 V, in category AC-3

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 ($\theta \leq 60\text{ }^{\circ}\text{C}$)							Rated operational current in AC-3 440 V up to	Instan- taneous auxiliary contacts	Basic reference, to be completed by adding the control voltage code ⁽¹⁾	
220 V	380 V	415 V	440 V	500 V	660 V	1000 V			Fixing ⁽²⁾	
230 V	400 V				690 V					

kW kW kW kW kW kW kW A

Power and control connections by spring terminals

2.2	4	4	4	5.5	5.5		9	1	1	LC1D093●●
3	5.5	5.5	5.5	7.5	7.5		12	1	1	LC1D123●●
4	7.5	9	9	10	10		18	1	1	LC1D183●●
5.5	11	11	11	15	15		25	1	1	LC1D253●●
7.5	15	15	15	18.5	18.5		32 ⁽³⁾	1	1	LC1D323●●

Power connections by EverLink® BTR screw connectors ⁽⁴⁾ and control by spring terminals

11	18.5	22	22	22	30		40	1	1	LC1D40A3●●
15	22	25	30	30	33		50	1	1	LC1D50A3●●
18.5	30	37	37	37	37		65	1	1	LC1D65A3●●
22	37	37	37	37	37		66	1	1	LC1D80A3●●

Connection by Faston connectors

These contactors are fitted with Faston connectors: 2 x 6.35 mm on the power poles and 1 x 6.35 mm on the coil and auxiliary terminals.

For contactors LC1D09 and LC1D12 only, replace the figure 3 with a 9 in the references selected above.
Example: LC1D093●● becomes LC1D099●●.

Separate components

Auxiliary contact blocks and add-on modules: see pages B8/36 to B8/42.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)

a.c. supply

Volts	24	42	48	110	115	220	230	240	380	400	415	440
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LC1D09...D80A

50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7
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d.c. supply

Volts	12	24	36	48	60	72	110	125	220	250	440
-------	----	----	----	----	----	----	-----	-----	-----	-----	-----

LC1D09...D32 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
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LC1D40A...D65A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.75...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
------------------	----	----	----	----	----	----	----	----	----	----	----

Low consumption

Volts ---	5	12	20	24	48	110	220	250
-----------	---	----	----	----	----	-----	-----	-----

LC1D09...D32 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL
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- For other voltages between 5 and 690 V, see pages B8/45 to B8/48.
- (1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
- (2) LC1D09 to D32: clip-on mounting on 35 mm rail NSYS DR or screw fixing.
- (3) Must be wired with 2 x 4 mm² cables in parallel on the upstream side. On the downstream side, outgoing terminal block LAD331 may be used (Quickfit technology, see page B1/18). When wired with a single cable, the product is limited to 25 A (11 kW/400 V motors).
- (4) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see page B8/42).



Contactors

TeSys Control

Deca Contactors

Product references



LC1D09●●



LC1D80A●●



For other voltages between 5 and 690 V, see pages B8/45 to B8/48.

- (1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
- (2) **LC1D09** to **D80A**: clip-on mounting on 35 mm rail **NSYS**DR or screw fixing.
LC1D80 and **D95** ~: clip-on mounting on 35 mm rail **NSYS**DR or 75 mm rail **AM1DL** or screw fixing.
LC1 or **LP1D80** to **D95** ~: clip-on mounting on 75 mm rail **AM1DL** or screw fixing.
LC1D115 and **D150**: clip-on mounting on 2 x 35 mm rails **NSYS**DR or screw fixing.
- (3) The weights indicated are for contactors with a.c. control circuit. For d.c. or low consumption control circuit, add 0.160 kg from **LC1D09** to **D38**, 0.075 kg from **LC1D40A** to **D80A** and 1 kg for **LC1D80** and **D95**.
- (4) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference **LADALLEN4**, see page B8/42).
- (5) Coordination tables according to the number of operating cycles, see AC-1 curve, page A5/40.
- (6) 32 A with 2 x 4 mm² cables connected in parallel.
- (7) For these coil voltages, choose from Deca green contactors. Same product ref. radical, just add BBE coil voltage code for 24 V DC, BNE for 24-60 V AC/DC, EHE for 48-130 V AC/DC, KUE for 100-250 V AC/DC. Exemple: **LC1D40ABBE**.

3-pole contactors - Load control from 25 to 200 A in category AC-1

Non inductive loads maximum current (θ ≤ 60 °C) utilisation category AC-1	Number of poles	Instantaneous auxiliary contacts	Basic reference, to be completed by adding the control voltage code ⁽¹⁾	Weight ⁽³⁾
			Fixing ⁽²⁾	
A				kg
Connection by screw clamp terminals				
25	3	1 1	LC1D09●● or LC1D12●●	0.320 0.325
32	3	1 1	LC1D18●●	0.330
40	3	1 1	LC1D25●●	0.370
50	3	1 1	LC1D32●● or LC1D38●●	0.375 0.380
Connection by EverLink®, BTR screw connectors ⁽⁴⁾				
60	3	1 1	LC1D40A●●	0.850
80	3	1 1	LC1D50A●● or LC1D65A●● ⁽⁵⁾ or LC1D80A●● ⁽⁵⁾	0.855 0.860 0.860
Connection by screw clamp terminals or connectors				
125	3	1 1	LC1D80●● or LC1D95●● ⁽⁵⁾	1.590 1.610
200	3	1 1	LC1D115●● or LC1D150●● ⁽⁶⁾	2.500 2.500

3-pole contactors for connection by lugs

In the references selected above, insert a figure 6 before the voltage code.
Example: **LC1D09●●** becomes **LC1D096●●**.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)

a.c. supply													
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500
LC1D09...D150 (LC1D115 and D150 coils with built-in suppression device as standard)													
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	S7
LC1D09...D65 (not available with "connection for lugs or bars")													
50 Hz	B5	D5	E5				P5						
LC1D80...D150													
50 Hz	B5	D5	E5	F5	FE5	M5	P5	U5	Q5	V5	N5	R5	S5
60 Hz	B6	—	E6	F6	—	M6	—	U6	Q6	—	—	R6	—
d.c. supply													
Volts	12	24	36	48	60	72	110	125	220	250	440		
LC1D09...D38 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
LC1D40A ...D65A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.75...1.25 Uc	JD	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	RD		
LC1 or LP1D80 and D95													
U 0.85...1.1 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
U 0.75...1.2 Uc	JW	BW	CW	EW	—	SW	FW	—	MW	—	—		
LC1D115 and D150 (coils with built-in suppression device fitted as standard)													
U 0.75...1.2 Uc	—	BD	—	ED	ND	SD	FD	GD	MD	UD	RD		
Low consumption													
Volts ~	5	12	20	24	48	110	220	250					
LC1D09...D38 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL					

TeSys Control

Deca Contactors

Product references



LC1D123●●



LC1D80A3●●

3-pole contactors - Load control from 16 to 80 A in category AC-1

Non inductive loads maximum current ($\theta \leq 60^\circ\text{C}$) utilisation category AC-1	Number of poles	Instantaneous auxiliary contacts	Basic reference, to be completed by adding the control voltage code ⁽¹⁾	Weight ⁽³⁾
			Fixing ⁽²⁾	

A kg

Connection by spring terminals

16	3	1	1	LC1D093●● ⁽⁴⁾	0.320
				or LC1D123●● ⁽⁴⁾	0.325
25	3	1	1	LC1D183●● ⁽⁵⁾	0.335
				or LC1D253●● ⁽⁶⁾	0.325
				or LC1D323●● ⁽⁶⁾	0.325

Power connections by EverLink® BTR screw connectors ⁽⁷⁾ and control by spring terminals

60	3	1	1	LC1D40A3●●	0.850
80	3	1	1	LC1D50A3●● ⁽⁸⁾	0.855
				or LC1D65A3●● ⁽⁸⁾	0.860
				or LC1D80A3●● ⁽⁸⁾	0.860

3-pole contactors for connection by Faston connectors

These contactors are fitted with Faston connectors: 2 x 6.35 mm on the power poles and 1 x 6.35 mm on the coil terminals. For contactors LC1D09 and LC1D12 only, in the references selected from the previous page, insert a figure **9** before the voltage code. Example: **LC1D09●●** becomes **LC1D099●●**.

Separate components

Auxiliary contact blocks and add-on modules: see pages B8/36 to B8/42.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)

a.c. supply													
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500

LC1D09...D80A													
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	S7

d.c. supply													
Volts	12	24	36	48	60	72	110	125	220	250	440		

LC1D09...D32 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.7...1.25 U _c	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
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LC1D40A...D65A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.75...1.25 U _c	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
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Low consumption													
Volts $\overline{\text{---}}$	5	12	20	24	48	110	220	250					

LC1D09...D32 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.8...1.25 U _c	AL	JL	ZL	BL	EL	FL	ML	UL					
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For other voltages between 5 and 690 V, see pages B8/45 to B8/48.

- (1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
- (2) LC1D09 to D80A: clip-on mounting on 35 mm $\sqcap$ rail NSYS DR or screw fixing.
- (3) The weights indicated are for contactors with a.c. control circuit. For d.c. or low consumption control circuit, add 0.160 kg from LC1D09 to D32 and 0.075 kg from LC1D40A to D80A.
- (4) 20 A with 2 x 2.5 mm² cables connected in parallel.
- (5) 32 A with 2 x 4 mm² cables connected in parallel.
- (6) 40 A with 2 x 4 mm² cables connected in parallel.
- (7) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see page B8/42).
- (8) Coordination tables according to the number of operating cycles, see AC-1 curve, page A5/40.



4-pole contactors - Load control, 20 to 200 A in category AC-1													
Non inductive loads maximum current (θ ≤ 60 °C) utilisation category AC-1	Number of poles		Instantaneous auxiliary contacts		Basic reference, to be completed by adding the control voltage code ⁽¹⁾								Weight ⁽³⁾
					Fixing ⁽²⁾								
A	kg												
Connection by screw clamp terminals													
20	4	—	1	1	LC1DT20●●								0.365
	2	2	1	1	LC1D098●●								0.365
25	4	—	1	1	LC1DT25●●								0.365
	2	2	1	1	LC1D128●●								0.365
32	4	—	1	1	LC1DT32●●								0.425
	2	2	1	1	LC1D188●●								0.425
40	4	—	1	1	LC1DT40●●								0.425
	2	2	1	1	LC1D258●●								0.425
Connection by EverLink®, BTR screw connectors													
60	4	—	1	1	LC1DT60A●●								1.090
80	4	—	1	1	LC1DT80A●●								1.150
Connection by screw clamp terminals or connectors													
60	2	2	—	—	LC1D40008●●								1.440
					or LP1D40008●●								2.210
80	2	2	—	—	LC1D65008●●								1.450
					or LP1D65008●●								2.220
125	4	—	—	—	LC1D80004●●								1.760
					or LP1D80004●●								2.685
	2	2	—	—	LC1D80008●●								1.840
					or LP1D80008●●								2.910
200	4	—	—	—	LC1D115004●●								2.860
4-pole contactors for connection by lugs or bars													
In the references selected above, insert a figure 6 before the voltage code. Example: LC1DT20●● becomes LC1DT206●●.													
Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)													
a.c. supply													
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500
LC1D09...D150 and LC1DT20...DT80A (LC1D115 and D150 coils with built-in suppression device as standard)													
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	—
LC1D80...D115													
50 Hz	B5	D5	E5	F5	FE5	M5	P5	U5	Q5	V5	N5	R5	S5
60 Hz	B6	—	E6	F6	—	M6	—	U6	Q6	—	—	R6	—
d.c. supply													
Volts	12	24	36	48	60	72	110	125	220	250	440		
LC1D09...D25 and LC1DT20...DT40 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.75...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
LC1DT60A ...DT80A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.75...1.25 Uc	JD	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	RD		
LP1D40...D80													
U 0.85...1.1 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
U 0.75...1.2 Uc	JW	BW	CW	EW	—	SW	FW	—	MW	—	—		
LC1D115 (coil with built-in suppression device as standard)													
U 0.75...1.2 Uc	—	BD	—	ED	ND	SD	FD	GD	MD	UD	RD		
Low consumption													
Volts ---	5	12	20	24	48	110	220	250					
LC1D09...D25 and LC1DT20...DT40 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL					
For other voltages between 5 and 690 V, see pages B8/45 to B8/48.													
(1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.													
(2) LC1D09 to D38 and LC1DT20 to DT80A: clip-on mounting on 35 mm rail NSYSR or screw fixing. LC1D80 ~: clip-on mounting on 35 mm rail NSYSR or 75 mm rail AM1DL or screw fixing. LC1 or LP1D80 ---: clip-on mounting on 75 mm rail AM1DL or screw fixing. LC1D115 and D150: clip-on mounting on 2 x 35 mm rails NSYSR or screw fixing.													
(3) The weights indicated are for contactors with a.c. control circuit. For d.c. or low consumption control circuit, add 0.160 kg from LC1D09 to D38, 0.075 kg from LC1DT60A and D80A and 1 kg for LC1D80.													
(4) For these coil voltages, choose from Deca green contactors. Same product ref. radical, just add BBE coil voltage code for 24 V DC, BNE for 24-60 V AC/DC, EHE for 48-130 V AC/DC, KUE for 100-250 V AC/DC. Example: LC1DT60ABBE.													

TeSys Control

Deca Contactors

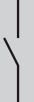
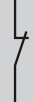
Product references



LC1DT253●●



LC1DT80A3●●

4-pole contactors - Load control, 20 to 80 A in category AC-1						
Non inductive loads maximum current (θ ≤ 60 °C) utilisation category AC-1	Number of poles	Instantaneous auxiliary contacts		Basic reference, to be completed by adding the voltage code ⁽¹⁾		Weight ⁽³⁾
					Fixing ⁽²⁾	
A						kg
Connection by spring terminals						
20	4	—	1	1	LC1DT203●●	0.380
	2	2	1	1	LC1D0983●●	0.380
25	4	—	1	1	LC1DT253●●	0.380
	2	2	1	1	LC1D1283●●	0.380
32	4	—	1	1	LC1DT323●●	0.425
	2	2	1	1	LC1D1883●●	0.425
40	4	—	1	1	LC1DT403●●	0.425
	2	2	1	1	LC1D2583●●	0.425
Connection by EverLink®, BTR screw connectors and control circuit by spring terminals						
60	4	—	1	1	LC1DT60A3●●	1.090
80	4	—	1	1	LC1DT80A3●●	1.150
Separate components						
Auxiliary contact blocks and add-on modules: see pages B8/36 to B8/42.						
Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)						
a.c. supply						
Volts	24	42	48	110	115 220 230 240 380 400 415 440 500	
LC1D09...D25 and LC1DT20...DT80A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)						
50/60 Hz	B7	D7	E7	F7	FE7 M7 P7 U7 Q7 V7 N7 R7	—
d.c. supply						
Volts	12	24	36	48	60 72 110 125 220 250 440	
LC1D09...D25 and LC1DT20... DT40 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)						
U 0.7...1.25 Uc	JD	BD	CD	ED	ND SD FD GD MD UD RD	
LC1DT60A...80A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)						
U 0.75...1.25 Uc	JD	BD	CD	ED	ND SD FD GD MD UD RD	
Low consumption						
Volts ---	5	12	20	24	48 110 220 250	
LC1D09...D25 and LC1DT20...DT40 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)						
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL FL ML UL	
For other voltages between 5 and 690 V, see pages B8/45 to B8/48.						
(1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.						
(2) LC1D09 to D38 and LC1DT20 to DT80A: clip-on mounting on 35 mm  rail NSYS DR or screw fixing.						
(3) The weights indicated are for contactors with a.c. control circuit. For d.c. or low consumption control circuit, add 0.160 kg from LC1D09 to D38, 0.075 kg for LC1DT60A and DT80A.						



LC1D09●●



LC1D25●●



LC1D80A●●



LC1D95●●

Contactors conforming to UL and CSA standards (North American market) - 25 to 160 A

Standard power ratings of motors 50/60 Hz						Associated cable type 75 °C-Cu	UL continuous current	Type of contactor required Basic reference, to be completed by adding the control voltage code ⁽¹⁾ Fixing, connection ⁽²⁾
Single-phase 1 Ø		3-phase 3 Ø						
120 V	240 V	208 V	240 V	480 V	600 V			

HP	HP	HP	HP	HP	HP		A	
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Connection by screw clamp terminals

1/3	1	2	2	5	7.5	AWG 18 - 10	25	LC1D09●●
0.5	2	3	3	7.5	10	AWG 18 - 10	25	LC1D12●●
1	3	5	5	10	15	AWG 18 - 8	32	LC1D18●●
2	3	7.5	7.5	15	20	AWG 14 - 6	40	LC1D25●●
2	5	10	10	20	25	AWG 14 - 6	50	LC1D32●● ⁽³⁾
2	5	10	10	20	25	AWG 14 - 6	50	LC1D38●● ⁽³⁾

Power connections by EverLink® BTR screw connectors and control by spring terminals

3	5	10	10	30	30	AWG 16 - 2	60	LC1D40A●●
3	7.5	15	15	40	40	AWG 16 - 2	70	LC1D50A●●
5	10	20	20	40	50	AWG 16 - 2	80	LC1D65A●●
5	10	20	20	40	50	AWG 16 - 2	80	LC1D80A●●

Connection by screw clamp terminals or connectors

7.5	15	25	30	60	60	AWG 10 - 2	110	LC1D80●●
7.5	15	25	30	60	60	AWG 10 - 2	110	LC1D95●●
–	–	30	40	75	100	AWG 8-1/0	160	LC1D115●●
–	–	40	50	100	125	AWG 8-1/0	160	LC1D150●●

Applications with High-Fault Short-Circuit ratings

High-fault short-circuit current ratings are: 100 kA (D09-80, D115-150) at 600 V with Class J fuses and 85 kA (D09-38), 100 kA (D40A-80, D115-150) at 480 V and 50 kA (D09-80, D115-150) at 600 V with circuit breakers.

Application example

For a 15 HP-230 V motor

Select a contactor type **LC1D50A**.

Information: the contactor rating selected corresponds to “size 2”, the associated cable is type AWG3 75 °C-Cu.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)

a.c. supply

Volts	24	42	48	110	115	120	208	220	230	240	380	400	415	440	480	500
-------	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

LC1D09...D150 (D115 and D150 coils with built-in suppression device as standard)

50/60 Hz	B7	D7	E7	F7	FE7	G7 ⁽⁴⁾	LE7 ⁽⁴⁾	M7	P7	U7	Q7	V7	N7	R7	T7 ⁽⁴⁾	S7
----------	----	----	----	----	-----	-------------------	--------------------	----	----	----	----	----	----	----	-------------------	----

LC1D09...D65 (not available with "connection for lugs or bars")

50 Hz	B5	D5	E5						P5							
-------	----	----	----	--	--	--	--	--	----	--	--	--	--	--	--	--

LC1D80...D115

50 Hz	B5	D5	E5	F5	FE5	G5	–	M5	P5	U5	Q5	V5	N5	R5	–	S5
60 Hz	B6	–	E6	F6	–	G6	L6	M6	–	U6	Q6	–	–	R6	T6	–

d.c. supply

Volts	12	24	36	48	60	72	110	125	220	250	440
-------	----	----	----	----	----	----	-----	-----	-----	-----	-----

LC1D09...D32 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
-----------------	----	----	----	----	----	----	----	----	----	----	----

LC1D40A...D65A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.75...1.25 Uc	JD	⁽⁵⁾	⁽⁵⁾	⁽⁵⁾	⁽⁵⁾	⁽⁵⁾	⁽⁵⁾	⁽⁵⁾	⁽⁵⁾	⁽⁵⁾	RD
------------------	----	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----

LC1D80 and D95

U 0.85...1.1 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
U 0.75...1.2 Uc	JW	BW	CW	EW	–	SW	FW	–	MW	–	–

LC1D115 and D150 (coils with built-in suppression device as standard)

U 0.75...1.2 Uc	–	BD	–	ED	ND	SD	FD	GD	MD	UD	RD
-----------------	---	----	---	----	----	----	----	----	----	----	----

Low consumption

Volts ~	5	12	20	24	48	72	110	220	250
---------	---	----	----	----	----	----	-----	-----	-----

LC1D09...D38 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	SL	FL	ML	UL
-----------------	----	----	----	----	----	----	----	----	----

⁽¹⁾ Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

⁽²⁾ LC1D09 to D65A: clip-on mounting on 35 mm L rail NSYS DR or screw fixing.

LC1D80 and LC1D95: clip-on mounting on 35 mm L rail NSYS DR or 75 mm L rail AM1DL or screw fixing.

LC1D115 and D150: clip-on mounting on 2 x 35 mm L rails NSYS DR or screw fixing.

⁽³⁾ Versions with spring terminals LC1D323 and LC1D383 are not certified UL/CSA.

⁽⁴⁾ Contactors LC1D40A, 50A, 65A, 80A: for this coil voltage use is only on 60 Hz.

⁽⁵⁾ For these coil voltages, choose from Deca green contactors. Same product ref. radical, just add BBE coil voltage code for 24 V DC, BNE for 24-60 V AC/DC, EHE for 48-130 V AC/DC, KUE for 100-250 V AC/DC. Example: LC1D40ABBE.

TeSys Control

Deca Reversing contactors

Product references



LC2D12



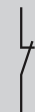
LC2D65A



LC2D115

3-pole reversing contactors - Motors up to 75 kW / 400 V in category AC-3

Horizontally mounted - Pre-wired power connections.

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 (θ ≤ 60 °C)							Rated opera- tional current in AC-3 440 V up to	Instan- taneous auxiliary contacts per contactor	Contactors supplied with coil Basic reference, to be completed by adding the control voltage code ⁽¹⁾	Weight ⁽³⁾	
											
220 V	380 V	415 V	440 V	500 V	660 V	1000 V			Fixing ⁽²⁾		
230 V	400 V				690 V						

With mechanical interlock, without electrical interlocking, for connection by screw clamp terminals or connectors

2.2	4	4	4	5.5	5.5	—	9	1	1	LC2D09	⁽⁴⁾	0.687
3	5.5	5.5	5.5	7.5	7.5	—	12	1	1	LC2D12	⁽⁴⁾	0.697
4	7.5	9	9	10	10	—	18	1	1	LC2D18	⁽⁴⁾	0.707
5.5	11	11	11	15	15	—	25	1	1	LC2D25	⁽⁴⁾	0.787
7.5	15	15	15	18.5	18.5	—	32	1	1	LC2D32	⁽⁴⁾	0.797
9	18.5	18.5	18.5	18.5	18.5	—	38	1	1	LC2D38	⁽⁴⁾	0.807
11	18.5	22	22	22	30	—	40	1	1	LC2D40A		1.870
15	22	25	30	30	33	—	50	1	1	LC2D50A		1.880
18.5	30	37	37	37	37	—	65	1	1	LC2D65A		1.890
22	37	45	45	55	45	—	80	1	1	LC2D80		3.200
25	45	45	45	55	45	—	95	1	1	LC2D95		3.200

With mechanical interlock and electrical interlocking, for connection by screw clamp terminals or connectors

30	55	59	59	75	80	65	115	1	1	LC2D115		6.350
40	75	80	80	90	100	75	150	1	1	LC2D150		6.400

Connection by lugs or bars

For reversing contactors LC2D09 to LC2D38, LC2D115 and LC2D150, in the references selected above, insert a figure 6 before the voltage code. Example: **LC2D09** becomes **LC2D096**.

To build a 40 to 65 A reversing contactor, for connection by lugs, order 2 contactors **LC1D** and mechanical interlock **LAD4CM** (see page B8/43).

Component parts

Auxiliary contact blocks and add-on modules: see pages B8/36 to B8/42.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)

a.c. supply

Volts	24	42	48	110	115	220	230	240	380	400	415	440	500
-------	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

LC2D09...D150 (D115 and D150 coils with built-in suppression device as standard)

50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	S7
----------	----	----	----	----	-----	----	----	----	----	----	----	----	----

LC2D80...D115

50 Hz	B5	D5	E5	F5	FE5	M5	P5	U5	Q5	V5	N5	R5	S5
-------	----	----	----	----	-----	----	----	----	----	----	----	----	----

60 Hz	B6	—	E6	F6	—	M6	—	U6	Q6	—	—	R6	—
-------	----	---	----	----	---	----	---	----	----	---	---	----	---

d.c. supply

Volts	12	24	36	48	60	72	110	125	220	250	440
-------	----	----	----	----	----	----	-----	-----	-----	-----	-----

LC2D09...D38 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
-----------------	----	----	----	----	----	----	----	----	----	----	----

LC2D40A...D65A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.75...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
------------------	----	----	----	----	----	----	----	----	----	----	----

Low consumption

Volts	5	12	20	24	48	110	220	250
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LC2D09...D38 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)

U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL
-----------------	----	----	----	----	----	----	----	----

For other voltages between 5 and 690 V, see pages B8/45 to B8/48.

(1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

(2) LC2D09 to D65A: clip-on mounting on 35 mm rail **NSYS** or screw fixing.
LC2D80 and D95: clip-on mounting on 35 mm rail **NSYS** or 75 mm rail **AM1DL** or screw fixing.
LC2D115 and D150: clip-on mounting on 35 mm rail **NSYS** or screw fixing.

(3) The weights indicated are for contactors with a.c. control circuit. For d.c. or low consumption control circuit, add 0.330 kg for **LC2D09** to **D38**, 0.150 kg for **LC1D40A** to **D65A**.

(4) For reversing contactors with electrical interlocking pre-wired at the factory, add suffix **V** to the references selected above.
Example: **LC2D09B7** becomes **LC2D09B7V**.

Note: when assembling a reversing contactor, it is good practice to incorporate a 50 ms time delay.



LC2D123●●

3-pole reversing contactors - Motors up to 15 kW / 400 V in category AC-3

Pre-wired power connections.
Mechanical interlock without electrical interlocking.

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 (θ ≤ 60 °C)						Rated operational current in AC-3 440 V up to		Contactors supplied with coil	Basic reference, to be completed by adding the voltage code ⁽¹⁾	Weight ⁽³⁾	
											Fixing ⁽²⁾
220 V 230 V	380 V 400 V	415 V	440 V	500 V	660 V 690 V	A					kg
For connection by spring terminals											
2.2	4	4	4	5.5	5.5	9	1	1	LC2D093●●		0.687
3	5.5	5.5	5.5	7.5	7.5	12	1	1	LC2D123●●		0.697
4	7.5	9	9	10	10	18	1	1	LC2D183●●		0.707
5.5	11	11	11	15	15	25	1	1	LC2D253●●		0.787
7.5	15	15	15	18.5	18.5	32 ⁽⁴⁾	1	1	LC2D323●●		0.797
Power connection by EverLink®, BTR screw connectors ⁽⁵⁾ and control by spring terminals											
11	18.5	22	22	22	30	40	1	1	LC2D40A3●●		1.870
15	22	25	30	30	33	50	1	1	LC2D50A3●●		1.880
18.5	30	37	37	37	37	65	1	1	LC2D65A3●●		1.890

For connection by Faston connectors

All power connections are to be made by the customer.
These contactors are fitted with Faston connectors: 2 x 6.35 mm on the power poles and 1 x 6.35 mm on the coil terminals.
For reversing contactors LC2D09 and LC2D12 only, in the references selected above, replace the figure 3 before the voltage code with a figure 9.
Example: LC2D093●● becomes LC2D099●●.

Component parts

Auxiliary contact blocks and add-on modules: see pages B8/36 to B8/42.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)

a.c. supply													
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500
LC2D09...D65A													
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	S7
d.c. supply													
Volts	12	24	36	48	60	72	110	125	220	250	440		
LC2D09...D32 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
LC2D40A ...D65A (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.75...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
Low consumption													
Volts ---	5	12	20	24	48	110	220	250					
LC2D09...D32 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)													
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL					

For other voltages between 5 and 690 V, see pages B8/45 to B8/48.

(1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

(2) LC2D09 to D32: clip-on mounting on 35 mm $\sqcap$ rail NSYSDR or screw fixing.

(3) The weights indicated are for reversing contactors with a.c. control circuit. For d.c. or low consumption control circuit, add 0.330 kg for LC2D09 to D38, 0.150 kg for LC1D40A to D65A.

(4) Must be wired with 2 x 4 mm² cables in parallel on the upstream side. On the downstream side, outgoing terminal block LAD331 may be used (Quickfit technology, see page B1/18). When wired with a single cable, the product is limited to 25 A (11 kW/400 V motors).

(5) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see page B8/42).

TeSys Control

Deca Changeover contactors

Product references



LC2DT20●●



LC2D115004●●

4-pole changeover contactor pairs - 20 to 200 A in category AC-1

Pre-assembled. Pre-wired power connections

LC2DT20 to LC2DT40: mechanical interlock without electrical interlocking.
LC2D80004: order separately 2 auxiliary contact blocks LADN●1 to obtain electrical interlocking between the 2 contactors (see page B8/36).
For electrical interlocking incorporated in the mechanical interlock, please consult your Regional Sales Office.
LC2D115004: mechanical interlock with integral, pre-wired electrical interlocking.

For connection by screw clamp terminals or connectors

Utilisation category AC-1 Non-inductive loads Maximum rated operational current ($\theta \leq 60\text{ }^{\circ}\text{C}$)	Instantaneous auxiliary contacts per contactor		Contactors supplied with coil	Weight kg
			Basic reference, to be completed by adding the voltage code ^{(1) (2)}	
			Fixing ⁽³⁾	
A				
20	1	1	LC2DT20●●	0.730
25	1	1	LC2DT25●●	0.730
32	1	1	LC2DT32●●	0.850
40	1	1	LC2DT40●●	0.850
125	—	—	LC2D80004●●	3.200
200	—	—	LC2D115004●●	7.400

For connection by lugs or bars

20	1	1	LC2DT206●●	0.730
25	1	1	LC2DT256●●	0.730
32	1	1	LC2DT326●●	0.850
40	1	1	LC2DT406●●	0.850

For customer assembly

For connection by screw clamp terminals or connectors

60	1	1	LC1DT60A●● ⁽⁴⁾	—
80	1	1	LC1DT80A●● ⁽⁴⁾	—

For connection by lugs or bars

60	1	1	LC1DT60A6●● ⁽⁴⁾	—
80	1	1	LC1DT80A6●● ⁽⁴⁾	—

Auxiliary contact blocks and add-on modules: see pages B8/36 to B8/42.

Note: when assembling changeover contactor pairs, it is good practice to incorporate a 50 ms time delay.

- (1) See note (2) on next page.
(2) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
(3) LC2DT20 to LC2DT80: clip-on mounting on 35 mm rail **NSYS**DR or screw fixing.
LC2D80: clip-on mounting on 35 mm rail **NSYS**DR or 75 mm rail **AM1**DL or screw fixing.
LC2D115: clip-on mounting on 2 x 35 mm rails **NSYS**DR or screw fixing.
(4) For these operational currents, order 2 identical contactors and a mechanical interlock **LAD4**CM (see page B8/43).



Example of necessary components for customer assembly:
2 x LC1DT80A3 contactors + LAD4CM mechanical interlock



4-pole changeover contactor pairs for 20 to 80 A control in category AC-1

Pre-assembled, for customer assembly		
Pre-wired power connections, for connection by spring terminals.		
Utilisation category AC-1 Non-inductive loads Maximum rated operational current ($\theta \leq 60\text{ }^{\circ}\text{C}$)	Instantaneous auxiliary contacts per contactor	Contactors supplied with coil
		Basic reference, to be completed by adding the control voltage code ⁽¹⁾
		Fixing ⁽²⁾
A		

Power connection by EverLink®, BTR screw connectors ⁽³⁾ and control by spring terminals		
20	1 1	LC2DT203●●
60	1 1	LC1DT60A3●● ⁽⁴⁾
80	1 1	LC1DT80A3●● ⁽⁴⁾

Separate components														
Auxiliary contact blocks and add-on modules: see pages B8/19 to B8/19.														
Standard control circuit voltages (for other voltages, please consult your Regional Sales Office)														
a.c. supply														
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500	
LC2DT20...DT40, LC2DT60A...DT80A														
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	–	
LC2D80004...D115004														
50 Hz	B5	D5	E5	F5	FE5	M5	P5	U5	Q5	V5	N5	R5	S5	
60 Hz	B6	–	E6	F6	–	M6	–	U6	Q6	–	–	R6	–	
d.c. supply														
Volts	12	24	36	48	60	72	110	125	220	250	440			
LC2DT20...DT40, LC1DT60...DT80 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)														
U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD			
Low consumption														
Volts	5	12	20	24	48	110	220	250						
LC2DT20...DT40 (coils with integral suppression device fitted as standard, by bi-directional peak limiting diode)														
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL						

For other voltages between 5 and 690 V, see pages B8/19 to B8/19.

(1) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

(2) Clip-on mounting on 35 mm rail NSYS DR or screw fixing.

(3) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see page B8/19).

(4) For these operational currents, order 2 identical contactors and a mechanical interlock LAD4CM (see page B8/19).

TeSys Control

Deca green Reversing contactors

Product references



LC2D09●●●



LC2D40A●●●

Deca green contactors have a dark grey casing and a 3-character code voltage.

3-pole reversing contactors - Motors up to 37 kW / 400 V in category AC-3

Pre-wired power connections

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 (θ ≤ 60 °C)						Rated operational current in AC-3 440 V up to	Instantaneous auxiliary contacts per contactor	Contactors supplied with coil Partial reference, to be completed by adding the control voltage code ⁽¹⁾		Weight
220 V	380 V	415 V	440 V	500 V	660 V	A		Fixing ⁽²⁾		kg
230 V	400 V				690 V					
kW	kW	kW	kW	kW	kW	A				

With mechanical interlock, without electrical interlocking, for connection by screw clamp terminals or Everlink BTR screw connectors ⁽³⁾ ⁽⁴⁾

2.2	4	4	4	5.5	5.5	9	1	1	LC2D09●●●	0.783
3	5.5	5.5	5.5	7.5	7.5	12	1	1	LC2D12●●●	0.793
4	7.5	9	9	10	10	18	1	1	LC2D18●●●	0.803
5.5	11	11	11	15	15	25	1	1	LC2D25●●●	0.913
7.5	15	15	15	18.5	18.5	32	1	1	LC2D32●●●	0.923
9	18.5	18.5	18.5	18.5	18.5	38	1	1	LC2D38●●●	0.933
11	18.5	22	22	22	30	40	1	1	LC2D40A●●● ⁽³⁾	2.154
15	22	25	30	30	33	50	1	1	LC2D50A●●● ⁽³⁾	2.164
18.5	30	37	37	37	37	65	1	1	LC2D65A●●● ⁽³⁾	2.174
22	37	37	37	37	37	66	1	1	LC2D80A●●● ⁽³⁾	2.174

Auxiliary contact blocks and add-on modules

See pages B8/36 to B8/42.

Coil voltage codes

AC/DC 24 V DC supply				
Volts	24 (DC only)	24-60	48-130	100-250
LC2D09...D32, LC2D40A ... D80A				
U 0.85...1.1 Uc		BNE	EHE	KUE
LC2D09...D38				
U 0.8...1.2 Uc		BNE		
LC2D40A ...D80A				
U 0.8...1.2 Uc		BBE		

- ⁽¹⁾ Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.
- ⁽²⁾ LC2D09 to D80A: clip-on mounting on 35 mm rail NSYSDR or screw fixing.
- ⁽³⁾ BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, see page B8/42).
- ⁽⁴⁾ Electrical interlocking is recommended when 2 orders (direct and reverse) could appeared in the same time.



Contactors

TeSys Control

Deca Contactors for switching capacitors banks

Product references



LC1DGK, LC1DLK, LC1DMK



LC1DWK12

Contactors for switching 3-phase capacitor banks

(power factor correction)

Special contactors **LC1D●K** are designed for switching 3-phase, single or multiple-step capacitor banks (up to 6 steps). Over 6 steps, it is recommended to use chokes in order to limit the inrush current and thus improve the lifetime of the installation. The contactors conform to standards IEC 60070 and 60831, UL and CSA.

Contactor applications

Specification

Contactors fitted with a block of early make poles and damping resistors, limiting the value of the current on closing to 60 In max. This current limitation increases the life of all the components of the installation, in particular that of the fuses and capacitors.

Operating conditions

Short-circuit protection must be provided by gI type fuses rated at 1.7...2 In. It will ensure the service continuity of the whole installation in case of a capacitor contactor end of life

Maximum operational power

The power values given in the selection table below are for the following operating conditions:

Prospective peak current at switch-on	LC1D●K	200 In
Maximum operating rate	LC1DFK, DGK, DLK, DMK	240 operating cycles/hour
	LC1DPK, DTK, DWK	240 operating cycles/hour
Electrical durability at nominal load	All contactor ratings	400 V 300 000 operating cycles
		690 V 200 000 operating cycles

Operational power at 50/60 Hz ⁽¹⁾ θ ≤ 60 °C ⁽²⁾				Instantaneous auxiliary contacts		Tightening torque on cable end	Basic reference, to be completed by adding the voltage code ^{(3) (4)}	Weight
230 V	400 V	440 V	690 V	N/O	N/C	N.m		kg
kVAR	kVAR	kVAR	kVAR					
7	12.5	12.5	21	1	2	1.7	LC1DFK	0.430
9.5	16.7	16.7	28.5	1	2	2.5	LC1DGK	0.450
11	20	21	33	1	2	2.5	LC1DLK	0.600
14	25	27	42	1	2	2.5	LC1DMK	0.630
17	30	32	50	1	2	5	LC1DPK	1.300
22	40	43	67	1	2	5	LC1DTK	1.300
35	63	67	104	1	2	9	LC1DWK12	1.650

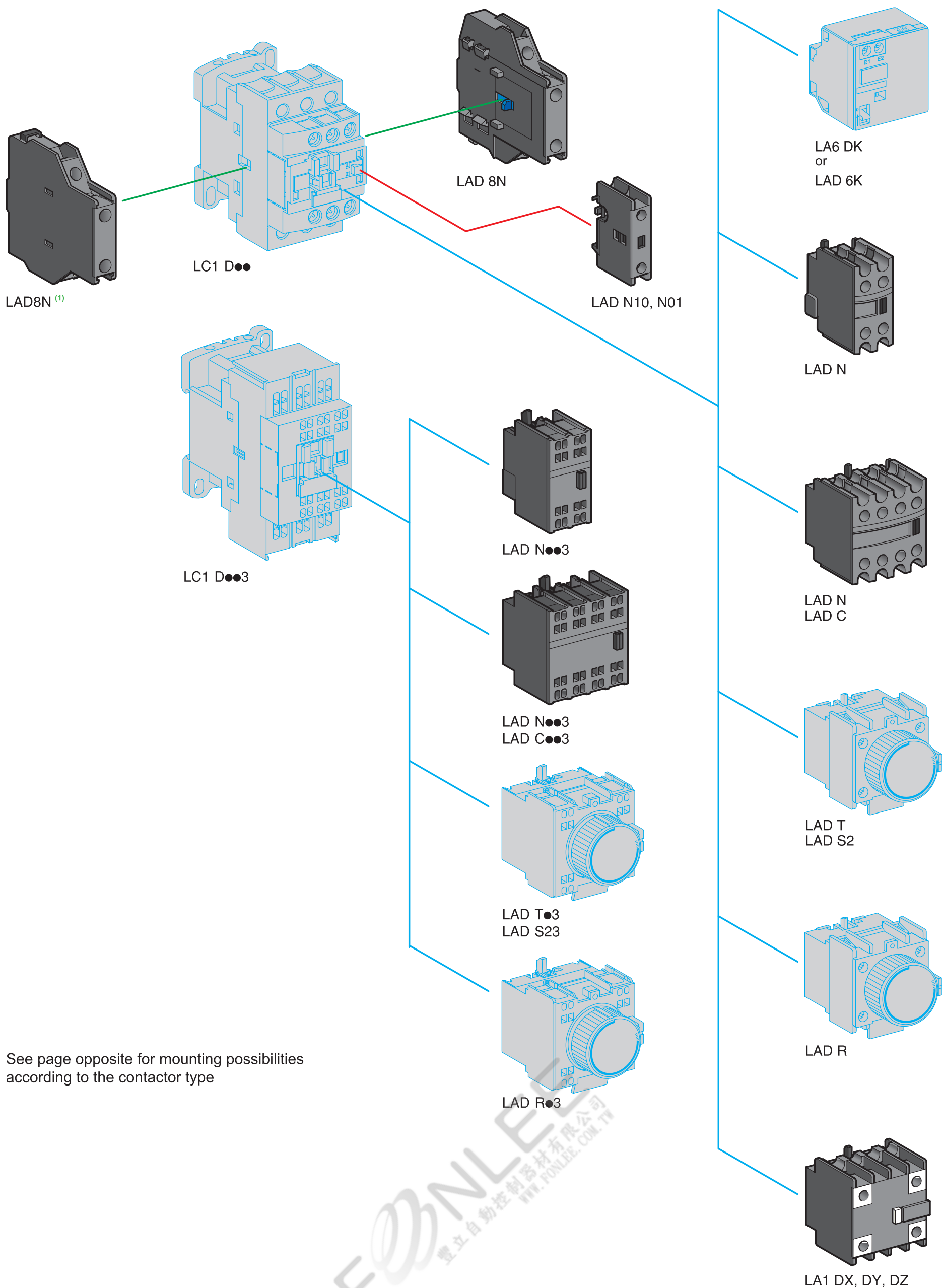
Switching of multiple-step capacitor banks (with equal or different power ratings)

The correct contactor for each step is selected from the above table, according to the power rating of the step to be switched.
Example: 50 kVAR 3-step capacitor bank. Temperature: 50 °C and U = 400 V or 440 V.
One 25 kVAR step: contactor LC1DMK, one 15 kVAR step: contactor LC1DGK, and one 10 kVAR step: contactor LC1DFK.

- (1) Operational power of the contactor according to the scheme on the page opposite.
- (2) The average temperature over a 24-hour period, in accordance with standards IEC 60070 and 60831 is 45 °C.
- (3) Standard control circuit voltages (the delivery time is variable, please consult your Regional Sales Office):

Volts	24	48	110	120	220	230	240	380	400	415	440
50/60 Hz	B7	E7	F7	G7	M7	P7	U7	Q7	V7	N7	R7

(4) Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.



See page opposite for mounting possibilities
according to the contactor type

(1) No left side mounting on Deca green contactors.

TeSys Control

Deca Contactors - Auxilliary contact blocks

Product references



LADN22



LAD8N11



LA1DX●●, LA1DZ●●



Instantaneous auxiliary contact blocks for connection by screw clamp terminals

For use in normal operating environments

Clip-on mounting	Number of contacts per block	Composition					Reference
Front	1	–	–	–	1	–	LADN10
		–	–	–	–	1	LADN01
	2	–	–	–	1	1	LADN11
		–	–	–	2	–	LADN20
		–	–	–	–	2	LADN02
		–	–	–	2	2	LADN22 LADN22S ⁽¹⁾
	4	–	–	–	1	3	LADN13
		–	–	–	4	–	LADN40
		–	–	–	–	4	LADN04
		–	–	–	3	1	LADN31
		–	–	–	2	2	LADC22
		–	–	–	2	2	LADC22
Side (contact blocks compatible with AC coil contactors only)	2	–	–	–	1	1	LAD8N11
		–	–	–	2	–	LAD8N20
		–	–	–	–	2	LAD8N02

For terminal referencing conforming to EN 50012

Front on 3P contactors and 4P contactors 20 to 80 A	2	–	–	–	1	1	LADN11G
	4	–	–	–	2	2	LADN22G
Front on 4P contactors 125 to 200 A	2	–	–	–	1	1	LADN11P
	4	–	–	–	2	2	LADN22P

With dust and damp protected contacts, for use in particularly harsh industrial environments

Front	2	–	2	–	–	–	LA1DX20
		1	1	–	–	–	LA1DX11
		2	–	–	–	–	LA1DX02
	4	–	2	2	–	–	LA1DY20 ⁽²⁾
		–	2	–	2	–	LA1DZ40
		–	2	–	1	1	LA1DZ31

Instantaneous auxiliary contact blocks for connection by lugs

This type of connection is not possible for blocks with 1 contact or blocks with dust and damp protected contacts. For all other instantaneous auxiliary contact blocks, add the figure 6 to the end of the references selected above. Example: LADN11 becomes LADN116.

Instantaneous auxiliary contact blocks for connection by spring terminals

This type of connection is not possible for LAD8, LADN with 1 contact or blocks with dust and damp protected contacts. For all other contact blocks, add the figure 3 to the end of the references selected above. Example: LADN11 becomes LADN113.

Maximum number of auxiliary contacts that can be fitted:

Contactors			Instantaneous auxiliary contacts					Time delay	
Type	Number of poles and size		Side mounted		Front mounted			Front mounted	
					1 contact	2 contacts	4 contacts		
AC AC/DC	3P	LC1D09...D38	1 on LH or 1 on RH side ⁽³⁾ and		–	1	or 1	or 1	
		LC1D40A...D80A	1 on LH or 1 on RH side and		–	1	or 1	or 1	
		LC1D80 and D95 (50/60 Hz)	1 on each side	or	2	and 1	or 1	or 1	
		LC1D80 and D95 (50 or 60 Hz)	1 on each side	and	2	and 1	or 1	or 1	
		LC1D115 and D150	1 on LH side	and	–	1	or 1	or 1	
	4P	LC1DT20...DT40	1 on LH side		and	–	1	or 1	or 1
		LC1DT60A and DT80A	1 on LH or 1 on RH side		and	–	1	or 1	or 1
		LC1D40008, D65008 and D80	1 on each side	or	1	or 1	or 1	or 1	
	LC1D115	1 on each side		and	1	or 1	or 1	or 1	
DC	3P	LC1D09...D38	–		–	1	or 1	or 1	
		LC1D40A...D80A	–		–	1	or 1	or 1	
		LC1D80 and D95	–		1	or 1	or 1	or 1	
		LC1D115 and D150	1 on LH side	and	–	1	or 1	or 1	
	4P	LC1DT20...DT40	–		–	1	or 1	or 1	
		LC1DT60A and DT80A	–		–	1	or 1	or 1	
		LC1D40008, D65008 and D80	–		2	and 1	or 1	or 1	
		LC1D115	1 on each side		–	and 1	or 1	or 1	
LC ⁽⁴⁾ ⁽⁵⁾	3P	LC1D09...D38	–		–	1	–	–	
	4P	LC1DT20...DT40	–		–	1	–	–	

(1) With red front face - for safety chain indication. (4) LC: low consumption.

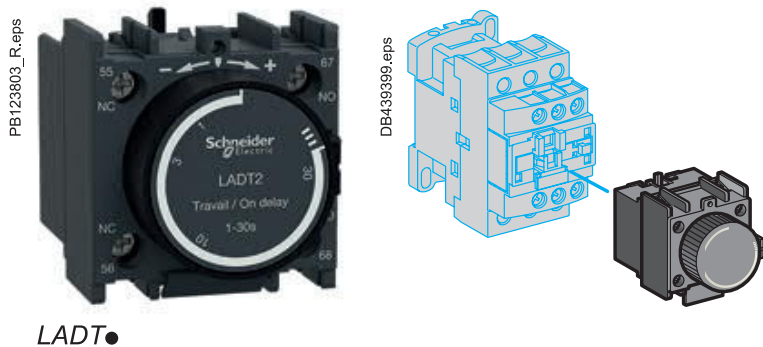
(2) Device fitted with 4 earth screen continuity terminals. (5) LA1D●●● dust & damp proof auxiliary contact blocks not allowed.

(3) 1 on LH side for AC coils - 1 on RH side for AC/DC coils.

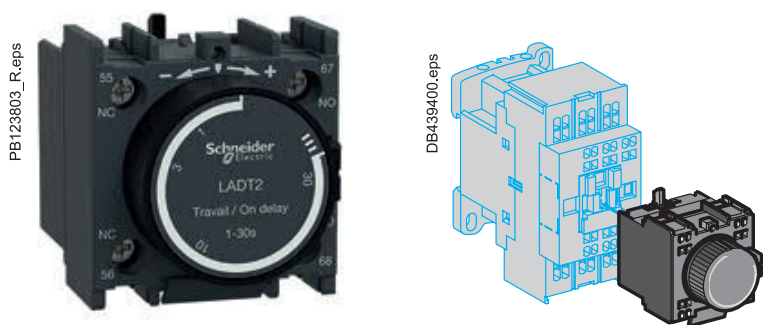
TeSys Control

Deca Contactors - Time delay auxilliary contact blocks

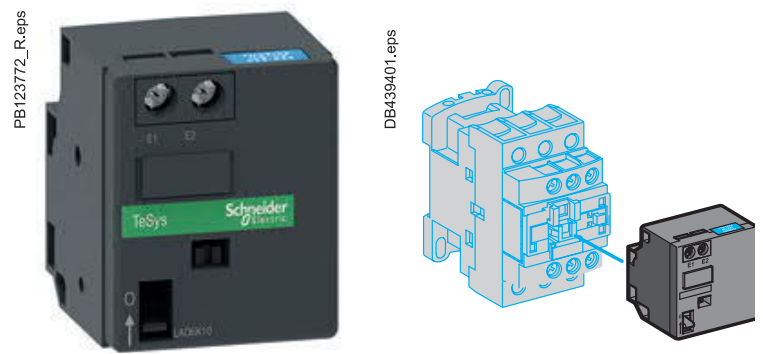
Product references



LADT0



LADT03



LAD6K10

Time delay auxiliary contact blocks for connection by screw clamp terminals

Maximum number of auxiliary contact blocks that can be fitted per contactor, see page B8/36.

Sealing cover to be ordered separately, see page B8/42.

LADS2: with switching time of 40 ms $\pm$ 15 ms between opening of the N/C contact and closing of the N/O contact.

Clip-on mounting	Number of contacts	Time delay		Reference
		Type	Setting range	
Front	1 N/O + 1 N/C	On-delay	0.3...3 s	LADT0
			1...30 s	LADT2
			10...180 s	LADT4
			1...30 s	LADS2
		Off-delay	0.3...3 s	LADR0
			1...30 s	LADR2
			10...180 s	LADR4

Time delay auxiliary contact blocks for connection by lugs

Add the figure 6 to the end of the references selected above. Example: LADT0 becomes LADT06.

Time delay auxiliary contact blocks for connection by spring terminals

Add the figure 3 to the end of the references selected above. Example: LADT0 becomes LADT03.

Time delay auxiliary contact blocks for connection by Faston connectors

Add the figure 9 to the end of the references selected above. Example: LADT0 becomes LADT09.

Mechanical latch blocks ⁽¹⁾

Clip-on mounting	Unlatching control	For use on contactor	Basic reference, to be completed by adding the control voltage code ^{(2) (3)}
Front	Manual or electric	LC1D09...D38 ($\sim$ or $\overline{\sim}$) ⁽⁴⁾	LAD6K10
		LC1DT20...DT40 ($\sim$ or $\overline{\sim}$)	LAD6K10
		LC1D40A...D80A (3 P $\sim$ or $\overline{\sim}$)	LAD6K10
		LC1DT60A and DT80A (4 P $\sim$ or $\overline{\sim}$)	LAD6K10
		LC1D80...D150 (3 P $\sim$)	LA6DK20
		LC1D80 and D150 (3 P $\overline{\sim}$)	LA6DK20
		LC1D80 (4 P $\sim$)	LA6DK20
		LC1D80 and D115 (4 P $\sim$)	LA6DK20
		LP1D80 and LC1D115 (4 P $\overline{\sim}$)	LA6DK20
		LC1D40 and D65 (4 P $\sim$)	LA6DK10
		LP1D40 and D65 (4 P $\overline{\sim}$)	LA6DK10

⁽¹⁾ The mechanical latch block must not be powered up at the same time as the contactor. The duration of the control signal for the mechanical latch block and the contactor should be: ≥ 100 ms for a contactor operating on an a.c. supply, ≥ 250 ms for a contactor operating on a d.c. supply. Maximum impulse duration for the LAD6K10 mechanical latch block: 10 seconds.

⁽²⁾ Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts	50/60 Hz, 24	32/36	42/48	60/72	100	110/127	220/240	256/277	380/415
Code	B	C	E	EN	K	F	M	U	Q

⁽³⁾ Please check the availability of your variant in the index page B8/55. The SEARCH function of your viewer can be used.

⁽⁴⁾ The DC, low consumption contactors (coil code L) are not compatible with the mechanical latch blocks LAD6K10.

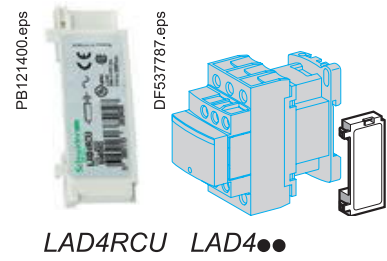
TeSys Control

Deca Contactors - Suppressor modules

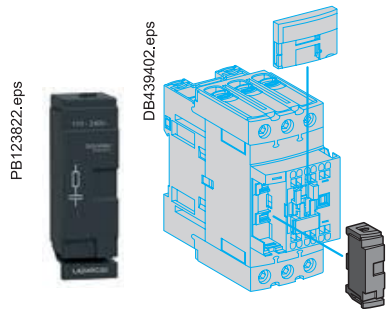
Product references



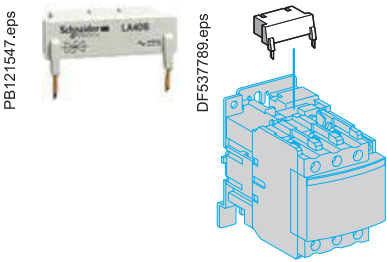
Contactors



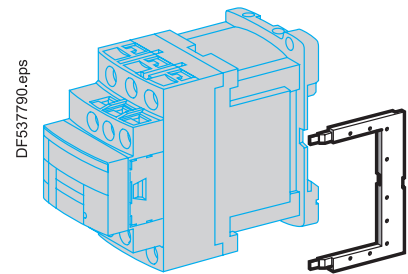
LAD4RCU LAD4●●



LAD4RC3●, LAD4V3●,
LAD4D3U, LAD4T3●



LA4DC3U



LAD4DDL or LAD4T●DL



LAD4DDL

RC circuits (Resistor-Capacitor)

Effective protection for circuits highly sensitive to "high frequency" interference. For use only in cases where the voltage is virtually sinusoidal, i.e. less than 5 % total harmonic distortion. Voltage limited to 3 Uc max. and oscillating frequency limited to 400 Hz max. Slight increase in drop-out time (1.2 to 2 times the normal time).

Mounting	For use with contactor ⁽¹⁾ Rating	Type		Reference
		V ~	V ---	
Clip-on side mounting ^{(2) (3)}	D09...D38 (3P) DT20...DT40	24...48	—	LAD4RCE
		50...127	—	LAD4RCG
		110...250	—	LAD4RCU
Clip-on front mounting ^{(2) (3)}	D40A...D65A (3P) DT60A...DT80A (4P)	24...48	—	LAD4RC3E
		50...127	—	LAD4RC3G
		110...240	—	LAD4RC3U
		380...415	—	LAD4RC3N
Screw fixing ⁽⁴⁾	D80...D150 (3P) D40...D115 (4P)	24...48	—	LA4DA2E
		50...127	—	LA4DA2G
		110...240	—	LA4DA2U
		380...415	—	LA4DA2N

Varistors (peak limiting)

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).

Clip-on side mounting ^{(2) (3)}	D09...D38 (3P) DT20...DT40	24...48	—	LAD4VE
		50...127	—	LAD4VG
		110...250	—	LAD4VU
Clip-on front mounting ^{(2) (3)}	D40A...D65A (3P) DT60A...DT80A (4P)	24...48	24...48	LAD4V3E
		50...127	50...127	LAD4V3G
		110...250	110...250	LAD4V3U
		—	—	—
Screw fixing ⁽⁴⁾	D80...D115 (3P) D80...D115 (4P)	24...48	—	LA4DE2E
		50...127	—	LA4DE2G
		110...250	—	LA4DE2U
		—	24...48	LA4DE3E
	D80...D95 (3P) D80 (4P)	—	110...250	LA4DE3U

Flywheel diodes

No overvoltage or oscillating frequency. Increase in drop-out time (6 to 10 times the normal time). Polarised component.

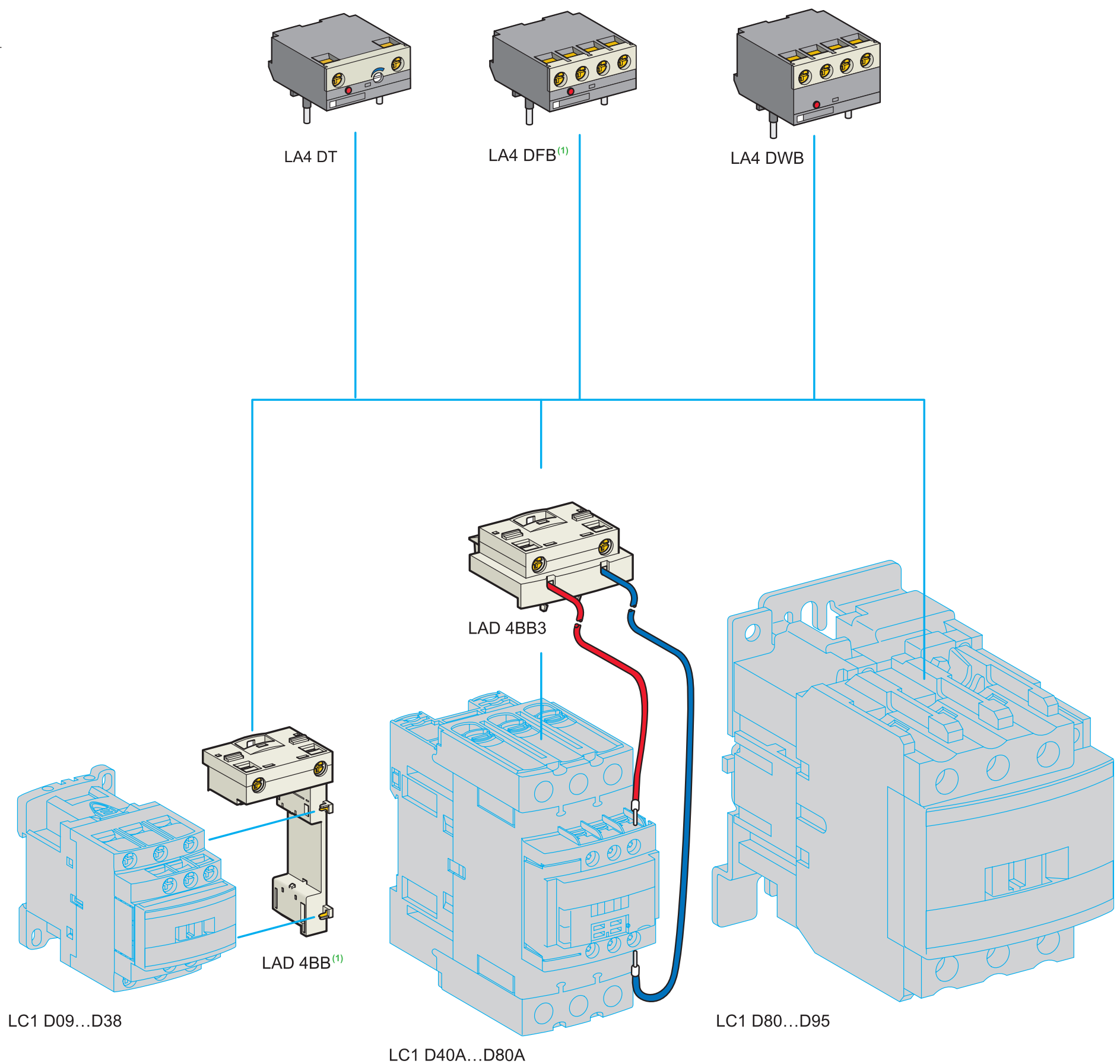
Clip-on side mounting ^{(3) (5)}	D09...D38 (3P), DT20...DT40	—	5...600	LAD4DDL
Clip-on front mounting ⁽³⁾	D40A...D65A (3P), DT60A...DT80A (4P)	—	24...250	LAD4D3U
Screw fixing ⁽⁴⁾	D80 and D95 (3P), D40...D80 (4P)	—	24...250	LA4DC3U

Bidirectional peak limiting diodes

Protection provided by limiting the transient voltage to 2 Uc max. Maximum reduction of transient voltage peaks.

Clip-on side mounting ⁽²⁾	D09...D38 (3P) DT20...DT40 (4P) ⁽⁶⁾	24	—	LAD4TB
		—	24	LAD4TBDL
		72	—	LAD4TS
		—	72	LAD4TSDL
		—	125	LAD4TGDL
		—	250	LAD4TUDL
Clip-on front mounting ⁽²⁾	D40A...D65A (3P) DT60A...DT80A (4P) ⁽⁶⁾	12...24	12...24	LAD4T3B
		25...72	25...72	LAD4T3S
		73...125	73...125	LAD4T3G
		126...250	126...250	LAD4T3U
		251...440	251...440	LAD4T3R
		—	—	—
Screw fixing ⁽⁴⁾		—	24	LA4DB3B
		—	72	LA4DB3S

- (1) For satisfactory protection, a suppressor module must be fitted across the coil of each contactor except for Deca green (●●E coil), as surge protection is already embedded.
- (2) Clipping-on makes the electrical connection. The overall size of the contactor remains unchanged.
- (3) In order to install these accessories, the existing suppression device must first be removed.
- (4) Mounting at the top of the contactor on coil terminals A1 and A2.
- (5) Not compatible with low consumption contactors.
- (6) From **D09** to **D65A** and from **LC1DT20** to **DT80A**, d.c., low consumption are fitted with a built-in bidirectional peak limiting diode suppressor as standard. This bidirectional peak limiting diode is removable and can therefore be replaced by the user. (See reference above).



See page opposite for mounting possibilities according to the contactor type.

⁽¹⁾ For Deca contactor with AC coil only.



LA4DT●●



LA4DFB



LA4DBL



LAD4BBVU

Electronic serial timer modules ⁽¹⁾

- 3-pole contactors LC1D09 to D38: mounted using adapter LAD4BB, to be ordered separately, see below.
- 3-pole contactors LC1D40A to D65A: mounted using adapter LAD4BB3, to be ordered separately, see below.
- 3-pole contactors LC1D80 to D150 and 4-pole contactors LC1D40 to D115: mounted directly across terminals A1 and A2 of the contactor.

On-delay type

Operational voltage ~		Time delay	Reference
24...250 V	100...250 V		
LC1D09...D80A (3P)	LC1D80...D150 (3P)	0.1...2 s	LA4DT0U
		1.5...30 s	LA4DT2U
		25...500 s	LA4DT4U

Interface modules

- 3-pole contactors LC1D09 to D38: mounted using adapter LAD4BB, to be ordered separately, see below.
- 3-pole contactors LC1D40A to D80A: mounted using adapter LAD4BB3, to be ordered separately, see below.

Relay interface

Operational voltage ~		Supply voltage E1-E2 (---)	Reference
24...250 V			
LC1D09...D150 (3P)		24 V	LA4DFB

Static relay interface

Operational voltage ~		Supply voltage E1-E2 (---)	Reference
24...250 V	100...250 V		
LC1D09...D80A (3P)	LC1D80...D115 (3P)	24 V	LA4DWB

Adapter kit for low control signal

For use on contactors	Composition	Reference
LC1D40A...D80A (3P) ⁽²⁾	■ 1 LAD4BB3 coil wiring adapter ■ 1 LA4DFB relay interface module	LA4DBL

Wiring adapters for coil retrofit of 3 pole contactors

For adapting existing wiring to a new product

For use on contactors			Reference
LC1D09...D38	Without coil suppression		LAD4BB ⁽³⁾
	With coil suppression	~ 24...48 V	LAD4BBVE
		~ 50...127 V	LAD4BBVG
		~ 110...250 V	LAD4BBVU
LC1D40A...80A	Without coil suppression		LAD4BB3

- ⁽¹⁾ For 24 V operation, the contactor must be fitted with a 21 V coil (code Z). See pages B8/45 to B8/48.
- ⁽²⁾ The kit is compatible with a coil voltage of ~ 24 V to ~ 250 V (B7 to U7) and --- 24 V to --- 250 V (BD to UD).
- ⁽³⁾ LAD4BB can not be used with 4 poles contactors.

TeSys Control

Deca Contactors - Accessories

Product references



LA9D3260



LA9D11560●



LA9D115503



LAD96570



LA9D11570●



LA9D80962



LA9D11567

Accessories for main pole and control connections						
Description		For use with contactors LC1		Sold in lots of	Unit reference	
		~	---			
Connectors for cable, size (1 connector)	4-pole 10 mm ²	DT20, DT25	DT20, DT25	1	LAD92560	
	3-pole 25 mm ²	D09...D38	D09...D38	1	LA9D3260	
EverLink® terminal block	3-pole	D40A...D80A	D40A...D80A	1	LAD96560	
Connectors for cables (2 connectors)	3-pole 120 mm ²	D115, D150	D115, D150	1	LA9D115603	
	4-pole 120 mm ²	D115	D115	1	LA9D115604	
Connectors for lug type terminals (2 connectors)	3-pole	D1156, D1506	D1156, D1506	1	LA9D115503	
	Protective covers for connectors for lug type terminals	D40A6...D80A6	D40A6...D80A6	1	LAD96570	
IP 20 covers for lug type terminals (for mounting with circuit breakers GV3 P●●6 and GV3 L●●6)	4-pole	D1156, D1506	D1156, D1506	1	LA9D115703 ⁽¹⁾	
		D60A6...D80A6	D60A6...D80A6	1	LAD96580	
		D1156, D1506	D1156, D1506	1	LA9D115704	
	3 poles	D40A6...D80A6	D40A6...D80A6	1	LAD96575	
Links for parallel connection of	2 poles	D09...D38	D09...D38	10	LA9D2561	
		DT32, DT40 (4P)	DT32, DT40 (4P)	10	LAD96061	
		D40A...D80A	D40A...D80A	1	LAD9P32	
		D80, D95	D80, D95	2	LA9D80961	
	3 poles	D09...D38	D09...D38	10	LAD9P3 ⁽²⁾	
		D40A...D80A	D40A...D80A	1	LAD9P33	
		D80, D95	D80, D95	1	LA9D80962	
	4 poles	DT20, DT25	DT20, DT25	2	LA9D1263	
		D80	D80	2	LA9D80963	
	Staggered coil connection	—	D80	10	LA9D09966	
Control circuit take-off from main pole	D80, D95	D80, D95	D80, D95	10	LA9D8067	
	D115, D150	D115, D150	D115, D150	10	LA9D11567	
Spreaders for increasing the pole pitch to 45 mm	D115, D150	D115, D150	D115, D150	3	GV7AC03	

(1) For 3-pole contactors: 1 set of 6 covers, for 4-pole contactors: 1 set of 8 covers.
(2) Separate connecting bar for connecting 2 poles in parallel.

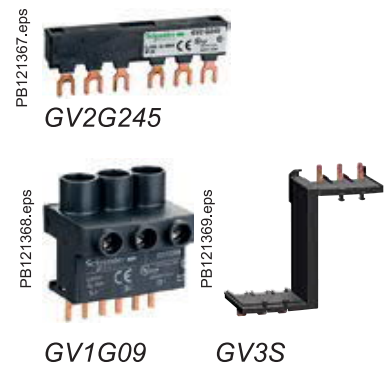


Control Panel Technical Guide:
Mounting and wiring accessories for TeSys K, Deca, F contactors. Star-delta, reverser, low-high speed control motor starters and changeover applications - Product references and details on all kits and wiring accessories.

> Ref. Document: CPTG011_EN



> Click on QR code to download



Contactors



Sets of contacts and arc chambers			
Description	For contactor		Reference
Sets of contacts	3-pole	LC1D115	LA5D1158031
		LC1D150	LA5D150803
	4-pole	LC1D115004	LA5D115804
Arc chambers	3-pole	LC1D115	LA5D11550

Power connection accessories		
Terminal block	For supply to one or more GV2G busbar sets	GV1G09
Set of 63 A busbars for parallelling of contactors	2 contactors LC1D09...D18 or D25...D38	GV2G245
	4 contactors LC1D09...D18 or D25...D38	GV2G445
Set of 115 A busbars for parallelling of contactors	2 contactors LC1D40A...D80A	GV3G264
	3 contactors LC1D40A...D80A	GV3G364 ⁽¹⁾
Set of S-shape busbars	For circuit breakers GV3P●● and GV3L●● ⁽³⁾ and contactors LC1D40A...D73A	GV3S

Protection accessories			
Description	Use	Sold in lots of	Reference
Sealing cover	For LADT, LADR	1	LA9D901
Safety cover preventing access to the moving contact carrier	LC1D09...D80A and DT20...DT80A	1	LAD9ET1
	Red cover (for safety chain indication)	1	LAD9ET1S
	Red cover (for safety chain indication)	1	LAD9ET3S
	LC1D115 and D150	1	LAD9ET4
	Red cover (for safety chain indication)	1	LAD9ET4S

Marking accessories			
Description	Use	Sold in lots of	Unit reference
Sheet of 64 blank legends, self-adhesive, 8 x 33 mm ⁽²⁾	Contactors (except 4P) LC1D80...D115, LADN (4 contacts), LA6DK	10	LAD21
Sheet of 112 blank legends, self-adhesive, 8 x 12 mm ⁽²⁾	LADN (2 contacts), LADT, LADR, LRD	10	LAD22
Marker holder snap-in, 8 x 22 mm	4-pole contactors, LC1D80...D115, LA6DK	100	LA9D92
Marker holder snap-in, 8 x 18 mm	LC1D09...D65A, LC1DT20...DT80A, LADN (4 contacts), LADT, LADR	100	LAD90
Bag of 300 blank legends self-adhesive, 7 x 21 mm	On holder LA9D92	1	LA9D93

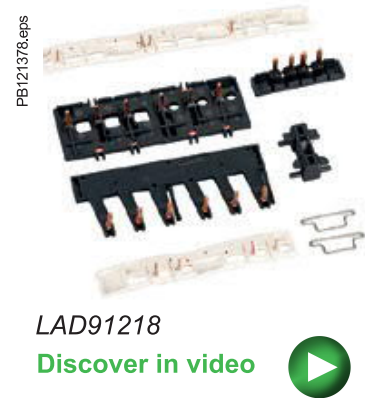
Mounting accessories		
Retrofit plate for screw fixing	For replacement of LC1D40 to D80 with LC1D40A to D80A	LAD7X3
Mounting plate	For replacement of LC1F115 or F150 with LC1D115 or D150	LA9D730
Size 4 Allen key, insulated, 1000 V	For use on contactors LC1D40A to LC1D150	LADALLEN4

- (1) With this set of busbars, any one contactor can be supplied directly by its EverLink® double cage power terminal block. The other two contactors are supplied by the busbar set. The 115 A limitation is therefore applied to these two contactors. Example: 1 **LC1D65A** supplied directly + 1 contactor **LC1D65A** and 1 contactor **LC1D50A** supplied via the busbar set = 115 A. This combination is compatible with busbar set **GV3G364**.
- (2) These legends are for sticking onto the safety cover of the contactors or add-on block, if fitted.
- (3) With 73 A current limit for **GV3L73**, **GV3P73**.

TeSys Control

Deca Contactors - Assembly kits

Product references



For 3-pole reversing contactors for motor control

Contactors with screw clamp terminals or connectors. Horizontally mounted, assembled by customer.

Description	For contactors ⁽¹⁾ (2 identical contactors)	Reference	
Kits for assembly of reversing contactors			
Kit comprising: ■ a mechanical interlock LAD9V2 with electrical interlocking LAD9V1 ■ a set of power connections LAD9V5 (parallel) and LAD9V6 (reversing).	LC1D09 to D38	LAD9R1V	
Kit comprising: ■ a mechanical interlock LAD9V2 without electrical interlocking ■ a set of power connections LAD9V5 (parallel) and LAD9V6 (reversing).	LC1D09 to D38	LAD9R1	
Kit comprising: ■ a mechanical interlock LAD4CM ■ a set of power connections LA9D65A69 .	LC1D40A to D80A	LAD9R3	
Mechanical interlocks			
Mechanical interlock with integral electrical interlocking	LC1D80 and D95 (∼)	LA9D4002	
	LC1D80 and D95 (⇄)	LA9D8002	
	LC1D115 and D150	LA9D11502	
Mechanical interlock without integral electrical interlocking	LC1D09 to D38	LAD9V2	
	LC1D40A to D80A	LAD4CM	
	LC1D80 and D95 (∼)	LA9D50978	
	LC1D80 and D95 (⇄)	LA9D80978	
Sets of power connections			
Comprising: ■ a set of parallel bars ■ a set of reverser bars.	LC1D09 to D38 with screw clamp terminals or connectors	LAD9V5 + LAD9V6	
	LC1D09...D32 with spring terminal connections	LAD9V12 + LAD9V13 ⁽²⁾	
	LC1D40A to D80A	LA9D65A69	
	LC1D80 and D95 (∼)	LA9D8069	
	LC1D80 and D95 (⇄)	LA9D8069	
	LC1D115 and D150	LA9D11569	
For star-delta starter			
Description	For contactors	Reference	Without timer LADS2
Mounting kit comprising: ■ 1 time delay contact block LADS2 (LC1D09...D80) , ■ power circuit connections (LC1D09...D80), ■ hardware required for fixing the contactors onto the mounting plate (LC1D80).	LC1D09 to D38 ⁽³⁾	LAD91217	LAD91218
	LC1D25 to D38 ⁽⁴⁾	LAD93217	LAD93218
	LC1D40A to D80A	LAD9SD3	–
	LC1D80	LA9D8017	–
Equipment mounting plates	LC1D09 to D38	LA9D12974	
	LC1D40A to D80A	–	
	LC1D80	LA9D80973	

- (1) To order the 2 contactors: see pages B8/23 and B8/29.
- (2) To assemble a reversing contactor with spring terminal connections, the following components must be ordered:
- 1 mechanical interlock **LAD9V2**,
 - 1 upstream power connection kit and 1 downstream power connection kit.
- Upstream power connection kit **LAD9V10**: installed in the Quickfit system with power connection module **LAD341**.
(If module **LAD341** is not used, replace **LAD9V10** with **LAD9V12**).
- Downstream power connection kit **LAD9V11**: installed in the Quickfit system with outgoing terminal block **LAD331**.
(If **LAD331** is not used, replace **LAD9V11** with **LAD9V13**).
- (3) For assembly of 3 contactors of the same physical size (depth).
- (4) For assembly of Main + Delta contactors **LC1D25** to **LC1D38** with Star contactor **LC1D09** to **LC1D18**.



Control Panel Technical Guide:

Mounting and wiring accessories for TeSys K, Deca, F contactors. Star-delta, reverser, low-high speed control motor starters and changeover applications - Product references and details on all kits and wiring accessories.

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For 4-pole changeover contactor pairs (3-phase distribution + neutral)		
Contactors with screw clamp terminals or connectors. Horizontally mounted, assembled by customer.		
Description	For contactors ⁽¹⁾ (2 identical contactors)	Reference
Kits for assembly of changeover contactor pairs		
Kit comprising: ■ a mechanical interlock LAD9V2 with electrical interlocking LAD9V1, ■ a set of power connections (changeover) LAD9V7.	LC1DT20 to DT40 with screw clamps or connectors	LADT9R1V
Kit comprising: ■ a mechanical interlock LAD9V2 without electrical interlocking, ■ a set of power connections (changeover) LAD9V7.	LC1DT20 to DT40 with screw clamps or connectors	LADT9R1
Mechanical interlocks		
With integral electrical interlocking	LC1D80004	LA9D4002
	LP1D80004	LA9D8002
	LC1D115004	LA9D11502
Without integral electrical interlocking	LC1DT20 to DT40 with screw clamps or connectors	LAD9V2 ⁽²⁾
	LC1DT203 to DT403 with spring terminals	LAD9V2 ⁽²⁾
	LC1DT60A and DT80A	LAD4CM
	LC1D80004	LA9D50978
	LP1D80004	LA9D80978
Sets of power connections		
Comprising a set of parallel bars	LC1D80004	LA9D8070
	LP1D80004	LA9D8070
	LC1D115004	LA9D11570
	LC1D80004	LA9D8070 ⁽²⁾
	LP1D80004	LA9D8070 ⁽²⁾
For 3-pole changeover contactor pairs		
Contactors with screw clamp terminals or connectors. Horizontally mounted, assembled by customer.		
Description	For contactors ⁽¹⁾ (2 identical contactors)	Reference
Kits for assembly of changeover contactor pairs		
Kit comprising: ■ a mechanical interlock LAD4CM ■ a set of parallel bars LA9D65A6	LC1D40A...D80A	LAD9R3S
Mechanical interlocks		
Without integral electrical interlocking	LC1D40A...D80A	LAD4CM
With integral electrical interlocking	LC1D115 and D150	LA9D11502
Sets of power connections		
Comprising a set of parallel bars	LC1D40A...D80A	LA9D65A6
	and D150	LA9D11571

(1) To order the 2 contactors: see pages B8/23 and B8/29.
(2) Order 2 contact blocks LADN●1 to build the electrical interlock, see page B8/36.



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a.c coils for ~ contactors LC1D09...D38 and LC1DT20...DT40

Specifications

Average consumption at 20 °C:

- inrush ($\cos \phi = 0.75$) 70 VA,
- sealed ($\cos \phi = 0.3$) 50 Hz: 7 VA, 60 Hz: 7.5 VA.

Operating range ($\theta \leq 60\text{ °C}$): 50 Hz: 0.8...1.1 Uc, 60 Hz: 0.85...1.1 Uc.

Control circuit voltage Uc	Average resistance at 20 °C ±10 %	Inductance of closed circuit	Reference ⁽¹⁾
V	Ω	H	
50/60 Hz			
12	1.33	0.05	LXD1J7
24	5.37	0.22	LXD1B7
32	10.1	0.39	LXD1C7
42	17	0.67	LXD1D7
48	21.7	0.87	LXD1E7
110	124.1	4.6	LXD1F7
115	129.8	5	LXD1FE7
120	150.6	5.4	LXD1G7 ⁽²⁾
200	410.7	15	LXD1L7
208	430.4	16	LXD1LE7 ⁽²⁾
220	515.4	18	LXD1M7 ⁽³⁾
230	538.6	20	LXD1P7
240	562.3	22	LXD1U7
277	800.7	29	LXD1W7 ⁽²⁾
380	1551	55	LXD1Q7 ⁽⁴⁾
400	1633	60	LXD1V7
415	1694	65	LXD1N7
440	1993	73	LXD1R7
480	2398	87	LXD1T7 ⁽²⁾
500	2499	95	LXD1S7
575	3294	125	LXD1SC7
600	3810	136	LXD1X7
660	4656	165	LXD1YC7
690	5020	180	LXD1Y7

⁽¹⁾ The last 2 digits in the reference represent the voltage code.

⁽²⁾ Coil for use only on 60 Hz.

⁽³⁾ Suitable for use on **230 V** / 50 Hz. In this case, apply a coefficient of 0.6 to the mechanical durability of the contactor (see pages B8/82 and B8/84).

⁽⁴⁾ Suitable for use on **400 V** / 50 Hz. In this case, apply a coefficient of 0.6 to the mechanical durability of the contactor (see pages B8/82 and B8/84).



a.c coils for ~ contactors LC1D40A...D80A,
LC1DT60A and LC1DT80A

Specifications

Average consumption at 20 °C:
■ inrush (cos ϕ = 0.75) 160 VA,
■ sealed (cos ϕ = 0.3) 50 Hz: 15 VA, 60 Hz: 15 VA.
Operating range ($\theta \leq 60$ °C): 50 Hz: 0.8...1.1 Uc, 60 Hz: 0.85...1.1 Uc.

Control circuit voltage Uc	Average resistance at 20 °C $\pm 10\%$	Inductance of closed circuit	Reference ⁽¹⁾
V	Ω	H	
50/60 Hz			
24	1.98	0.12	LXD3B7
42	6.18	0.37	LXD3D7
48	7.97	0.48	LXD3E7
110	42.28	2.50	LXD3F7
115	48.76	2.74	LXD3FE7
120	37.63	2.07	LXD3G7 ⁽²⁾
208	105	6.22	LXD3LE7 ⁽²⁾
220	182	10	LXD3M7 ⁽³⁾
230	192	10.9	LXD3P7
240	202	11.9	LXD3U7
380	512	29.9	LXD3Q7 ⁽⁴⁾
400	607	33.1	LXD3V7
415	635	35.6	LXD3N7
440	682	40.1	LXD3R7
480	607	33.1	LXD3T7 ⁽²⁾
575	1238	68.4	LXD3SC7
600	1304	74.5	LXD3X7

(1) The last 2 digits in the reference represent the voltage code.
(2) This coil can only be used on 60 Hz.
(3) Suitable for use on **230 V** / 50 Hz. In this case, apply a coefficient of 0.6 to the mechanical durability of the contactor (see page B8/82 and B8/84).
(4) Suitable for use on **400 V** / 50 Hz. In this case, apply a coefficient of 0.6 to the mechanical durability of the contactor (see page B8/82 and B8/84).



a.c coils for 3 or 4-pole contactors LC1D40, D50, D65, D80, D95

Specifications

Average consumption at 20 °C:

- inrush ($\cos \phi = 0.75$) 50 Hz: 200 VA, 60 Hz: 220 VA
- sealed ($\cos \phi = 0.3$) 50 Hz: 20 VA, 60 Hz: 22 VA.

Operating range ($\theta \leq 55\text{ °C}$): 0.85...1.1 U_c .

Control circuit voltage U _c	Average resistance at 20°C ±10 %	Inductance of closed circuit	Reference (1)	Average resistance at 20 °C ±10 %	Inductance of closed circuit	Reference (1)
V	Ω	H		Ω	H	
			50 Hz	60 Hz		
24	1.4	0.09	LX1D6B5	1.05	0.06	LX1D6B6
110	31	1.9	LX1D6F5	22	1.2	
115	31	1.9	LX1D6FE5	–	–	–
208	–	–	–	86	4.3	LX1D6L6
220	–	–	–	98	4.8	LX1D6M6
220/230	127	7.5	LX1D6M5	–	–	–
240	152	8.7	LX1D6U5	120	5.7	LX1D6U6
380	–	–	–	300	14	LX1D6Q6
440	513	30	LX1D6R5	392	19	
480	–	–	–	480	23	LX1D6T6

Specifications

Average consumption at 20 °C:

- inrush ($\cos \phi = 0.75$) 50/60 Hz: 245 VA at 50 Hz
- sealed ($\cos \phi = 0.3$) 50/60 Hz: 26 VA at 50 Hz.

Operating range ($\theta \leq 55\text{ °C}$): 0.85...1.1 U_c .

						50/60 Hz
24	–	–	–	1.22	0.08	LX1D6B7
48	–	–	–	5	0.32	LX1D6E7
110	–	–	–	26	1.7	LX1D6F7
120	–	–	–	32	2	LX1D6G7
220/230 ⁽²⁾	–	–	–	102	6.7	LX1D6M7
230	–	–	–	115	7.7	LX1D6P7
230/240 ⁽³⁾	–	–	–	131	8.3	LX1D6U7
380/400 ⁽⁴⁾	–	–	–	310	20	LX1D6Q7
400	–	–	–	349	23	LX1D6V7
415	–	–	–	390	24	LX1D6N7
440	–	–	–	410	27	LX1D6R7

(1) The last 2 digits in the reference represent the voltage code.

(2) For use on **230 V** / 50 Hz, apply a coefficient of 0.6 to the mechanical durability of the contactor, see page B8/82 and B8/84. This coil can be used on 240 V at 60 Hz.

(3) This coil can be used on 220/240 V at 50 Hz and on 240 V only at 60 Hz.

(4) For use on **400 V** / 50 Hz, apply a coefficient of 0.6 to the mechanical durability of the contactor, see page B8/82 and B8/84.



a.c coils for 3 or 4-pole contactors LC1D115

Specifications

Average consumption at 20 °C:
■ inrush (cos ϕ = 0.8) 50 or 60 Hz: 300 VA
■ sealed (cos ϕ = 0.3) 50 or 60 Hz: 22 VA.
Operating range (θ ≤ 55 °C): 0.85...1.1 Uc.

Control circuit voltage U _c	Average resistance at 20 °C ±10 %	Inductance of closed circuit	Reference (1)	Average resistance at 20 °C ±10 %	Inductance of closed circuit	Reference (1)
V	Ω	H		Ω	H	
			50 Hz	60 Hz		
24	—	—	—	0.87	0.07	LX1D8B6
32	2.14	0.17	LX1D8C5	—	—	—
42	3.91	0.28	LX1D8D5	—	—	—
48	—	—	—	3.91	0.28	LX1D8E6
127	32.75	2.44	LX1D8FC5	—	—	—
208	—	—	—	67.92	5.06	LX1D8L6
220	104.77	7.65	LX1D8M5	—	—	—
380	338.51	22.26	LX1D8Q5	243.07	17.04	LX1D8Q6
440	441.56	30.34	LX1D8R5	338.51	22.26	LX1D8R6
500	566.62	38.12	LX1D8S5	—	—	—

a.c coils for 3 or 4-pole contactors LC1D115, LC1D150

Specifications

Average consumption at 20 °C:
■ inrush: cos ϕ = 0.9 - 280 to 350 VA
■ sealed: cos ϕ = 0.9 - 2 to 18 VA.
Operating range (θ ≤ 55 °C): 0.8...1.15 Uc.
Coils with integral suppression device fitted as standard, class B.

Control circuit voltage Uc	Average resistance at 20 °C ±10 %	Inductance of closed circuit	Reference (1)	Average resistance at 20 °C ±10 %	Inductance of closed circuit	Reference (1)
V	Ω	H		Ω	H	
			50/60 Hz			
24	—	—	—	147	3.03	LX1D8B7
32	—	—	—	301	8.28	LX1D8C7
48	—	—	—	1061	24.19	LX1D8E7
110	—	—	—	4377	109.69	LX1D8F7
115	—	—	—	4377	109.69	LX1D8FE7
120	—	—	—	4377	109.69	LX1D8G7
208	—	—	—	10 895	260.15	LX1D8LE7
220	—	—	—	9895	210.72	LX1D8M7
230	—	—	—	9895	210.72	LX1D8P7
240	—	—	—	9895	210.72	LX1D8U7
277	—	—	—	21 988	533.17	LX1D8UE7
380	—	—	—	21 011	482.42	LX1D8Q7
400	—	—	—	21 011	482.42	LX1D8V7
415	—	—	—	21 011	482.42	LX1D8N7
440	—	—	—	21 501	507.47	LX1D8R7
480	—	—	—	32 249	938.41	LX1D8T7

(1) The last 2 digits in the reference represent the voltage code.

d.c. coils for 3-pole contactors LC1D80 or 4-pole contactors LP1D80

Specifications

Average consumption: 22 W.
Operating range: 0.85...1.1 Uc.

Control circuit voltage Uc	Average resistance at 20 °C ± 10%	Inductance of closed circuit	Reference ⁽¹⁾	Weight
V	Ω	H		kg
12	6.6	0.46	LX4D7JD	0.680
24	27	1.89	LX4D7BD	0.680

⁽¹⁾ The last 2 digits in the reference represent the voltage code.





LX4D8●D

d.c. coils for contactors LC1D115, D150

Specifications

Consumption: inrush 270 to 365 W, sealed 2.4 to 5.1 W.
Operating range: 0.75...1.2 Uc.
Coils with integral suppression device fitted as standard, class B.

Control circuit voltage Uc	Average resistance at 20 °C ± 10 %	Inductance of closed circuit	Reference ⁽¹⁾	Weight
V	Ω	H		kg
24	147	3.03	LX4D8BD	0.300
60	1673	38.44	LX4D8ND	0.300
220	9895	210.72	LX4D8MD	0.300
250	18 022	345.40	LX4D8UD	0.300

⁽¹⁾ The last 2 digits in the reference represent the voltage code.