

**Applications**

**All types of control system**



<b>Rated operational current</b>	le max AC-3 (Ue ≤ 440 V)
	le AC-1 (θ ≤ 60 °C)

9 A	12 A	18 A	25 A	32 A	38 A
20/25 A		25/32 A	25/40 A	50 A	

**Rated operational voltage**

690 V on ~ and ☰
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**Number of poles**

3 or 4	3 or 4	3 or 4	3 or 4	3	
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<b>Rated operational power in AC-3</b>	220/240 V
	380/400 V
	415/440 V
	500 V
	660/690 V
	1000 V

2.2 kW	3 kW	4 kW	5.5 kW	7.5 kW	9 kW
4 kW	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW
4 kW	5.5 kW	9 kW	11 kW	15 kW	18.5 kW
5.5 kW	7.5 kW	10 kW	15 kW	18.5 kW	18.5 kW
5.5 kW	7.5 kW	10 kW	15 kW	18.5 kW	18.5 kW
–	–	–	–	–	–

**Auxiliary contacts**

1 N/C and 1 N/O instantaneous incorporated in the contactors, with add-on blocks common to the whole range comprising up to 4 N/C or N/O instantaneous, up to 1 N/O + 1 N/C time delay and up to 2 N/O or 2 N/C protected contacts and 2 screen continuity terminals.

<b>Thermal overload relays manual-auto compatible</b>	Class 10 A
	Class 20

0.10...10 A	0.10...13 A	0.10...18 A	0.10...32 A	0.10...38 A	0.10...38 A
2.5...10 A	2.5...13 A	2.5...18 A	2.5...32 A		

<b>Suppressor modules</b> (☰ and low consumption contactors are fitted with a built-in bidirectional peak limiting diode suppressor as standard)	Varistor
	Diode
	RC circuit
	Bidirectional peak limiting diode

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•	•	•	•	•	•

<b>Interfaces</b>	Relay output
	Relay interface with manual override switch
	Solid state

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•	•	•	•	•	•

<b>Contactor type references</b>	~ or ☰ 3 pole
	~ 4 pole
	☰ 4 pole

LC1 D09	LC1 D12	LC1 D18	LC1 D25	LC1 D32	LC1 D38
LC1 DT20/	LC1 DT25/	LC1 DT32/	LC1 DT40/	–	–
LC1 D098	LC1 D128	LC1 D188	LC1 D258	–	–

<b>Reversing contactor type references</b>	~ 3 pole
	☰ 3 pole
	~ 4 pole
	☰ 4 pole

LC2 D09	LC2 D12	LC2 D18	LC2 D25	LC2 D32	LC2 D38
LC2 D09	LC2 D12	LC2 D18	LC2 D25	LC2 D32	LC2 D38
LC2 DT20	LC2 DT25	LC2 DT32	LC2 DT40	–	–
LC2 DT20	LC2 DT25	LC2 DT32	LC2 DT40	–	–

<b>Pages</b>	Contactors
	Reversing contactors

24501/2 to 24502/5
24503/2 to 24510/3



40 A	50 A	65 A	80 A	95 A	115 A	150 A
60 A	80 A		125 A		200 A	

690 V ~ or ---	1000 V on ~ supply, 690 V on --- supply
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3	4	3	3	4	3	4	3	4	3
11 kW	15 kW	18.5 kW	22 kW	25 kW	30 kW	40 kW	18.5 kW	22 kW	30 kW
18.5 kW	22 kW	30 kW	37 kW	45 kW	55 kW	75 kW	22 kW	25/30 kW	37 kW
22 kW	30 kW	37 kW	45 kW	55 kW	75 kW	90 kW	22 kW	30 kW	37 kW
30 kW	33 kW	37 kW	45 kW	45 kW	80 kW	100 kW	30 kW	33 kW	37 kW
-	-	-	45 kW	45 kW	75 kW	90 kW	-	-	-

1 N/C and 1 N/O instantaneous incorporated in the contactors, with add-on blocks common to the whole range comprising up to 4 N/C or N/O instantaneous, up to 1 N/O + 1 N/C time delay and up to 2 N/O or 2 N/C protected contacts and 2 screen continuity terminals.

13...40 A	13...50 A	13...65 A	17...104 A	17...104 A	60...150 A	60...150 A
13...40 A	13...50 A	13...65 A	17...80 A		60...150 A	60...150 A

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•	•	•	•	•	•	•	•	-
•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	-

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•	•	•	•	•	•	•	•	-

LC1 D40A	LC1 D50A	LC1 D65A	LC1 D80	LC1 D95	LC1 D115	LC1 D150
LC1 DT60A	-	LC1 DT80A	LC1 D80	-	LC1 D115	-
LC1 DT60A	-	LC1 DT80A	LC1 D80	-	LC1 D115	-

LC2 D40A	LC2 D50A	LC2 D65A	LC2 D80	LC2 D95	LC2 D115	LC2 D150
LC2 D40A	LC2 D50A	LC2 D65A	-	-	-	-
-	-	-	LC2 D80	-	LC2 D115	-
-	-	-	-	-	-	-

24501/2 to 24502/5
24503/2 to 24510/3

**Applications**

**Automation systems**



<b>Rated operational current</b>	le max AC-3 ( $U_e \leq 440$ V)	9 A	12 A	18 A
	le AC-1 ( $\theta \leq 60$ °C)	20/25 A	20/25 A	25/32 A
<b>Rated operational voltage</b>		690 V		
<b>Number of poles</b>		3 or 4	3 or 4	3 or 4
<b>Rated operational power in AC-3</b>	220/240 V	2.2 kW	3 kW	4 kW
	380/400 V	4 kW	5.5 kW	7.5 kW
	415/440 V	4 kW	5.5 kW	9 kW
	500 V	5.5 kW	7.5 kW	10 kW
	660/690 V	5.5 kW	7.5 kW	10 kW
<b>Coil consumption</b>		2.4 W (100 mA - 24 V)		
<b>Operating ranges</b>		0.7...1.25 $U_c$		
<b>Operating time at 20 °C and at <math>U_c</math></b>	Closing	70 ms		
	Opening	25 ms		
<b>Auxiliary contact block modules</b>		1 N/C and 1 N/O instantaneous contacts incorporated in the contactors, with add-on blocks common to the whole range, comprising up to 2 N/C or 2 N/O instantaneous standard contacts		
<b>Interference suppression</b>		Built-in suppression as standard, by bi-directional peak limiting diode		
<b>Contactor type</b>	3-pole	<b>LC1 D09</b>	<b>LC1 D12</b>	<b>LC1 D18</b>
	4-pole	<b>LC1 DT20/D098</b>	<b>LC1 DT25/D128</b>	<b>LC1 DT32/D188</b>
<b>Reversing contactor type</b>	3-pole	<b>LC2 D09</b>	<b>LC2 D12</b>	<b>LC2 D18</b>
	4-pole	<b>LC2 DT20</b>	<b>LC2 DT25</b>	<b>LC2 DT32</b>
<b>Pages</b>	Contactors	24501/2 to 24502/5		
	Reversing contactors	24503/2 to 24510/3		

(1) With low consumption kit **LA4 DBL** (see page 24511/7).  
 (2) With 2 low consumption kits **LA4 DBL** (see page 24511/7).



25 A	32 A	38 A	40 A	50 A	65 A
25/40 A	50 A	50 A	60 A	–	80 A
690 V			690 V		
3 or 4	3	3	3	3	3
5.5 kW	7.5 kW	9 kW	11 kW	15 kW	18.5 kW
11 kW	15 kW	18.5 kW	18.5 kW	22 kW	30 kW
11 kW	15 kW	18.5 kW	22 kW	25/30 kW	37 kW
15 kW	18.5 kW	18.5 kW	22 kW	30 kW	37 kW
15 kW	18.5 kW	18.5 kW	30 kW	33 kW	37 kW
2.4 W (100 mA - 24 V)			0.6 W (25 mA - 24 V) for relay <b>LA4 DFB</b> + the power consumed by the contactor coil		
0.7...1.25 U <sub>c</sub>			–	–	–
70 ms			–	–	–
25 ms			–	–	–

1 N/C and 1 N/O instantaneous contacts incorporated in the contactors, with add-on blocks common to the whole range, comprising up to 2 N/C or 2 N/O instantaneous standard contacts

Built-in suppression as standard, by bi-directional peak limiting diode

LC1 D25	LC1 D32	LC1 D38	LC1 D40A (1)	LC1 D50A (1)	LC1 D65A (1)
LC1 DT40/D258			–	–	LC1 DT80A (1)
LC2 D25	LC2 D32	LC2 D38	LC2 D40A (2)	LC2 D50A (2)	LC2 D65A (2)
LC2 DT40					

24501/2 to 24502/5

24503/2 to 24510/3

Contactor type	LC1	D09...D18 DT20 and DT25	D25...D38 DT32 and DT40	D40A...D65A DT60A and DT80A	D80...D95	D115 and D150	
<b>Environment</b>							
<b>Rated insulation voltage (U<sub>i</sub>)</b>	Conforming to IEC 60947-4-1, overvoltage category III, degree of pollution: 3	V	690			1000	
	Conforming to UL, CSA	V	600				
<b>Rated impulse withstand voltage (U<sub>imp</sub>)</b>	Conforming to IEC 60947	kV	6			8	
<b>Conforming to standards</b>			IEC/EN 60947-4-1, IEC/EN 60947-5-1, UL 508, CSA C22.2 n°14.				
<b>Product certifications</b>			UL, CSA (1), CCC, GOST GL, DNV, RINA, BV, LROS (pending for contactors LC1 D40A to D65A)				
<b>Degree of protection (2)</b> (front face only)	Conforming to VDE 0106 and IEC 60529						
	Power circuit connections		Protection against direct finger contact IP 2X				
	Coil connection		Protection against direct finger contact IP 2X				
<b>Protective treatment</b>	Conforming to IEC 60068-2-30		"TH"				
<b>Ambient air temperature around the device</b>	Storage	°C	- 60...+ 80				
	Operation	°C	- 5...+ 60				
	Permissible	°C	- 40...+ 70, for operation at U <sub>c</sub>				
<b>Maximum operating altitude</b>	Without derating	m	3000				
<b>Operating positions (3)</b>	Without derating in the following positions						
	Positions that are not permissible		For $\overline{\text{---}}$ contactors LC1 D09 to LC1 D65A. 				
<b>Flame resistance</b>	Conforming to UL 94		V1				
	Conforming to IEC 60695-2-1	°C	850				
<b>Shock resistance (4)</b> 1/2 sine wave = 11 ms	Contactor open		10 gn	8 gn	10 gn	8 gn	6 gn
	Contactor closed		15 gn	15 gn	15 gn	10 gn	15 gn
<b>Vibration resistance (4)</b> 5...300 Hz	Contactor open		2 gn				
	Contactor closed		4 gn	4 gn	4 gn	3 gn	4 gn

(1) Contactor LC1 D95 with d.c. coil is not UL/CSA certified.

(2) Protection provided for the cabling c.s.a.'s indicated on the next page and for connection by cable.

(3) When mounting on a vertical rail, use a stop.

(4) Without modifying the contact states, in the most unfavourable direction (coil energised at U<sub>e</sub>).

Contactor type	LC1	D09 and D12 DT20 and DT25	D18 (3P)	D25 (3P)	D32	D38	D18 and D25 (4P) DT32 and DT40	D40A to D65A DT60A and DT80A (1)	D80 and D95	D115 and D150
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**Power circuit connections**

**Screw clamp terminal connections**

Tightening			Screw clamp terminals				Connector 2 inputs	Screw clamp terminals	Connector 1 input	Connector 2 inputs
Flexible cable without cable end	1 conductor	mm <sup>2</sup>	1...4	1.5...6	2.5...10		2.5...10	1...35	4...50	10...120
	2 conductors	mm <sup>2</sup>	1...4	1.5...6	2.5...10		2.5...10	1...25 and 1...35	4...25	10...120 + 10...50
Flexible cable with cable end	1 conductor	mm <sup>2</sup>	1...4	1...6	1...10		2.5...10	1...35	4...50	10...120
	2 conductors	mm <sup>2</sup>	1...2.5	1...4	1.5...6		2.5...10	1...25 and 1...35	4...16	10...120 + 10...50
Solid cable without cable end	1 conductor	mm <sup>2</sup>	1...4	1.5...6	1.5...10		2.5...16	1...35	4...50	10...120
	2 conductors	mm <sup>2</sup>	1...4	1.5...6	2.5...10		2.5...16	1...25 and 1...35	4...25	10...120 + 10...50
Screwdriver	Philips		N° 2	N° 2	N° 2		N° 2	–	–	–
	Flat screwdriver Ø		Ø 6	Ø 6	Ø 6		Ø 6	–	Ø 6...Ø 8	–
Hexagonal key			–	–	–		–	4	4	4
Tightening torque		N.m	1.7	1.7	2.5		1.8	5: ≤ 25 mm <sup>2</sup> 8: 35 mm <sup>2</sup>	9	12

**Spring terminal connections (2)**

Flexible cable without cable end	1 conductor	mm <sup>2</sup>	2.5 (4: DT25)	4	4	4	–	10	–	–
	2 conductors	mm <sup>2</sup>	2.5 (except DT25)	4	4	4	–	–	–	–

**Connection by bars or lugs**

Bar c.s.a.			–	–	–	–	–	–	3 x 16	5 x 25
Lug external Ø	mm		8	8	10	10	8	16.5	17	25
Ø of screw	mm		M3.5	M3.5	M4	M4	M3.5	M6	M6	M8
Screwdriver	Philips		N° 2	N° 2	N° 2	N° 2	N° 2	–	–	–
	Flat screwdriver Ø		Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	–	Ø 8	–
Key for hexagonal headed screw			–	–	–	–	–	10	10	13
Tightening torque		N.m	1.7	1.7	2.5	2.5	1.8	6	9	12

**Control circuit connections**

**Connection by cable (tightening via screw clamps)**

Flexible cable without cable end	1 conductor	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...2.5
	2 conductors	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...2.5
Flexible cable with cable end	1 conductor	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...2.5	1...2.5
	2 conductors	mm <sup>2</sup>	1...2.5	1...2.5	1...2.5	1...2.5	1...2.5	1...2.5	1...2.5	1...2.5
Solid cable without cable end	1 conductor	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...2.5
	2 conductors	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...2.5
Screwdriver	Philips		N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 2
	Flat screwdriver Ø		Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6
Tightening torque		N.m	1.7	1.7	1.7	1.7	1.7	1.7	1.2	1.2

**Spring terminal connections (2)**

Flexible cable without cable end	1 conductor	mm <sup>2</sup>	2.5	2.5	2.5	2.5	–	2.5	0.75...2.5	–
	2 conductors	mm <sup>2</sup>	2.5	2.5	2.5	2.5	–	2.5	0.75...2.5	–

**Connection by bars or lugs**

Lug external Ø	mm		8	8	8	8	8	8	8	8
Ø of screw	mm		M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5
Screwdriver	Philips		N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 2
	Flat screwdriver Ø		Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6
Tightening torque		N.m	1.7	1.7	1.7	1.7	1.7	1.7	1.2	1.2

(1) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LAD ALLEN4, see page 24511/9).

(2) If cable ends are used, choose the next size down (example: for 2.5 mm<sup>2</sup>, use 1.5 mm<sup>2</sup>) and square crimp the cable ends using a special tool.

Contactor type	LC1	D09 (3P)	DT20 D098	D12 (3P)	DT25 D128	D18 (3P)	DT32 D188	D25 (3P)	DT40 D258	
<b>Pole characteristics</b>										
Rated operational current (Ie) (Ue ≤ 440 V)	In AC-3, θ ≤ 60 °C	A	9	12	18	25				
	In AC-1, θ ≤ 60 °C	A	25 (1)	20	25 (1)	25	32 (1)	32	40 (1)	40
Rated operational voltage (Ue)	Up to	V	690	690	690	690				
Frequency limits	Of the operational current	Hz	25...400	25...400	25...400	25...400				
Conventional thermal current (Ith)	θ ≤ 60 °C	A	25 (1)	20	25 (1)	25	32 (1)	32	40 (1)	40
Rated making capacity (440 V)	Conforming to IEC 60947	A	250	250	300	450				
Rated breaking capacity (440 V)	Conforming to IEC 60947	A	250	250	300	450				
Permissible short time rating No current flowing for preceding 15 minutes with θ ≤ 40 °C	For 1 s	A	210	210	240	380				
	For 10 s	A	105	105	145	240				
	For 1 min	A	61	61	84	120				
	For 10 min	A	30	30	40	50				
Fuse protection against short-circuits (U ≤ 690 V)	Without thermal overload relay, gG fuse	type 1	A	25	40	50	63			
		type 2	A	20	25	35	40			
	With thermal overload relay	A	See pages 24514/2 and 24514/3, for aM or gG fuse ratings corresponding to the associated thermal overload relay							
Average impedance per pole	At Ith and 50 Hz	mΩ	2.5	2.5	2.5	2				
Power dissipation per pole for the above operational currents	AC-3	W	0.20	0.36	0.8	1.25				
	AC-1	W	1.56	1.56	2.5	3.2				

**Control circuit characteristics, a.c. supply**

Rated control circuit voltage (Uc)	50/60 Hz	V	12...690		
<b>Control voltage limits</b>					
50 or 60 Hz coils	Operation		–		
	Drop-out		–		
50/60 Hz coils	Operation		0.8...1.1 Uc on 50 Hz and 0.85...1.1 Uc on 60 Hz at 60 °C		
	Drop-out		0.3...0.6 Uc at 60 °C		
Average consumption at 20 °C and at Uc	~ 50 Hz	Inrush	50 Hz coil	VA	–
			Cos φ		0.75
	50/60 Hz coil	VA	70		
		Cos φ		0.3	
	Sealed	50/60 Hz coil	VA	7	
			Cos φ		0.3
	~ 60 Hz	Inrush	60 Hz coil	VA	–
			Cos φ		0.75
	50/60 Hz coil	VA	70		
		Cos φ		0.3	
	Sealed	60 Hz coil	VA	–	
			Cos φ		0.3
	50/60 Hz coil	VA	7.5		
	Heat dissipation	50/60 Hz	W	2...3	
Operating time (2)	Closing "C"	ms	12...22		
	Opening "O"	ms	4...19		
Mechanical durability in millions of operating cycles	50 or 60 Hz coil		–		
	50/60 Hz coil on 50 Hz		15		
Maximum operating rate at ambient temperature ≤ 60 °C	In operating cycles per hour		3600		

(1) Versions with spring terminal connections:

16 A for LC1 D093 and LC1 D123 (20 A possible with 2 x 2.5 mm<sup>2</sup> in parallel),

25 A for LC1 D183 to LC1 D323 (32 A possible for LC1 D183 connected with 2 x 4 mm<sup>2</sup> cables in parallel; 40 A possible for LC1 D253 and LC1 D323 connected with 2 x 4 mm<sup>2</sup> in parallel).

(2) The closing time "C" is measured from the moment the coil supply is switched on to closure of the main poles. The opening time "O" is measured from the moment the coil supply is switched off to the moment the main poles separate.

D32	D38	D40A	DT60A	D50A	D65A	DT80A	D80	D95	D115	D150
32	38	40	–	50	65	–	80	95	115	150
50 (1)	50	60	60	80	80	80	125	125	200	200
690	690	690	690	690	690	690	1000	1000	1000	1000
25...400	25...400	25...400	25...400	25...400	25...400	25...400	25...400	25...400	25...400	25...400
50	50	60	60	80	80	80	125	125	200	200
550	550	800	800	900	1000	1000	1100	1100	1260	1660
550	550	800	800	900	1000	1000	1100	1100	1100	1400
430	430	720	720	810	900	900	990	1100	1100	1400
260	310	320	320	400	520	520	640	800	950	1200
138	150	165	165	208	260	260	320	400	550	580
60	60	72	72	84	110	110	135	135	250	250
63	63	80	80	100	125	125	200	200	250	315
63	63	80	80	100	125	125	160	160	200	250

See pages 24514/2 and 24514/3 for aM or gG fuse ratings corresponding to the associated thermal overload relay

2	2	1.5	1.6	1.5	1.5	1.6	0.8	0.8	0.6	0.6
2	3	2.4	–	3.7	6.3	–	5.1	7.2	7.9	13.5
5	5	5.4	5.8	9.6	9.6	10.2	12.5	12.5	24	24

12...690	12...690					24...500
–	–	0.85...1.1 Uc at 55 °C				
–	–	0.3...0.6 Uc at 55 °C		0.3...0.5 Uc at 55 °C		
0.8...1.1 Uc on 50 Hz and 0.85...1.1 Uc on 60 Hz at 60 °C	0.8...1.1 Uc on 50 Hz and 0.85...1.1 Uc on 60 Hz at 60 °C	0.8...1.1 Uc on 50 Hz and 0.85...1.1 Uc on 60 Hz at 55 °C		0.8...1.15 Uc on 50/60 Hz at 55 °C		
0.3...0.6 Uc at 60 °C	0.3...0.6 Uc at 60 °C	0.3...0.6 Uc at 55 °C		0.3...0.5 Uc at 55 °C		
–	–	200	300	–		
0.75	0.75	0.75	0.8	0.9		
70	160	245	280...350	280...350		
–	–	20	22	–		
0.3	0.3	0.3	0.3	0.9		
7	15	26	2...18	2...18		
–	–	220	300	–		
0.75	0.75	0.75	0.8	0.9		
70	140	245	280...350	280...350		
–	–	22	22	–		
0.3	0.3	0.3	0.3	0.9		
7.5	13	26	2...18	2...18		
2...3	4...5	6...10		3...8	3...4.5	
12...22	12...26	12...26	12...26	12...26	20...35	20...35
4...19	4...19	4...19	4...19	4...19	6...20	6...20
–	–	–	–	–	10	10
15	6	6	6	6	4	4
3600	3600	3600	3600	3600	3600	3600
					2400	1200



Contactor type			LC1 D09...D38 LC1 DT20...DT40	LC1 D40A...D65A LC1 DT60A and DT80A	LC1 or LP1 D80 LC1 D95	LC1 D115 and LC1 D150	
<b>d.c. control circuit characteristics</b>							
Rated control circuit voltage (Uc)	☐	V	12...440	12...440		24...440	
Rated insulation voltage	Conforming to IEC 60947-1	V	690				
	Conforming to UL, CSA	V	600				
Control voltage limits	Operation	Standard coil	0.7...1.25 Uc at 60 °C	0.75...1.25 Uc at 60 °C	0.85...1.1 Uc at 55 °C	0.75...1.2 Uc at 55 °C	
		Wide range coil	–	–	0.75...1.2 Uc at 55 °C	–	
	Drop-out		0.1...0.25 Uc at 60 °C	0.1...0.3 Uc at 60 °C	0.1...0.3 Uc at 55 °C	0.15...0.4 Uc at 55 °C	
Average consumption at 20 °C and at Uc	☐	Inrush	W	5.4	19	22	270...365
		Sealed	W	5.4	7.4	22	2.4...5.1
Operating time (1) average at Uc	Closing	"C"	ms	63 ± 15 %	50 ± 15%	95...130	20...35
	Opening	"O"	ms	20 ± 20 %	20 ± 20%	20...35	40...75
			<i>Note: The arcing time depends on the circuit switched by the poles. For all normal 3-phase applications, the arcing time is less than 10 ms. The load is isolated from the supply after a time equal to the sum of the opening time and the arcing time.</i>				
Time constant (L/R)		ms	28	34	75	25	
Mechanical durability at Uc	In millions of operating cycles		30	10	10	8	
Maximum operating rate at ambient temperature ≤ 60 °C	In operating cycles per hour		3600	3600	3600	1200	
<b>Low consumption control circuit characteristics</b>							
Rated insulation voltage	Conforming to IEC 60947-1	V	690	–			
	Conforming to UL, CSA	V	600	–			
Maximum voltage	Of the control circuit on ☐	V	250	–			
Average consumption d.c. at 20 °C and at Uc	Wide range coil (0.7...1.25 Uc)	Inrush	W	2.4	–		
		Sealed	W	2.4	–		
Operating time (1) at Uc and at 20 °C	Closing	"C"	ms	77 ± 15 %	–		
	Opening	"O"	ms	25 ± 20 %	–		
Voltage limits (θ ≤ 60 °C) of the control circuit	Operation			0.8 to 1.25 Uc	–		
	Drop-out			0.1...0.3 Uc	–		
Time constant (L/R)		ms	40	–			
Mechanical durability	In millions of operating cycles		30	–			
Maximum operating rate at ambient temperature ≤ 60 °C	In operating cycles per hour		3600	–			

(1) The operating times depend on the type of contactor electromagnet and its control mode.  
The closing time "C" is measured from the moment the coil supply is switched on to initial contact of the main poles.  
The opening time "O" is measured from the moment the coil supply is switched off to the moment the main poles separate

**Characteristics of auxiliary contacts incorporated in the contactor**

<b>Mechanically linked contacts</b>	Conforming to IEC 60947-5-1		Each contactor has 2 N/O and N/C contacts mechanically linked on the same movable contact holder
<b>Mirror contact</b>	Conforming to IEC 60947-4-1		The N/C contact on each contactor represents the state of the power contacts and can be connected to a PREVENTA safety module
<b>Rated operational voltage (U<sub>e</sub>)</b>	Up to	<b>V</b>	690
<b>Rated insulation voltage (U<sub>i</sub>)</b>	Conforming to IEC 60947-1	<b>V</b>	690
	Conforming to UL, CSA	<b>V</b>	600
<b>Conventional thermal current (I<sub>th</sub>)</b>	For ambient temperature ≤ 60 °C	<b>A</b>	10
<b>Frequency of the operational current</b>		<b>Hz</b>	25...400
<b>Minimum switching capacity λ = 10<sup>-8</sup></b>	U min	<b>V</b>	17
	I min	<b>mA</b>	5
<b>Short-circuit protection</b>	Conforming to IEC 60947-5-1		gG fuse: 10 A
<b>Rated making capacity</b>	Conforming to IEC 60947-5-1, I <sub>rms</sub>	<b>A</b>	~: 140, ---: 250
<b>Short-time rating</b>	Permissible for	1 s	<b>A</b> 100
		500 ms	<b>A</b> 120
		100 ms	<b>A</b> 140
<b>Insulation resistance</b>		<b>MΩ</b>	> 10
<b>Non-overlap time</b>	Guaranteed between N/C and N/O contacts	<b>ms</b>	1.5 (on energisation and on de-energisation)

**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 φ 0.7) = 10 times the power broken (cos φ 0.4).

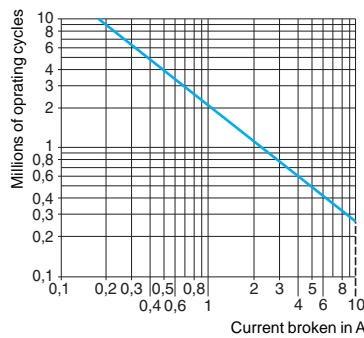
**d.c. supply, category DC-13**  
Electrical durability (valid for up to 1200 operating cycles/hour) on an inductive load such as the coil of an electromagnet, without economy resistor, the time constant increasing with the load.

1 million operating cycles
3 million operating cycles
10 million operating cycles

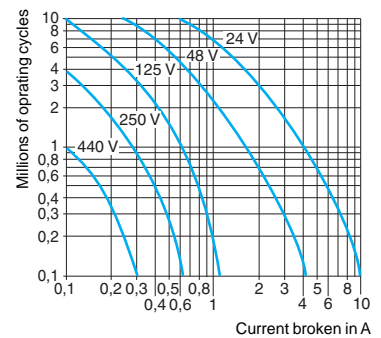
V	24	48	115	230	400	440	600
<b>VA</b>	60	120	280	560	960	1050	1440
<b>VA</b>	16	32	80	160	280	300	420
<b>VA</b>	4	8	20	40	70	80	100

V	24	48	125	250	440
<b>W</b>	96	76	76	76	44
<b>W</b>	48	38	38	32	–
<b>W</b>	14	12	12	–	–

**AC-15**



**DC-13**



Contact block type		LAD N or LAD C	LAD T and LAD S	LAD R	LAD 8	
<b>Environment</b>						
<b>Conforming to standards</b>		IEC 60947-5-1, NF C 63-140, VDE 0660, BS 4794, EN 60947-5-1				
<b>Product certifications</b>		UL, CSA				
<b>Protective treatment</b>	Conforming to IEC 60068	"TH"				
<b>Degree of protection</b>	Conforming to VDE 0106	Protection against direct finger contact IP 2X				
<b>Ambient air temperature around the device</b>	Storage	°C	- 60...+ 80			
	Operation	°C	- 5...+ 60			
	Permissible for operation at Uc	°C	- 40...+ 70			
<b>Maximum operating altitude</b>	Without derating	m	3000			
<b>Connection by cable</b>	Phillips N° 2 and Ø 6 mm Flexible or solid cable with or without cable end	mm <sup>2</sup>	Min: 1 x 1; max: 2 x 2.5			
	Flexible or solid cable without cable end	mm <sup>2</sup>	Max: 2 x 2.5			
<b>Instantaneous and time delay contact characteristics</b>						
<b>Number of contacts</b>			1, 2 or 4	2	2	2
<b>Rated operational voltage (Ue)</b>	Up to	V	690			
<b>Rated insulation voltage (Ui)</b>	Conforming to IEC 60947-5-1	V	690			
	Conforming to UL, CSA	V	600			
<b>Conventional thermal current (Ith)</b>	For ambient temperature ≤ 60 °C	A	10			
<b>Frequency of the operational current</b>		Hz	25...400			
<b>Minimum switching capacity</b>	U min	V	17			
	I min	mA	5			
<b>Short-circuit protection</b>	Conforming to IEC 60947-5-1 and VDE 0660. gG fuse	A	10			
<b>Rated making capacity</b>	Conforming to IEC 60947-5-1	I rms	~: 140; ---: 250			
<b>Short-time rating</b>	Permissible for	1 s	A	100		
		500 ms	A	120		
		100 ms	A	140		
<b>Insulation resistance</b>		MΩ	> 10			
<b>Non-overlap time</b>	Guaranteed between N/C and N/O contacts	ms	1.5 (on energisation and on de-energisation)			
<b>Overlap time</b>	Guaranteed between N/C and N/O contacts on LAD C22	ms	1.5	–	–	–
<b>Time delay (LADT, R and S contact blocks)</b> Accuracy only valid for setting range indicated on the front face	Ambient air temperature for operation	°C	–	- 40...+ 70	- 40...+ 70	–
	Repeat accuracy		–	± 2 %	± 2 %	–
	Drift up to 0.5 million operating cycles		–	+ 15 %	+ 15 %	–
	Drift depending on ambient air temperature		–	0.25 % per °C	0.25 % per °C	–
<b>Mechanical durability</b>	In millions of operating cycles		30	5	5	30
<b>Operational power of contacts</b>			See page 24506/4			

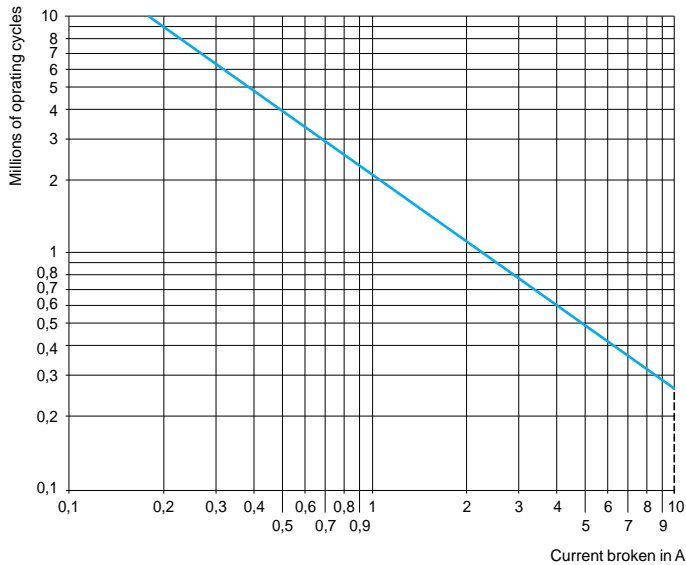
Contact block type			LA1 DX	LA1 DZ		LA1 DY
				Protected	Non protected	
<b>Environment</b>						
Conforming to standards			IEC60947-5-1, VDE0660			
Product certifications			UL, CSA			
Protective treatment	Conforming to IEC 60068		"TH"			
Degree of protection	Conforming to VDE 0106		Protection against direct finger contact IP 2X			
Ambient air temperature	Storage and operation	°C	- 25...+ 70			
Cabling	Phillips N° 2 and Ø 6 mm Flexible or solid conductor with or without cable end	mm <sup>2</sup>	Min: 1 x 1; max: 2 x 2.5			
Number of contacts			2	2	2	2
<b>Contact characteristics</b>						
Rated operational voltage (U <sub>e</sub> )	Up to	V	50	50	690	24
Rated insulation voltage (U <sub>i</sub> )	Conforming to IEC 60947-5-1	V	250	250	690	250
	Conforming to UL, CSA	V	–	–	600	–
Conventional thermal current (I <sub>th</sub> )	For ambient temperature ≤ 40 °C	A	–	–	10	–
Maximum operational current (I <sub>e</sub> )		mA	500	500	–	50
Frequency of the operational current		Hz	–	–	25...400	–
Minimum switching capacity	U min	V	3	3	3	3
	I min	mA	0.3	0.3	0.3	0.3
Short-circuit protection	Conforming to IEC 60947-5-1 gG fuse	A	–	–	10	–
Rated making capacity	Conforming to IEC 60947-5-1	I rms	A	–	–	~:140; ∞: 250
Short-time rating	Permissible for	1 s	A	–	–	100
		500 ms	A	–	–	120
		100 ms	A	–	–	140
Insulation resistance		MΩ	> 10	> 10	> 10	> 10
Mechanical durability	In millions of operating cycles		5	5	30	5
Materials and technology	used for dust and damp protected contacts		Silver - Single break	Silver - Single break	–	Gold - Single break with crossed bars

### 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 ( $\cos \varphi 0.4$ ).

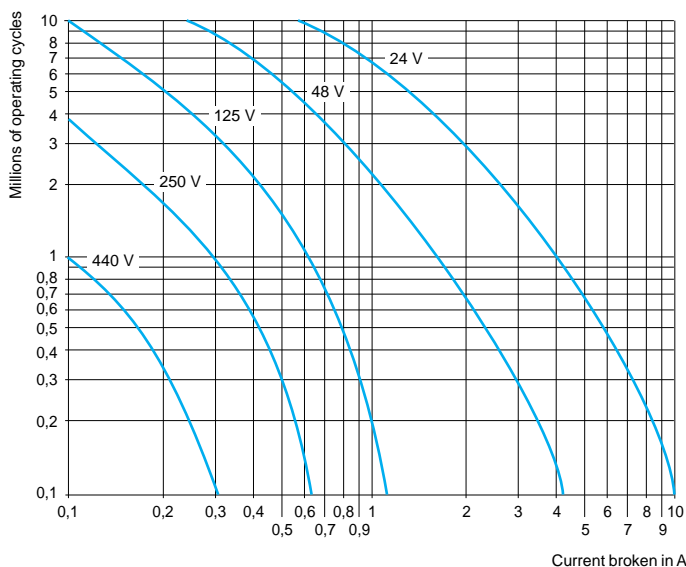
	V	24	48	115	230	400	440	600
1 million operating cycles	VA	60	120	280	560	960	1050	1440
3 million operating cycles	VA	16	32	80	160	280	300	420
10 million operating cycles	VA	4	8	20	40	70	80	100



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

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

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



Environment			
Conforming to standards			IEC 60947-5-1
Product certifications			UL, CSA
Protective treatment	Conforming to IEC 60068		"TH"
Degree of protection	Conforming to VDE 0106		Protection against direct finger contact IP 2X
Ambient air temperature around the device	Storage	°C	- 40...+ 80
	Operation	°C	- 25...+ 55
	Permissible for operation at U <sub>c</sub>	°C	- 25...+ 70

Suppressor modules						
Module type			LA4 DA, LAD 4RC, LAD 4RC3	LA4 DB, LAD 4T, LAD 4T3	LA4 DC, LAD 4D3	LA4 DE, LAD 4V, LAD 4V3
Type of protection			RC circuit	Bidirectional peak limiting diode	Diode	Varistor
Rated control circuit voltage (U <sub>c</sub> )		V	~ 24...415	~ or --- 24...440	--- 12...250	~ or --- 24...250
Maximum peak voltage			3 U <sub>c</sub>	2 U <sub>c</sub>	U <sub>c</sub>	2 U <sub>c</sub>
Natural RC frequency	24/48 V	Hz	400	-	-	-
	50/127 V	Hz	200	-	-	-
	110/240 V	Hz	100	-	-	-
	380/415 V	Hz	150	-	-	-

Mechanical latch blocks (1)					
Mechanical latch block type			LAD 6K10		LA6 DK20
For use on contactor			LC1 D09...D65A DT20...DT80A		LC1 D80...D150 LP1 D80 and LC1 D115
Product certifications			UL, CSA		UL, CSA
Rated insulation voltage	Conforming to IEC 60947-5-1	V	690		690
Rated control circuit voltage	~ 50/60 Hz and ---	V	24...415		24...415
Power required	For unlatching	~	VA	25	
		---	W	30	
Maximum operating rate	In operating cycles/hour		1200		1200
On-load factor			10 %		10 %
Mechanical durability at U <sub>c</sub>	In millions of operating cycles		0,5		0,5

(1) Unlatching can be manually operated or electrically controlled (pulsed).

The LA6 DK or LAD 6K latch coil and the LC1 D operating coil must not be energised simultaneously.

The duration of the LA6 DK or LAD 6K and LC1 D control signals must be ≥ 100 ms.

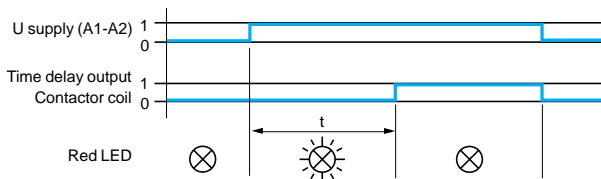
<b>Module type</b>		<b>LA4 DT (On-delay)</b>	
<b>Environment</b>			
<b>Conforming to standards</b>		IEC 60255-5	
<b>Product certifications</b>		UL, CSA	
<b>Protective treatment</b>	Conforming to IEC 60068	"TH"	
<b>Degree of protection</b>	Conforming to VDE 0106	Protection against direct finger contact IP 2X	
<b>Ambient air temperature around the device</b>	Storage	°C	-40...+80
	Operation	°C	-25...+55
	For operation at U <sub>c</sub>	°C	-25...+70
<b>Rated insulation voltage (U<sub>i</sub>)</b>	Conforming to IEC 60947-1	<b>V</b>	250
<b>Cabling</b>	Phillips n° 2 and Ø 6 mm Flexible or solid conductor with or without cable end	<b>mm<sup>2</sup></b>	Min: 1 x 1; max: 2 x 2.5

<b>Control circuit characteristics</b>			
<b>Built-in protection</b>	Of the input		By varistor
	Contactors coil suppression		By varistor
<b>Rated control circuit voltage (U<sub>c</sub>)</b>		<b>V</b>	~ or --- : 24...250
<b>Permissible variation</b>			0.8...1.1 U <sub>c</sub>
<b>Type of control</b>			By mechanical contact only

<b>Timing characteristics</b>			
<b>Timing ranges</b>		<b>s</b>	0.1...2; 1.5...30; 25...500
<b>Repeat accuracy</b>	0...40 °C		± 3 % (10 ms minimum)
<b>Reset time</b>	During time delay period	<b>ms</b>	150
	After time delay period	<b>ms</b>	50
<b>Immunity to microbreaks</b>	During time delay period	<b>ms</b>	10
	After time delay period	<b>ms</b>	2
<b>Minimum control pulse duration</b>		<b>ms</b>	-
<b>Time delay signalling</b>	By LED		Illuminates during time delay period

<b>Switching characteristics (solid state type)</b>			
<b>Maximum power dissipated</b>		<b>W</b>	2
<b>Leakage current</b>		<b>mA</b>	< 5
<b>Residual voltage</b>		<b>V</b>	3.3
<b>Overvoltage protection</b>			3 kV; 0.5 joule
<b>Electrical durability</b>	In millions of operating cycles		30

**Function diagram**  
Electronic on-delay timer LA4 DT



Environment						
<b>Conforming to standards</b>			IEC 60255-5			
<b>Product certifications</b>			UL, CSA			
<b>Protective treatment</b>	Conforming to IEC 60068		"TH"			
<b>Degree of protection</b>	Conforming to VDE 0106		Protection against direct finger contact IP 2X			
<b>Ambient air temperature around the device</b>	Storage	°C	- 40...+ 80			
	Operation	°C	- 25...+ 55			
	Permissible for operation at U <sub>c</sub>	°C	- 25...+ 70			
Other characteristics						
Module type			LA4 DFB With relay	LA4 DWB Solid state		
<b>Conventional thermal current (I<sub>th</sub>)</b>	For ambient temperature ≤ 50 °C	<b>A</b>	8			
<b>Rated insulation voltage</b>	Conforming to IEC 60947-5-1	<b>V</b>	250			
<b>Rated operational voltage</b>	Conforming to IEC 60947-5-1	<b>V</b>	250			
<b>Indication of input state</b>			By integral LED which illuminates when the contactor coil is energised			
<b>Input signals</b>	Control voltage (E1-E2)	<b>V</b>	~ 24			
	Permissible variation	<b>V</b>	17...30			
	Current consumption at 20 °C	<b>mA</b>	25			
	State "0" guaranteed for U	<b>V</b>	< 2.4			
	I	<b>mA</b>	< 2			
State "1" guaranteed for U	<b>V</b>	17				
<b>Built-in protection</b>	Against reversed polarity		By diode			
	Of the input		By diode			
<b>Electrical durability at 220 A/240 V</b>	In millions of operating cycles		10			
<b>Maximum immunity to microbreaks</b>		<b>ms</b>	4			
<b>Power dissipated</b>	At 20 °C	<b>W</b>	0.6			
<b>Direct mounting on contactor</b>	With coil	~ 24...250 V	LC1 D80...D150			
		~ 100...250 V	-			
		~ 380...415 V	-			
<b>Mounting with cabling adapter LAD 4BB</b>	With coil	~ 24...250 V	LC1 D09...D38, LC1 DT20...DT40			
		~ 380...415 V	-			
<b>Mounting with cabling adapter LAD 4BB3</b>	With coil	~ 24...250 V	LC1 D40A...D65A			
		~ 380...415 V	LC1 D40A...D65A			
<b>Total operating time at U<sub>c</sub> (of the contactor)</b>	The operating times depend on the type of contactor electromagnet and its control mode. The closing time "C" is measured from the moment the coil supply is switched on to initial contact of the main poles. The opening time "O" is measured from the moment the coil supply is switched off to the moment the main poles separate.					
			LC1 D09...D38, LC1 DT20...DT40	LC1 D40A...D65A	LC1 D80 and D95	
	With LA4 DFB	"C"	<b>ms</b>	20...30	28...34	28...43
		"O"	<b>ms</b>	16...24	20...24	18...32
<b>Cabling</b>	Phillips N° 2 and Ø 6 mm Flexible or solid cable with or without cable end	<b>mm<sup>2</sup></b>	Min: 1 x 1; max: 2 x 2.5			



# TeSys contactors

TeSys D contactors for motor control  
up to 75 kW at 400 V, in category AC-3  
For connection by screw clamp terminals and lugs

526216



LC1 D09●●

526217



LC1 D25●●

526218



LC1 D65A●●

526219



LC1 D95●●

526220



LC1 D115●●

### 3-pole contactors

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

kW	kW	kW	kW	kW	kW	kW	A				kg
<b>Connection by screw clamp terminals</b>											
2.2	4	4	4	5.5	5.5	—	9	1	1	LC1 D09●●	0.320
3	5.5	5.5	5.5	7.5	7.5	—	12	1	1	LC1 D12●●	0.325
4	7.5	9	9	10	10	—	18	1	1	LC1 D18●●	0.330
5.5	11	11	11	15	15	—	25	1	1	LC1 D25●●	0.370
7.5	15	15	15	18.5	18.5	—	32	1	1	LC1 D32●●	0.375
9	18.5	18.5	18.5	18.5	18.5	—	38	1	1	LC1 D38●●	0.380
<b>Power connections by EverLink® BTR screw connectors (4) and control by spring terminals</b>											
11	18.5	22	22	22	30	—	40	1	1	LC1 D40A●● (5)	0.850
15	22	25	30	30	33	—	50	1	1	LC1 D50A●● (5)	0.855
18.5	30	37	37	37	37	—	65	1	1	LC1 D65A●● (5)	0.860
<b>Connection by screw clamp terminals or connectors</b>											
22	37	45	45	55	45	45	80	1	1	LC1 D80●●	1.590
25	45	45	45	55	45	45	95	1	1	LC1 D95●●	1.610
30	55	59	59	75	80	65	115	1	1	LC1 D115●●	2.500
40	75	80	80	90	100	75	150	1	1	LC1 D150●●	2.500

### Connection by lugs or bars

In the references selected above, insert a figure 6 before the voltage code.

Example: LC1 D09●● becomes LC1 D096●●.

### Separate components

Auxiliary contact blocks and add-on modules: see pages 24511/2 to 24511/9.

- (1) LC1 D09 to D65A: clip-on mounting on 35 mm rail AM1 DP or screw fixing.  
LC1 D80 to D95: clip-on mounting on 35 mm rail AM1 DP or 75 mm rail AM1 DL or screw fixing.  
LC1 D80 to D95: clip-on mounting on 75 mm rail AM1 DL or screw fixing.  
LC1 D115 and D150: clip-on mounting on 2 x 35 mm rails AM1 DP or screw fixing.  
(2) 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
<b>LC1 D09...D150</b> (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
<b>LC1 D80...D115</b>													
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
<b>LC1 D09...D65A</b> (coils with integral suppression device fitted as standard)											
U 0.75...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
<b>LC1 D80...D95</b>											
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	—	—
<b>LC1 D115 and D150</b> (coils with integral suppression device fitted as standard)											
U 0.75...1.2 Uc	—	BD	—	ED	ND	SD	FD	GD	MD	UD	RD
<b>Low consumption</b>											
Volts	5	12	20	24	48	110	220	250			
<b>LC1 D09...D38</b> (coils with integral suppression device fitted as standard)											
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL			

For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.

(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 LC1 D09 to D38, 0.075 kg from LC1 D40A to D65A and 1 kg for LC1 D80 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 LAD ALLEN4, see page 24511/9).

(5) For low consumption kit LA4 DBL (see page 24511/7).

# TeSys contactors

TeSys D contactors for motor control  
up to 30 kW at 400 V, in category AC-3  
For connection by spring terminals

526221



LC1 D123●●

526222



LC1 D65A3●●

### 3-pole contactors

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 ( $\theta \leq 60^\circ\text{C}$ )							Rated oper- ational current in AC-3 440 V up to	Instan- taneous auxiliary contacts	Basic reference, to be completed by adding the control voltage code (2)	Weight (3)	
220 V	380 V	415 V	440 V	500 V	660 V	1000 V					
230 V	400 V				690 V				Fixing (1)		
kW	kW	kW	kW	kW	kW	kW	A			kg	
Power and control connections by spring terminals											
2.2	4	4	4	5.5	5.5		9	1	1	LC1 D093●●	0.320
3	5.5	5.5	5.5	7.5	7.5		12	1	1	LC1 D123●●	0.325
4	7.5	9	9	10	10		18	1	1	LC1 D183●●	0.330
5.5	11	11	11	15	15		25	1	1	LC1 D253●●	0.370
7.5	15	15	15	18.5	18.5		32 (4)	1	1	LC1 D323●●	0.375

### Power connections by EverLink® BTR screw connectors (5) and control by spring terminals

11	18.5	22	22	22	30		40	1	1	LC1 D40A3●● (6)	0.850
15	22	25	30	30	33		50	1	1	LC1 D50A3●● (6)	0.855
18.5	30	37	37	37	37		65	1	1	LC1 D65A3●● (6)	0.860

### 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 LC1 D09 and LC1 D12 only, replace the figure 3 with a 9 in the references selected above.

Example: LC1 D093●● becomes LC1 D099●●.

### Separate components

Auxiliary contact blocks and add-on modules: see pages 24511/2 to 24511/9.

(1) LC1 D09 to D32: clip-on mounting on 35 mm rail AM1 DP or screw fixing.

(2) 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
-------	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----

#### LC1 D09...D65A

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
-------	----	----	----	----	----	----	-----	-----	-----	-----	-----

#### LC1 D09...D65A (coils with built-in suppression 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
-----------	---	----	----	----	----	-----	-----	-----

#### LC1 D09...D32 (coils with integral suppression device fitted as standard)

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

For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.

(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 LC1 D09 to D32 and 0.075 kg from LC1 D40A to D65A.

(4) Must be wired with 2 x 4 mm<sup>2</sup> cables in parallel on the upstream side. On the downstream side, outgoing terminal block LAD 331 may be used (Quickfit technology, see page 15021/5). 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 LAD ALLEN4, see page 24511/9).

(6) For low consumption kit LA4 DBL (see page 24511/7).

# TeSys contactors

## TeSys D, 3-pole contactors

for control in category AC-1, from 25 to 200 A

526230



LC1 D09●●

526231



LC1 D65A●●

### 3-pole contactors

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
<b>Connection by screw clamp terminals</b>					
25	3	1	1	LC1 D09●● or LC1 D12●●	0.320 0.325
32	3	1	1	LC1 D18●●	0.330
40	3	1	1	LC1 D25●●	0.370
50	3	1	1	LC1 D32●● or LC1 D38●●	0.375 0.380

<b>Connection by EverLink®, BTR screw connectors (4)</b>					
60	3	1	1	LC1 D40A●● (7)	0.850
80	3	1	1	LC1 D50A●● (7) or LC1 D65A●● (5) (7)	0.855 0.860

<b>Connection by screw clamp terminals or connectors</b>					
125	3	1	1	LC1 D80●● or LC1 D95●● (5)	1.590 1.610
200	3	1	1	LC1 D115●● or LC1 D150●● (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: LC1 D09●● becomes LC1 D096●●.

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

<b>a.c. supply</b>													
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500
<b>LC1 D09...D150</b> (coils D115 and D150 fitted with integral suppression device as standard)													
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	-
<b>LC1 D80...D150</b>													
50 Hz	B5	D5	E5	F5	FE5	M5	P5	U5	Q5	V5	N5	R5	S5
60 Hz	B6	-	E6	F6	-	M6	-	U6	Q6	-	-	R6	-
<b>d.c. supply</b>													
Volts	12	24	36	48	60	72	110	125	220	250	440		
<b>LC1 D09...D65A</b> (coils with integral suppression device fitted as standard)													
U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
<b>LC1 or LP1 D80 and D95</b>													
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	-	-		
<b>LC1 D115 and D150</b> (coils with integral suppression device fitted as standard)													
U 0.75...1.2 Uc	-	BD	-	ED	ND	SD	FD	GD	MD	UD	RD		
<b>Low consumption</b>													
Volts	5	12	20	24	48	110	220	250					
<b>LC1 D09...D38</b> (coils with integral suppression device fitted as standard)													
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL					

- For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.
- (2) LC1 D09 to D65A: clip-on mounting on 35 mm rail AM1 DP or screw fixing.  
LC1 D80 and D95: clip-on mounting on 35 mm rail AM1 DP or 75 mm rail AM1 DL or screw fixing.  
LC1 or LP1 D80 to D95: clip-on mounting on 75 mm rail AM1 DL or screw fixing.  
LC1 D115 and D150: clip-on mounting on 2 x 35 mm rails AM1 DP 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 LC1 D09 to D38, 0.075 kg from LC1 D40A to D65A and 1 kg for LC1 D80 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 LAD ALLEN4, see page 24511/9).
- (5) Selection according to the number of operating cycles, see AC-1 curve, page 24561/2.
- (6) 32 A with 2 x 4 mm<sup>2</sup> cables connected in parallel.
- (7) For low consumption kit LA4 DBL (see page 24511/7).

# TeSys contactors

## TeSys D, 3-pole contactors

For control in category AC-1, 25 to 200 A



LC1 D123●●



LC1 D65A3●●

### 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 LC1 D09 and LC1 D12 only, in the references selected from the previous page, insert a figure 9 before the voltage code. Example: **LC1 D09●●** becomes **LC1 D099●●**.

### 3-pole contactors

Non inductive loads maximum current (θ ≤ 60 °C) utilisation category AC-1	Number of poles	Instan-taneous auxiliary contacts	Basic reference, to be completed by adding the control voltage code (1)	Weight (3)
			<b>Fixing (2)</b>	
<b>A</b>				<b>kg</b>
<b>Connection by spring terminals</b>				
16	3	1	1	<b>LC1 D093●● (4)</b> 0.320 or <b>LC1 D123●● (4)</b> 0.325
25	3	1	1	<b>LC1 D183●● (5)</b> 0.335 or <b>LC1 D253●● (6)</b> 0.325 or <b>LC1 D323●● (6)</b> 0.325
<b>Power connections by EverLink® BTR screw connectors (7) and control by spring terminals</b>				
60	3	1	1	<b>LC1 D40A3●● (9)</b> 0.850
80	3	1	1	<b>LC1 D50A3●● (8) (9)</b> 0.855 or <b>LC1 D65A3●● (8) (9)</b> 0.860

### Separate components

Auxiliary contact blocks and add-on modules: see pages 24511/2 to 24511/9.

(1) 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	
<b>LC1 D09...D65A</b>														
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			
<b>LC1 D09...D65A (coils with integral suppression device fitted as standard)</b>														
U 0.75...1.25 U <sub>c</sub>	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD			
Low consumption														
Volts	5	12	20	24	48	110	220	250						
<b>LC1 D09...D38 (coils with integral suppression device fitted as standard)</b>														
U 0.8...1.25 U <sub>c</sub>	AL	JL	ZL	BL	EL	FL	ML	UL						

For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.

(2) **LC1 D09** to **D65A**: clip-on mounting on 35 mm rail **AM1 DP** 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 **LC1 D09** to **D38** and 0.075 kg from **LC1 D40A** to **D65A**.

(4) 20 A with 2 x 2.5 mm<sup>2</sup> cables connected in parallel.

(5) 32 A with 2 x 4 mm<sup>2</sup> cables connected in parallel.

(6) 40 A with 2 x 4 mm<sup>2</sup> 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 **LAD ALLEN4**, see page 24511/9).

(8) Selection according to the number of operating cycles, see AC-1 curve, page 24561/2.

(9) For low consumption kit **LA4 DBL** (see page 24511/7).

# TeSys contactors

## TeSys D, 4-pole contactors

For control in category AC-1, 25 to 200 A

538227



LC1 DT20●●

538228



LC1 DT80A●●

538229



LC1 D65008●●

### 4-pole contactors for connection by screw clamp terminals or connectors

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
<b>Connection by screw clamp terminals</b>					
20	4	–	1	1	LC1 DT20●● 0.365
	2	2	1	1	LC1 D098●● 0.365
25	4	–	1	1	LC1 DT25●● 0.365
	2	2	1	1	LC1 D128●● 0.365
32	4	–	1	1	LC1 DT32●● 0.425
	2	2	1	1	LC1 D188●● 0.425
40	4	–	1	1	LC1 DT40●● 0.425
	2	2	1	1	LC1 D258●● 0.425

<b>Connection by EverLink®, BTR screw connectors</b>					
60	4	–	1	1	LC1 DT60A●● 1.090
80	4	–	1	1	LC1 DT80A●● 1.150

<b>Connection by screw clamp terminals or connectors</b>					
60	2	2	–	–	LC1 D40008●● 1.440 or LP1 D40008●● 2.210
80	2	2	–	–	LC1 D65008●● 1.450 or LP1 D65008●● 2.220
125	4	–	–	–	LC1 D80004●● 1.760 or LP1 D80004●● 2.685
	2	2	–	–	LC1 D80008●● 1.840 or LP1 D80008●● 2.910
200	4	–	–	–	LC1 D115004●● 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: LC1 DT20●● becomes LC1 DT206●●.

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

<b>a.c. supply</b>													
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500
<b>LC1 D09...D150 and LC1 DT20...DT80A</b> (coils D115 and D150 fitted with integral suppression device as standard)													
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	–
<b>LC1 D80...D115</b>													
50 Hz	B5	D5	E5	F5	FE5	M5	P5	U5	Q5	V5	N5	R5	S5
60 Hz	B6	–	E6	F6	–	M6	–	U6	Q6	–	–	R6	–
<b>d.c. supply</b>													
Volts	12	24	36	48	60	72	110	125	220	250	440		
<b>LC1 D09...D65A and LC1 DT20...DT80A</b> (coils with integral suppression device fitted as standard)													
U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
<b>LC1 or LP1 D80</b>													
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	–	–		
<b>LC1 D115</b> (coils with integral suppression device fitted as standard)													
U 0.75...1.2 Uc	–	BD	–	ED	ND	SD	FD	GD	MD	UD	RD		
<b>Low consumption</b>													
Volts	5	12	20	24	48	110	220	250					
<b>LC1 D09...D38 and LC1 DT20...DT40</b> (coils with integral suppression device fitted as standard)													
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL					

For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.

(2) LC1 D09 to D38 and LC1 DT20 to DT80A: clip-on mounting on 35 mm rail AM1 DP or screw fixing.

LC1 D80 ~: clip-on mounting on 35 mm rail AM1 DP or 75 mm rail AM1 DL or screw fixing.

LC1 or LP1 D80 ---: clip-on mounting on 75 mm rail AM1 DL or screw fixing.

LC1 D115 and D150: clip-on mounting on 2 x 35 mm rails AM1 DP 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 LC1 D09 to D38, 0.075 kg from LC1 DT60A and D80A and 1 kg for LC1 D80.

# TeSys contactors

## TeSys D, 4-pole contactors

For control in category AC-1, 25 to 200 A

4-pole contactors					
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 voltage code (1)	Weight (3)
				Fixing (2)	
<b>A</b>	<b>Connection by spring terminals</b>				<b>kg</b>
20	4	–	1	1	LC1 DT203●● 0.380
	2	2	1	1	LC1 D0983●● 0.380
25	4	–	1	1	LC1 DT253●● 0.380
	2	2	1	1	LC1 D1283●● 0.380
32	4	–	1	1	LC1 DT323●● 0.425
	2	2	1	1	LC1 D1883●● 0.425
40	4	–	1	1	LC1 DT403●● 0.425
	2	2	1	1	LC1 D2583●● 0.425
<b>Connection by by EverLink®, BTR screw connectors and control circuit by spring terminals</b>					
60	4	–	1	1	LC1 DT60A3●● 1.090
80	4	–	1	1	LC1 DT80A3●● 1.150

### Separate components

Auxiliary contact blocks and add-on modules: see pages 24511/2 to 24511/9.

(1) 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
LC1 D09...D25 and LC1 DT20...DT80A (coils with integral suppression device fitted as standard)													
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		
LC1 D09...D25 and LC1 DT20...DT80A (coils with integral suppression device fitted as standard)													
U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD		
Low consumption													
Volts $\overline{\text{---}}$	5	12	20	24	48	110	220	250					
LC1 D09...D25 and LC1 DT20...DT40 (coils with integral suppression device fitted as standard)													
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL					

For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.

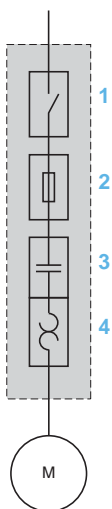
(2) LC1 D09 to D38 and LC1 DT20 to DT80A: clip-on mounting on 35 mm  $\perp$  rail AM1DP or screw fixing.

(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 LC1 D09 to D38, 0.075 kg for LC1 DT60A and DT80A.



# TeSys contactors

for the North American market,  
conforming to UL and CSA



- 1 Motor Disconnect (Disconnect switch)
- 2 Motor Branch Circuit Protection (Short-circuit protection)
- 3 Motor Controller (Contactor)
- 4 Motor Overload Protection (Thermal overload relay)

### Starters for the North American market

In recent years, the North American market has started to harmonise UL, CSA and ANCE standards, as well as the industrial installation codes provided by national regulations (NEC for the United States, CEC for Canada and MEC for Mexico). (1)

Major improvements, carried out by the Canena (2) are aimed at harmonising product requirements based on IEC (3) standards.

However, the North American codes use specific terminology for defining the functions of a starter.

These functions can be fulfilled by standard IEC products, accompanied by appropriate certifications.

### Combination Starters

Combination Starters are the most common type of packaged motor starter. They are called "Combination" because of their structure and their combined functions.

The figure opposite shows the four combined functions that constitute a complete motor starter circuit, defined as a "Motor branch circuit" by the NEC (US National Electric Code) in article 430. Standard UL508 currently gives different types of combination starter that meet the requirements of a "Motor branch circuit".

**Type E**, called "**self-protected combination starter**", covers all these functions and can be controlled manually (thermal-magnetic circuit-breaker) or remotely (starter-controller). Type E starters withstand faults within their declared nominal rating without sustaining damage, after which they can be put back into service. In addition, they can withstand more severe short-circuit and durability performance tests without welding or excessive wear of the contact tips.

**Type F**, called "**Combination motor starter**", consists of a type E manual starter (thermal-magnetic circuit-breaker) combined with a contactor. These starters are evaluated by means of basic short-circuit tests, but are not considered as "self-protected".

For this combination, the type E starter must be marked "Combination Motor Controller when used with ...", followed by the reference of the load side contactor.

(1) **UL**: Underwriters Laboratories, **CSA**: Canadian Standards Association, **ACNE**: Association of Standardization and Certification, **NEC**: National Electric Code, **CEC**: Canadian Electrical Code, **MEC**: Mexican Electrical Code.  
 (2) **Canena**: Council for Harmonization of Electrotechnical Standardization of North America.  
 (3) **IEC**: International Electrotechnical Commission.

## Control panels

To help users properly coordinate their motor control equipment with their distribution system in the event of a fault, article 409 of the 2005 NEC requires panel builders to list the short-circuit withstand rating of their motor control panels.

According to standard UL508A, manufacturers must use the short-circuit withstand value of the lowest rated device as the nominal withstand rating of the panel, unless the devices have been tested together for a higher coordinated rating.

The minimum **“short-circuit current rating”** (SCCR), on motor control components for horsepower ratings of 50 hp or below is 5 000 A.

Using a **type E** or **type F** combination starter eliminates the coordination problems of using individual components for the “motor branch circuit protection”, “motor controller” and “motor overload protection” functions.

The panel builder uses the declared short-circuit current rating for the combination starter. This value is generally higher than 5 000 A.

This makes it easier to list the short-circuit current ratings and to check the compatibility of a UL508A motor control panel within a given distribution system.



# TeSys contactors

for the North American market,  
conforming to UL and CSA

## Group protection

Article 430.53 of the NEC allows a single short-circuit protection device to be used for more than one motor circuit if the components used are marked and listed for such use.

Components suitable for use in group protection, known as “**motor group installations**”, can be marked in one of the following two ways:

### Case n° 1

The contactor and the motor overload relay are both listed as suitable for group installation.

An inverse time circuit-breaker can be used as the short-circuit protection device if it is also listed as suitable for group installation.

The panel builder must therefore make sure that the short-circuit protection device selected (fuses or inverse time circuit-breaker) does not exceed the value allowed by article 430.40 for the smallest overload relay used in the circuit.

Once these conditions have been met, the panel builder can reduce the size of the conductor connecting the short-circuit protection device to the individual motor contactor/overload relay, to one third of the size of the upstream circuit conductor supplying the protection device.

The panel builder must limit the length of the motor starter conductor (connecting the short-circuit protection device to the motor contactor/overload relay) to a maximum of 7.6 m (25 feet).

### Case n° 2

The motor contactor and overload relay are listed as suitable for “**tap conductor protection**” in group installations.

This category allows the panel designer to reduce the size of the conductor connecting the short-circuit protection device to the individual motor contactor/overload relay, to one tenth of the size of the upstream circuit conductor supplying the protection device.

The designer must limit the length of this conductor to a maximum of 3.05 m (10 feet).

In both cases, the supply circuits must not be less than 125 % of the connected motor FLA (Full Load Amps) rating.

For panel builders, using **type F** combination starters in group installations simplifies group motor considerations.

Each starter is a fully coordinated motor branch circuit.

The panel builder follows the same NEC requirements for sizing the supply conductors as those required for single motor branch circuits.

The size of the supply conductors can be reduced in accordance with the specifications of article 430.28.

This allows the same flexibility in conductor sizing as that offered in article 430.53 (D), without a requirement to check the short-circuit protection rating marked on the components and the overload relay limit.

A UL508A panel does not need a short-circuit protection device when each motor starter installed is a **type F**.

The upstream short-circuit protection device supplying the starter protects the panel. The panel builder only has to consider the panel/enclosure disconnect requirements specified by the NEC or local codes.

# TeSys contactors

for the North American market,  
conforming to UL and CSA standards, 20 to 200

528168



LC1 D09●●

528168



LC1 D25●●

528170



LC1 D65A●●

528171



LC1 D95●●

## Contactors

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

### Connection by screw clamp terminals

0.5	1	2	2	5	7.5	00	AWG10	20	LC1 D09●●
1	2	3	3	7.5	10	0	AWG10	25	LC1 D12●●
1	3	5	5	10	15	0	AWG8	32	LC1 D18●●
2	3	5	7.5	15	20	1	AWG6	40	LC1 D25●●
2	5	7.5	10	20	30	1	AWG6	50	LC1 D32●●

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

3	5	10	10	30	30	2	AWG3	60	LC1 D40A●●
3	7.5	15	15	40	40	2	AWG3	70	LC1 D50A●●
5	10	20	20	40	50	2	AWG3	80	LC1 D65A●●

### Connection by screw clamp terminals or connectors

7.5	15	20	25	60	60	2	AWG2	110	LC1 D80●●
7.5	15	20	25	60	60	2	AWG2	110	LC1 D95●●
–	–	30	40	75	100	3	AWG2/0	175	LC1 D115●●
–	–	40	50	100	125	4	AWG3/0	200	LC1 D150●●

## Applications with High-Fault Short-Circuit ratings

For contactors **LC1 D40A** to **LC1 D65A**, the High-Fault Short-Circuit ratings are 50 kA at 480 V and 25 kA at 600 V. If these contactors are used, stick the **LAD UL1** warning sticker on the enclosure door..

Description	Language	Sold in lots of	Reference
Warning sticker	English, Spanish, French	10	LAD UL1

### Application example

For a 15 HP-230 V motor

Select a contactor type **LC1 D50A**.

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

(1) 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
-------	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

LC1 D09...D150 (D115 and D150 coils with integral suppression device fitted as standard)

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

LC1 D80...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
-------	----	----	----	----	----	----	-----	-----	-----	-----	-----

LC1 D09...D65A (coils with integral suppression device fitted as standard)

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

LC1 D80 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	–	–
-----------------	----	----	----	----	---	----	----	---	----	---	---

LC1 D115 and D150 (coils with integral 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
-----------	---	----	----	----	----	-----	-----	-----

LC1 D09...D38 (coils with integral suppression device fitted as standard)

U 0.7...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL
-----------------	----	----	----	----	----	----	----	----

(2) **LC1 D09** to **D65A**: clip-on mounting on 35 mm L rail **AM1 DP** or screw fixing.

**LC1 D80** and **LC1 D95**: clip-on mounting on 35 mm L rail **AM1 DP** or 75 mm L rail **AM1 DL** or screw fixing.

**LC1 D115** and **D150**: clip-on mounting on 2 x 35 mm L rails **AM1 DP** or screw fixing.

# TeSys contactors

TeSys D, 3-pole reversing contactors for motor control up to 75 kW at 400 V, in category AC-3  
Horizontally mounted, pre-assembled

528172



LC2 D12●●

528173



LC2 D65A●●

528175



LC2 D115●●

## 3-pole reversing contactors for connection by screw clamp terminals

Pre-wired power connections.

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 ( $\theta \leq 60^\circ\text{C}$ )							Rated operational current in AC-3 440 V up to	Instantaneous auxiliary contacts per contactor	Contactors supplied with coil Basic reference, to be completed by adding the control voltage code (2)	Weight (3)	
220 V	380 V	415 V	440 V	500 V	660 V	1000 V					
230 V	400 V				690 V				Fixing (1)		
kW	kW	kW	kW	kW	kW	kW	A			kg	
<b>With mechanical interlock, without electrical interlocking, for connection by screw clamp terminals or connectors</b>											
2.2	4	4	4	5.5	5.5	-	9	1	1	LC2 D09●● (4)	0.687
3	5.5	5.5	5.5	7.5	7.5	-	12	1	1	LC2 D12●● (4)	0.697
4	7.5	9	9	10	10	-	18	1	1	LC2 D18●● (4)	0.707
5.5	11	11	11	15	15	-	25	1	1	LC2 D25●● (4)	0.787
7.5	15	15	15	18.5	18.5	-	32	1	1	LC2 D32●● (4)	0.797
9	18.5	18.5	18.5	18.5	18.5	-	38	1	1	LC2 D38●● (4)	0.807
11	18.5	22	22	22	30	-	40	1	1	LC2 D40A●● (5)	1.870
15	22	25	30	30	33	-	50	1	1	LC2 D50A●● (5)	1.880
18.5	30	30	30	37	37	-	65	1	1	LC2 D65A●● (5)	1.890
22	37	45	45	55	45	-	80	1	1	LC2 D80●●	3.200
25	45	45	45	55	45	-	95	1	1	LC2 D95●●	3.200
<b>With mechanical interlock and electrical interlocking, for connection by screw clamp terminals or connectors</b>											
30	55	59	59	75	80	65	115	1	1	LC2 D115●●	6.350
40	75	80	80	90	100	75	150	1	1	LC2 D150●●	6.400

### Connection by lugs or bars

For reversing contactors LC2 D09 to LC2 D38, LC2 D115 and LC2 D150, in the references selected above, insert a figure 6 before the voltage code. Example: **LC2 D09●●** becomes **LC2 D096●●**.  
To build a 40 to 65 A reversing contactor, for connection by lugs, order 2 contactors **LC1 D●●A6** and mechanical interlock **LAD 4CM** (see page 24504/2).

## Component parts

Auxiliary contact blocks and add-on modules: see pages 24511/2 to 24511/9.

- (1) LC2 D09 to D38: clip-on mounting on 35 mm rail **AM1 DP** or screw fixing.  
LC2 D40 to D95: clip-on mounting on 35 mm rail **AM1 DP** or 75 mm rail **AM1 DL** or screw fixing.  
LC2 D115 and D150: clip-on mounting on 35 mm rail **AM1 DP** or screw fixing.
- (2) Standard control circuit voltages (for other voltages between 16 and 690 V, please consult your Regional Sales Office):

a.c. supply														
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500	
<b>LC2 D09...D150</b> (D115 and D150 coils with integral suppression device fitted as standard))														
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	S7	
<b>LC2 D80...D115</b>														
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			
<b>LC2 D09...D65A</b> (coils with integral suppression device fitted as standard)														
U 0.75...1.25 U <sub>c</sub>	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD			
Low consumption														
Volts ---	5	12	20	24	48	110	220	250						
<b>LC2 D09...D38</b> (coils with integral suppression device fitted as standard)														
U 0.8...1.25 U <sub>c</sub>	AL	JL	ZL	BL	EL	FL	ML	UL						

- For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.
- (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 **LC2 D09** to **D38**, 0.150 kg for **LC1 D40A** to **D65A**.
- (4) For reversing contactors with electrical interlocking pre-wired at the factory, add suffix **V** to the references selected above.  
Example: **LC2 D09P7** becomes **LC2 D09P7V**.
- (5) For low consumption kit **LA4 DBL** (see page 24511/7).

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

# TeSys contactors

TeSys D, 3-pole reversing contactors for motor control up to 15 kW at 400 V, in category AC-3  
Horizontally mounted, pre-assembled

528174



LC2 D123●●

## 3-pole reversing contactors, for connection by spring terminals

### Pre-wired power connections.

Mechanical interlock without electrical interlocking.

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3 ( $\theta \leq 60^\circ\text{C}$ )							Rated operational current in AC-3 440 V up to	Instantaneous auxiliary contacts per contactor	Contactors supplied with coil Basic reference, to be completed by adding the voltage code (2)	Weight (3)
220 V	380 V	415 V	440 V	500 V	660 V					
230 V	400 V				690 V					
kW	kW	kW	kW	kW	kW	A			Fixing (1)	kg
<b>For connection by spring terminals</b>										
2.2	4	4	4	5.5	5.5	9	1	1	LC2 D093●●	0.687
3	5.5	5.5	5.5	7.5	7.5	12	1	1	LC2 D123●●	0.697
4	7.5	9	9	10	10	18	1	1	LC2 D183●●	0.707
5.5	11	11	11	15	15	25	1	1	LC2 D253●●	0.787
7.5	15	15	15	18.5	18.5	32 (4)	1	1	LC2 D323●●	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	LC2 D40A3●● (6)	1.870
15	22	25	30	30	33	50	1	1	LC2 D50A3●● (6)	1.880
18.5	30	30	30	37	37	65	1	1	LC2 D65A3●● (6)	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 LC2 D09 and LC2 D12 only, in the references selected above, replace the figure 3 before the voltage code with a figure 9.

Example: LC2 D093●● becomes LC2 D099●●.

## Component parts

Auxiliary contact blocks and add-on modules: see pages 24511/2 to 24511/9.

(1) LC2 D09 to D32: clip-on mounting on 35 mm rail AM1 DP or screw fixing.

(2) 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	
LC2 D09...D65														
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	
LC2 D09...D65A (coils with integral suppression device fitted as standard)												
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	
LC2 D09...D32 (coils with integral suppression device fitted as standard)									
U 0.8...1.25 Uc		AL	JL	ZL	BL	EL	FL	ML	UL

For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.

(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 LC2 D09 to D38, 0.150 kg for LC1 D40A to D65A.

(4) Must be wired with 2 x 4 mm<sup>2</sup> cables in parallel on the upstream side. On the downstream side, outgoing terminal block LAD 331 may be used (Quickfit technology, see page 15021/5). 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 LAD ALLEN4, see page 24511/9).

(6) For low consumption kit LA4 DBL (see page 24511/7).

# TeSys contactors

TeSys D, 4-pole changeover contactor pairs  
for control in category AC-1,  
20 to 200 A

528176



LC2 DT20●●

## Pre-assembled. Pre-wired power connections.

### For connection by screw clamp terminals or connectors

LC2 DT20 to LC2 DT40: mechanical interlock without electrical interlocking.

LC2 D80004: order separately 2 auxiliary contact blocks LAD N●1 to obtain electrical interlocking between the 2 contactors (see page page 24511/3). For electrical interlocking incorporated in the mechanical interlock, please consult your Regional Sales Office.

LC2 D115004: mechanical interlock with integral, pre-wired electrical interlocking.

Utilisation category AC-1 Non-inductive loads Maximum rated operational current ( $\theta \leq 60^\circ\text{C}$ )	Instantaneous auxiliary contacts per contactor		Contactors supplied with coil	Weight  kg
			Basic reference, to be completed by adding the voltage code (1) Fixing (2)	
<b>A</b>				<b>kg</b>
20	1	1	LC2 DT20●●	0.730
25	1	1	LC2 DT25●●	0.730
32	1	1	LC2 DT32●●	0.850
40	1	1	LC2 DT40●●	0.850
125	–	–	LC2 D80004●●	3.200
200	–	–	LC2 D115004●●	7.400

### For connection by lugs or bars

20	1	1	LC2 DT206●●	0.730
25	1	1	LC2 DT256●●	0.730
32	1	1	LC2 DT326●●	0.850
40	1	1	LC2 DT406●●	0.850

## For customer assembly.

### For connection by screw clamp terminals or connectors

60	1	1	LC1 DT60A●● (3)	–
80	1	1	LC1 DT80A●● (3)	–

### For connection by lugs or bars

60	1	1	LC1 DT60A6●● (3)	–
80	1	1	LC1 DT80A6●● (3)	–

## Accessories

Auxiliary contact blocks and add-on modules: see pages 24511/2 to 24511/9.

(1) See note (1) on next page.

(2) LC2 DT20 to LC2 DT80: clip-on mounting on 35 mm  $\perp$  rail AM1 DP or screw fixing.

LC2 D80: clip-on mounting on 35 mm  $\perp$  rail AM1 DP or 75 mm  $\perp$  rail AM1 DL or screw fixing.

LC2 D115: clip-on mounting on 2 x 35 mm  $\perp$  rails AM1 DP or screw fixing.

(3) For these operational currents, order 2 identical contactors and a mechanical interlock LAD 4CM (see page 24504/2).

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

# TeSys contactors

TeSys D, 4-pole changeover contactor pairs  
for control in category AC-1, 20 A

## Pre-assembled. Pre-wired power connections.

For connection by spring terminals.

Utilisation category AC-1 Non-inductive loads Maximum rated operational current ( $\theta \leq 60^\circ\text{C}$ )	Instantaneous auxiliary contacts per contactor		Contactors supplied with coil Basic reference, to be completed by adding the control voltage code (1) Fixing (2)	Weight
A				kg
20	1	1	LC2 DT203●●	0.760

## For customer assembly.

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

60	1	1	LC1 DT60A3●● (4)	–
80	1	1	LC1 DT80A3●● (4)	–

## Separate components

Auxiliary contact blocks and add-on modules: see pages 24511/2 to 24511/9.

(1) 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
<b>LC2 DT20...DT40, LC1 DT60...DT80</b>													
50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	–
<b>LC2 D80004...D115004</b>													
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
<b>LC2 DT20...DT40, LC1 DT60...DT80</b> (coils with integral suppression device fitted as standard)											
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
<b>LC2 DT20...DT40</b> (coils with integral suppression device fitted as standard)								
U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL

For other voltages between 5 and 690 V, see pages 24507/2 to 24507/7.

(2) Clip-on mounting on 35 mm rail AM1 DP 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 LAD ALLEN4, see page 24511/9).

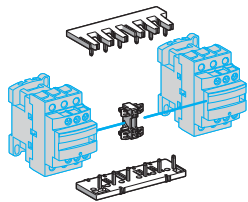
(4) For these operational currents, order 2 identical contactors and a mechanical interlock LAD 4CM (see page 24504/2).



## TeSys contactors

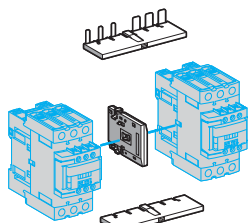
Component parts for assembling reversing contactors for motor control, low-speed/high-speed starters and star-delta starters

537729



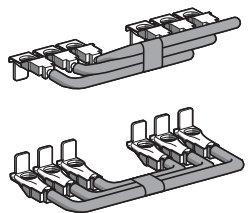
LAD 9R1

537730



LAD 9R3

537731



LA9 D8069

### 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	Weight kg
<b>Kits for assembly of reversing contactors</b>			
<b>Kit comprising:</b> ■ a mechanical interlock <b>LAD 9V2</b> with electrical interlocking <b>LAD 9V1</b> . ■ a set of power connections <b>LAD 9V5</b> (parallel) and <b>LAD 9V6</b> (reversing)	LC1 D09 to D38	<b>LAD 9R1V</b>	0.045
<b>Kit comprising:</b> ■ a mechanical interlock <b>LAD 9V2</b> without electrical interlocking ■ a set of power connections <b>LAD 9V5</b> (parallel) and <b>LAD 9V6</b> (reversing)	LC1 D09 to D38	<b>LAD 9R1</b>	0.045
<b>Kit comprising:</b> ■ a mechanical interlock <b>LAD 4CM</b> , ■ a set of power connections <b>LA9 D65A69</b> .	LC1 D40A to D65A	<b>LAD 9R3</b>	0.170
<b>Mechanical interlocks</b>			
<b>Mechanical interlock with integral electrical interlocking</b>	LC1 D80 and D95 (~)	<b>LA9 D4002</b>	0.170
	LC1 D80 and D95 (---)	<b>LA9 D8002</b>	0.170
	LC1 D115 and D150	<b>LA9 D11502</b>	0.290
<b>Mechanical interlock without integral electrical interlocking</b>	LC1 D09 to D38	<b>LAD 9V2</b>	0.040
	LC1 D40A to D65A	<b>LAD 4CM</b>	0.040
	LC1 D80 and D95 (~)	<b>LA9 D50978</b>	0.170
	LC1 D80 and D95 (---)	<b>LA9 D80978</b>	0.170
<b>Sets of power connections</b>			
<b>Comprising:</b> ■ a set of parallel bars, ■ a set of reverser bars.	LC1 D09 to D38 with screw clamp terminals or connectors	<b>LAD 9V5 + LAD 9V6</b>	–
	LC1 D09...D32 with spring terminal connections	<b>LAD 9V12 + LAD 9V13 (2)</b>	–
	LC1 D40A to D65A	<b>LA9 D65A69</b>	0.130
	LC1 D80 and D95 (~)	<b>LA9 D8069</b>	0.490
	LC1 D80 and D95 (---)	<b>LA9 D8069</b>	0.490
	LC1 D115 and D150	<b>LA9 D11569</b>	1.450

### For low-speed/high-speed starter

Description	For contactors with connection type	Reference	Weight kg
<b>Connection kit enabling reversing of low and high speed directions using a reversing contactor and a 2N/O + 2N/C main pole contactor</b>	Screw clamps or connectors	<b>LAD 9PVG V</b>	0.016
	Power connection module with spring terminal connections	<b>LAD 3PVG V</b>	0.034
	Outgoing terminal block with spring terminal connections	<b>LAD 3PVG V10</b>	0.034

### For star-delta starter

Description	For contactors	Reference	Weight kg
<b>Mounting kit comprising:</b> ■ 1 time delay contact block <b>LAD S2</b> (LC1 D09...D80), ■ power circuit connections (LC1 D09...D80), ■ hardware required for fixing the contactors onto the mounting plate (LC1 D80).	LC1 D09 and D12	<b>LAD 91217</b>	0.180
	LC1 D18 to D32	<b>LAD 93217</b>	0.310
	LC1 D40A and D50A	<b>LAD 9SD3</b>	0.380
	LC1 D80	<b>LA9 D8017</b>	0.680
<b>Equipment mounting plates</b>	LC1 D09, D12 and D18	<b>LA9 D12974</b>	0.150
	LC1 D32	<b>LA9 D32974</b>	0.180
	LC1 D40A and D50A	–	–
	LC1 D80	<b>LA9 D80973</b>	0.300

(1) To order the 2 contactors: see pages 24502/3 and 24503/2.

(2) To assemble a reversing contactor with spring terminal connections, the following components must be ordered:

- 1 mechanical interlock **LAD 9V2**,

- 1 upstream power connection kit and 1 downstream power connection kit.

Upstream power connection kit **LAD 9V10**: installed in the Quickfit system with power connection module **LAD 34**.

(If module **LAD 34** is not used, replace **LAD 9V10** with **LAD 9V12**).

Downstream power connection kit **LAD 9V11**: installed in the Quickfit system with outgoing terminal block **LAD 331**.

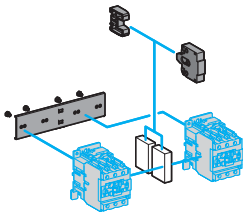
(If **LAD 331** is not used, replace **LAD 9V11** with **LAD 9V13**).

**For 4-pole changeover contactor pairs (3-phase distribution + neutral)**

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

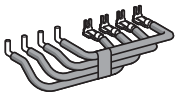
Description	For contactors (1) (2 identical contactors)	Reference	Weight kg
<b>Kits for assembly of changeover contactor pairs</b>			
<b>Kit comprising:</b> ■ a mechanical interlock <b>LAD 9V2</b> with electrical interlocking <b>LAD 9V1</b> , ■ a set of power connections (changeover) <b>LAD 9V7</b> .	LC1 DT20 to DT40 with screw clamps or connectors	<b>LAD T9R1V</b>	0.045
<b>Kit comprising:</b> ■ a mechanical interlock <b>LAD 9V2</b> without electrical interlocking, ■ a set of power connections (changeover) <b>LAD 9V7</b> .	LC1 DT20 to DT40 with screw clamps or connectors	<b>LAD T9R1</b>	0.045
<b>Mechanical interlocks</b>			
<b>With integral electrical interlocking</b>	LC1 D80004	<b>LA9 D4002</b>	0.170
	LP1 D80004	<b>LA9 D8002</b>	0.170
	LC1 D115004	<b>LA9 D11502</b>	0.280
<b>Without integral electrical interlocking</b>	LC1 DT20 to DT40 with screw clamps or connectors	<b>LAD 9V2 (2)</b>	0.040
	LC1 DT203 to DT403 with spring terminals	<b>LAD 9V2 (2)</b>	0.040
	LC1 DT60A and DT80A	<b>LAD 4CM</b>	0.040
	LC1 D80004	<b>LA9 D50978</b>	0.155
	LP1 D80004	<b>LA9 D80978</b>	0.180
<b>Sets of power connections</b>			
Comprising a set of parallel bars	LC1 D60A and D80A	<b>LA9 D65A70 ▲</b>	0.150
	LC1 D80004	<b>LA9 D8070</b>	0.280
	LP1 D80004	<b>LA9 D8070</b>	0.280
	LC1 D115004	<b>LA9 D11570</b>	1.100
	LC1 DT203 to DT403 with spring terminals	<b>LAD 9V9</b>	0.100
	LC1 D80004	<b>LA9 D8070 (2)</b>	–
	LP1 D80004	<b>LA9 D8070 (2)</b>	–

537733



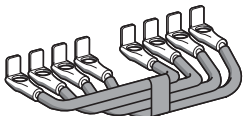
LA9 D50978

537734



LA9 D6570

537735



LA9 D8070

**For 3-pole changeover contactor pairs**

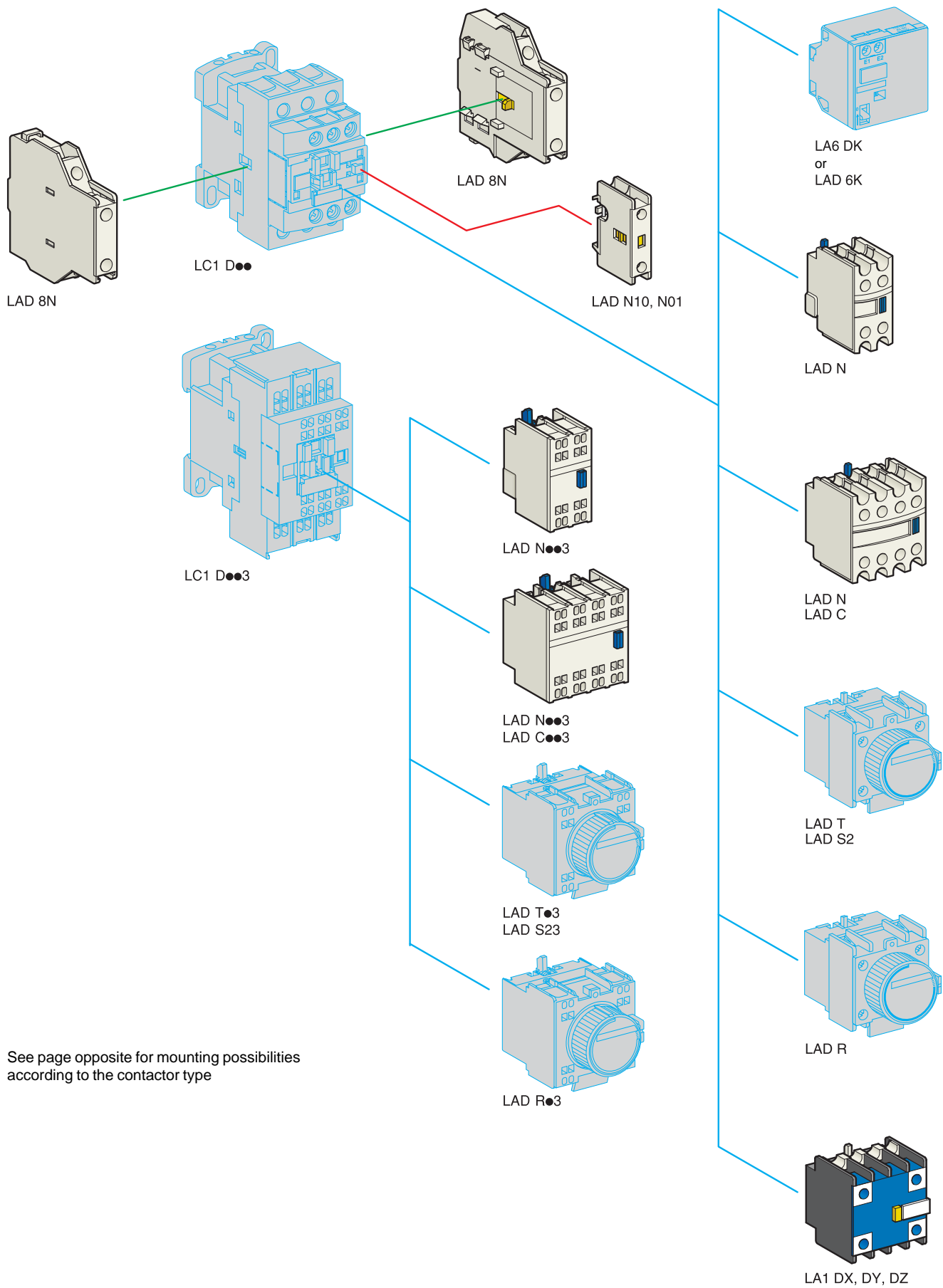
Contactors with screw clamp terminals or connectors. Horizontally mounted, assembled by customer.

Description	For contactors (1) (2 identical contactors)	Reference	Weight kg
<b>Mechanical interlocks</b>			
<b>Without integral electrical interlocking</b>	LC1 D40A...D65A	<b>LAD 9R3S</b>	0.105
<b>With integral electrical interlocking</b>	LC1 D115 and D150	<b>LA9 D11502</b>	0.280
<b>Sets of power connections</b>			
Comprising a set of parallel bars,	LC1 D115 and D150	<b>LA9 D11571</b>	0.960

(1) To order the 2 contactors: see pages 24502/3 and 24503/2.

(2) Order 2 contact blocks **LAD No 1** to build the electrical interlock, see page 24511/3.▲ Available 3<sup>rd</sup> quarter 2009.





See page opposite for mounting possibilities according to the contactor type






## TeSys contactors

TeSys D contactors and reversing contactors  
Instantaneous auxiliary contact blocks

## Instantaneous auxiliary contact blocks for connection by screw clamp terminals

## For use in normal operating environments

In order to mount an LAD 8N on an LC1 D80 to D95, a set of shims must be ordered separately, see page 24511/9

Clip-on mounting (1)	Number of contacts per block	Composition					Reference	Weight  kg
								
Front	1	-	-	-	1	-	LAD N10	0.020
		-	-	-	-	1	LAD N01	0.020
	2	-	-	-	1	1	LAD N11	0.030
		-	-	-	2	-	LAD N20	0.030
		-	-	-	-	2	LAD N02	0.030
	4	-	-	-	2	2	LAD N22	0.050
		-	-	-	1	3	LAD N13	0.050
		-	-	-	4	-	LAD N40	0.050
		-	-	-	-	4	LAD N04	0.050
		-	-	-	3	1	LAD N31	0.050
-		-	-	2	2	LAD C22	0.050	
Side	2	-	-	-	1	1	LAD 8N11	0.030
		-	-	-	2	-	LAD 8N20	0.030
		-	-	-	-	2	LAD 8N02	0.030

## For terminal referencing conforming to EN 50012

Front on 3P contactors and 4P contactors 20 to 80 A	2	-	-	-	1	1	LAD N11G	0.030
Front on 4P contactors 125 to 200 A	4	-	-	-	2	2	LAD N22G	0.050
	2	-	-	-	1	1	LAD N11P	0.030
	4	-	-	-	2	2	LAD N22P	0.050

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

Front	2	-	2	-	-	-	LA1 DX20	0.040
		1	1	-	-	-	LA1 DX11	0.040
		2	-	-	-	-	LA1 DX02	0.040
		-	2	2	-	-	LA1 DY20 (2)	0.040
		-	2	-	2	-	LA1 DZ40	0.050
	4	-	2	-	1	1	LA1 DZ31	0.060

## 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: LAD N11 becomes LAD N116.

## Instantaneous auxiliary contact blocks for connection by spring terminals

This type of connection is not possible for LAD 8, LAD N 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: LAD N11 becomes LAD N113.

## Instantaneous auxiliary contact blocks for connection by Faston connectors

This type of connection is not possible for LAD 8, LAD N with 1 contact or blocks with dust and damp protected contacts. For all other contact blocks, add the figure 9 to the end of the references selected above. Example: LAD N11 becomes LAD N119.

(1) Maximum number of auxiliary contacts that can be fitted:

Contactors	Type	Number of poles and size	Instantaneous auxiliary contacts Side mounted	Front mounted			Time delay Front mounted		
				1 contact	2 contacts	4 contacts			
~	3P	LC1 D09...D38	1 on LH side	and	-	1	or 1	or 1	
		LC1 D40A...D65A	1 on LH or 1 on RH side	and	-	1	or 1	or 1	
		LC1 D80 and D95 (50/60 Hz)	1 on each side	or	2	and 1	or 1	or 1	
		LC1 D80 and D95 (50 or 60 Hz)	1 on each side	and	2	and 1	or 1	or 1	
		LC1 D115 and D150	1 on LH side	and	-	1	or 1	or 1	
	4P	LC1 DT20...DT40	1 on LH side	and	-	1	or 1	or 1	
		LC1 DT60A and DT80A	1 on LH or 1 on RH side	and	-	1	or 1	or 1	
		LC1 D40008, D65008 and D80	1 on each side	or	1	or 1	or 1	or 1	
		LC1 D115	1 on each side	and	1	or 1	or 1	or 1	
≡	3P	LC1 D09...D38	-	-	-	1	or 1	or 1	
		LC1 D40A...D65A	-	-	-	1	or 1	or 1	
		LC1 D80 and D95	-	-	1	or 1	or 1	or 1	
		LC1 D115 and D150	1 on LH side	and	-	1	or 1	or 1	
	4P	LC1 DT20...DT40	-	-	-	-	1	or 1	or 1
		LC1 DT60A and DT80A	-	-	-	-	1	or 1	or 1
		LC1 D40008, D65008 and D80	-	-	2	and 1	or 1	or 1	
		LC1 D115	1 on each side	-	-	and 1	or 1	or 1	
BC (3)	3P	LC1 D09...D38	-	-	-	1	-	-	
	4P	LC1 DT20...DT40	-	-	-	1	-	-	

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

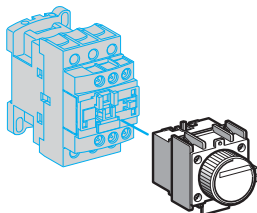
(3) LC: low consumption.

# TeSys contactors

TeSys D contactors and reversing contactors

Time delay auxiliary contact blocks

Mechanical latch blocks

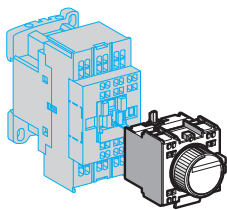


LAD T0

### 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 24511/3.  
 Sealing cover to be ordered separately, see page 24511/9.  
 LAD T0 and LAD R0: with extended scale from 0.1 to 0.6 s.  
 LAD S2: with switching time of 40 ms ± 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	Weight kg
		Type	Setting range		
Front	1 N/O + 1 N/C	On-delay	0.1...3 s	LAD T0	0.060
			0.1...30 s	LAD T2	0.060
			10...180 s	LAD T4	0.060
			1...30 s	LAD S2	0.060
		Off-delay	0.1...3 s	LAD R0	0.060
			0.1...30 s	LAD R2	0.060
			10...180 s	LAD R4	0.060



LAD T03

### Time delay auxiliary contact blocks for connection by lugs

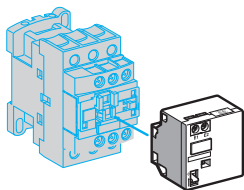
Add the figure 6 to the end of the references selected above. Example: LAD T0 becomes LAD T06.

### Time delay auxiliary contact blocks for connection by spring terminals

Add the figure 3 to the end of the references selected above. Example: LAD T0 becomes LAD T03

### Time delay auxiliary contact blocks for connection by Faston connectors

Add the figure 9 to the end of the references selected above. Example: LAD T0 becomes LAD T09.



LAD 6K10

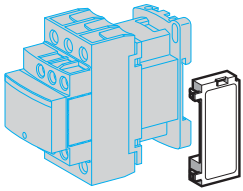
### Mechanical latch blocks (1)

Clip-on mounting	Unlatching control	For use on contactor	Basic reference, to be completed by adding the control voltage code (2)	Weight kg
Front	Manual or electric	LC1 D09...D38 (~ or ---)	LAD 6K10	0.070
		LC1 DT20...DT40 (~ or ---)		
		LC1 D40A...D65A (3 P ~ or ---) LC1 DT60A and DT80A (4 P ~ or ---)	LAD 6K10	0.070
Front	Manual or electric	LC1 D80...D150 (3 P ~)	LA6 DK20	0.090
		LC1 D80 and D115 (3 P ---)		
		LC1 D80 (4 P ~) LC1 D80 and D115 (4 P ~) LP1 D80 and LC1 D115 (4 P ---)		

(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 LAD 6K10 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

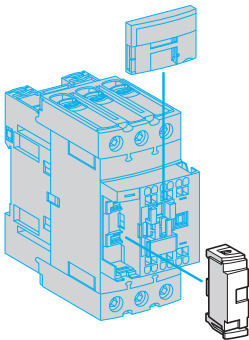


LAD 4●●

#### 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).

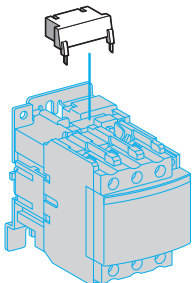
Mounting	For use with contactor (1) Rating	Type		Reference	Weight kg
		V ~	V ---		
Clip-on side mounting (3)	D09...D38 (3P) DT20...DT40	24...48	–	LAD 4RCE	0.012
		50...127	–	LAD 4RCG	0.012
		110...250	–	LAD 4RCU	0.012
Clip-on front mounting (3)	D40A...D65A (3P) DT60A...DT80A (4P)	24...48	–	LAD 4RC3E	0.020
		50...127	–	LAD 4RC3G	0.020
		110...240	–	LAD 4RC3U	0.020
Screw fixing (4)	D80...D150 (3P) D40...D115 (4P)	380...415	–	LAD 4RC3N	0.040
		24...48	–	LA4 DA2E	0.018
		50...127	–	LA4 DA2G	0.018
		110...240	–	LA4 DA2U	0.018
		380...415	–	LA4 DA2N	0.018

LAD 4RC3●, LAD 4V3●,  
LAD 4D3U, LAD 4T3●

#### 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 (3)	D09...D38 (3P) DT20...DT40	24...48	–	LAD 4VE	0.012
		50...127	–	LAD 4VG	0.012
		110...250	–	LAD 4VU	0.012
Clip-on front mounting (3)	D40A...D65A (3P) DT60A...DT80A (4P)	24...48	24...48	LAD 4V3E	0.020
		50...127	50...127	LAD 4V3G	0.020
		110...250	110...250	LAD 4V3U	0.020
Screw fixing (4)	D80...D115 (3P) D80...D115 (4P)	24...48	–	LA4 DE2E	0.018
		50...127	–	LA4 DE2G	0.018
		110...250	–	LA4 DE2U	0.018
		–	24...48	LA4 DE3E	0.018
		–	50...127	LA4 DE3G	0.018
		–	110...250	LA4 DE3U	0.018



LA4 D●●

#### Flywheel diodes

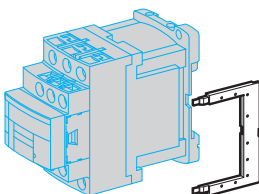
No overvoltage or oscillating frequency. Increase in drop-out time (6 to 10 times the normal time). Polarised component.

Clip-on side mounting (5)	D09...D38 (3P), DT20...DT40	–	24...250	LAD 4DDL	0.012
Clip-on front mounting (5)	D40A...D65A (3P), DT60A...DT80A (4P)	–	24...250	LAD 4D3U	0.020
Screw fixing (4)	D80 and D95 (3P), D40...D80 (4P)	–	24...250	LA4 DC3U	0.018

#### 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 (3) (5)	D09...D38 (3P) DT20...DT40 (4P) (2)	24	–	LAD 4TB	0.012
		–	24	LAD 4TBDL	0.012
		72	–	LAD 4TS	0.012
		–	72	LAD 4TSDL	0.012
		–	125	LAD 4TGDL	0.012
		–	250	LAD 4TUDL	0.012
		–	600	LAD 4TXDL	0.012
Clip-on front mounting (3)	D40A...D65A (3P) DT60A...DT80A (4P) (2)	12...24	12...24	LAD 4T3B	0.020
		25...72	25...72	LAD 4T3S	0.020
		73...125	73...125	LAD 4T3G	0.020
		126...250	126...250	LAD 4T3U	0.020
		251...440	251...440	LAD 4T3R	0.020
Screw fixing (4)	D80...D95 (3P) D40...D80 (4P)	24	–	LA4 DB2B	0.018
		72	–	LA4 DB2S	0.018
		–	24	LA4 DB3B	0.018
		–	72	LA4 DB3S	0.018



LAD 4DDL or LAD 4TDL

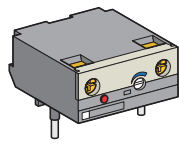
(1) For satisfactory protection, a suppressor module must be fitted across the coil of each contactor.

(2) From D09 to D65A and from LC1 DT20 to DT80A, d.c. and low consumption 3-pole contactors 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). If a d.c. or low consumption contactor is used without suppression, the standard suppressor should be replaced with a blanking plug (reference LAD 9DL for LC1 D09 to D38 and LC1 DT20 to DT40; reference LAD 9DL3 for LC1 D40A to D65A and LC1 DT60A to DT80A).

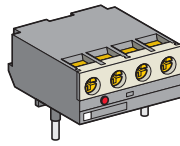
(3) Clipping-on makes the electrical connection. The overall size of the contactor remains unchanged.

(4) Mounting at the top of the contactor on coil terminals A1 and A2.

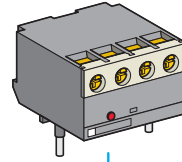
(5) In order to install these accessories, the existing suppression device must first be removed.



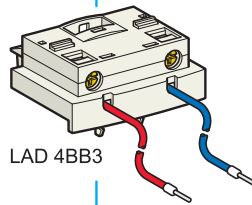
LA4 DT



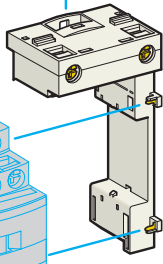
LA4 DFB



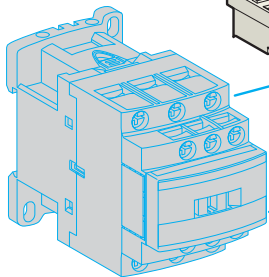
LA4 DWB



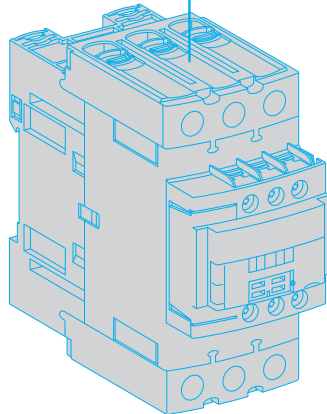
LAD 4BB3



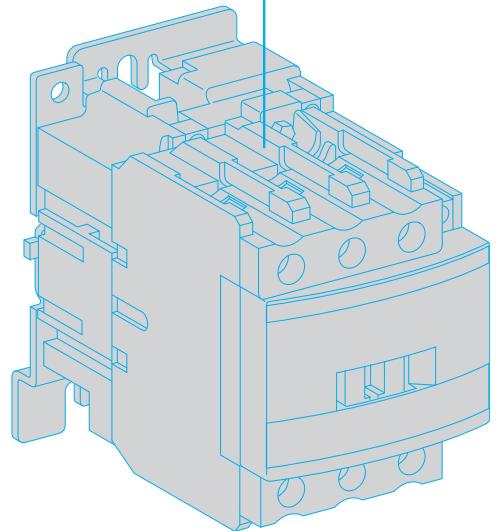
LAD 4BB



LC1 D09...D38



LC1 D40A...D65A



LC1 D80...D95

See page opposite for mounting possibilities according to the contactor type

**Electronic serial timer modules (1)**

- 3-pole contactors LC1 D09 to D38:  
mounted using adapter LAD 4BB, to be ordered separately, see below.
- 3-pole contactors LC1 D40A to D65A:  
mounted using adapter LAD 4BB3, to be ordered separately, see below.
- 3-pole contactors LC1 D80 to D150 and 4-pole contactors LC1 D40 to D115:  
mounted directly across terminals A1 and A2 of the contactor.

On-delay type				
Operational voltage ~		Time delay	Reference	Weight kg
24...250 V	100...250 V			
LC1 D09...D65A (3P)	LC1 D80...D150 (3P)	0.1...2 s	LA4 DT0U	0.040
		1.5...30 s	LA4 DT2U	0.040
		25...500 s	LA4 DT4U	0.040

**Interface modules**

- 3-pole contactors LC1 D09 to D38: mounted using adapter LAD 4BB, to be ordered separately, see below.
- 3-pole contactors LC1 D40A to D65A: mounted using adapter LAD4 BB3, to be ordered separately, see below.

Relay interface				
Operational voltage ~		Supply voltage E1-E2 (---)	Reference	Weight kg
24...250 V				
LC1 D09...D150 (3P)		24 V	LA4 DFB	0.050

**Relay interface with "AUTO-I" manual override switch (output forced "ON"), solid state type**

Operational voltage ~		Supply voltage E1-E2 (---)	Reference	Weight kg
24...250 V	100...250 V			
LC1 D09...D65A (3P)	LC1 D80...D115 (3P)	24 V	LA4 DWB	0.045

**Low consumption kit**

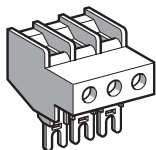
For use on contactors	Composition	Reference	Weight kg
LC1 D40A...D65A (3P) (2)	Kit comprising: <ul style="list-style-type: none"> <li>■ a retrofit coil LAD 4BB3.</li> <li>■ a relay interface module LA4 DFB.</li> </ul>	LA4 DBL	0.077

**Retrofit: coil for 3-pole contactor****For adapting existing wiring to a new product**

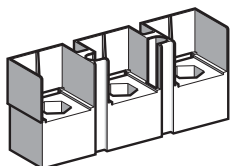
For use on contactors		Reference	Weight kg	
LC1 D09...D38	Without coil suppression	LAD 4BB	0.019	
	With coil suppression	~ 24...48 V	LAD 4BBVE	0.014
		~ 50...127 V	LAD 4BBVG	0.014
		~ 110...250 V	LAD 4BBVU	0.014
LC1 D40A...65A	Without coil suppression	LAD 4BB3	0.027	

(1) For 24 V operation, the contactor must be fitted with a 21 V coil (code Z). See pages 24507/2 to 24507/7.

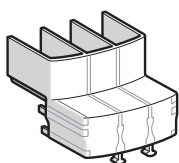
(2) The kit is compatible with a coil voltage of ~ 24 V to ~ 250 V (B7 to U7) and --- 24 V to --- 250 V (BD to UD).



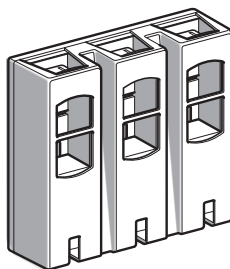
LA9 D3260



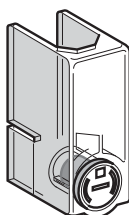
LA9 D11550



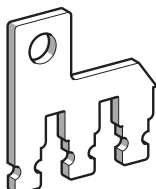
LAD 96570



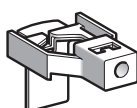
LA9 D11560



LA9 D11570



LA9 D80962



LA9 D11567

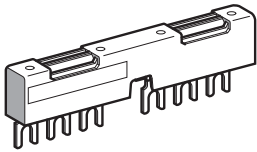
## Accessories for main pole and control connections

Description	For use with contactors LC1		Sold in lots of	Unit reference	Weight kg	
	~	---				
Connectors for cable, size (1 connector)	4-pole 10 mm <sup>2</sup>	DT20, DT25	DT20, DT25	1	LAD 92560	0.030
	3-pole 25 mm <sup>2</sup>	D09...D38	D09...D38	1	LA9 D3260	0.040
EverLink® terminal block	3-pole	D40A...D65A	D40A...D65A	1	LAD 96560	0.087
Connectors for cables (2 connectors)	3-pole 120 mm <sup>2</sup>	D115, D150	D115, D150	1	LA9 D115603	0.560
	4-pole 120 mm <sup>2</sup>	D115	D115	1	LA9 D115604	0.740
Connectors for lug type terminals (2 connectors)	3-pole	D1156, D1506	D1156, D1506	1	LA9 D115503	0.300
	4-pole	D1156	D1156	1	LA9 D115504	0.360
Protective covers for connectors for lug type terminals	3-pole	D40A6...D65A6	D40A6...D65A6	1	LAD 96570	0.021
		D1156, D1506	D1156, D1506	1	LA9 D115703 (1)	0.250
	4-pole	D60A6...D80A6	D60A6...D80A6	1	LAD 96580	0.027
IP 20 covers for lug type terminals (for mounting with circuit-breakers GV3 P●●6 and GV3 L●●6)	3 poles	D40A6...D65A6	D40A6...D65A6	1	LAD 96575	0.010
		D1156, D1506	D1156, D1506	1	LA9 D115704	0.300
Links for parallel connection of	2 poles	D09...D38	D09...D38	10	LA9 D2561	0.060
		DT20, DT25 (4P)	DT20, DT25 (4P)	10	LA9 D1261	0.012
		DT32, DT40 (4P)	DT32, DT40 (4P)	10	LAD 96061	0.060
	3 poles	D40A...D65A	D40A...D65A	1	LAD 9P32	0.021
		D80, D95	D80	2	LA9 D80961	0.060
		D09...D38	D09...D38	10	LAD 9P3 (2)	0.005
4 poles	D40A...D65A	D40A...D65A	1	LAD 9P33	0.021	
	D80, D95	D80, D95	1	LA9 D80962	0.080	
	DT20, DT25	DT20, DT25	2	LA9 D1263	0.024	
Staggered coil connection	-	D80	D80	2	LA9 D80963	0.100
		D80	D80	10	LA9 D09966	0.006
Control circuit take-off from main pole	D80, D95	D80, D95	10	LA9 D8067	0.010	
	D115, D150	D115, D150	10	LA9 D11567	0.014	
Spreaders for increasing the pole pitch to 45 mm	D115, D150	D115, D150	3	GV7 AC03	0.180	

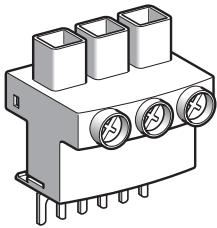
(1) For 3-pole contactors: 1 set of 6 covers, for 4-pole contactors: 1 set of 8 covers.

(2) Separate connecting bar for connecting 2 poles in parallel.

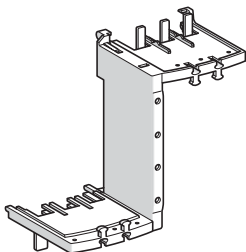




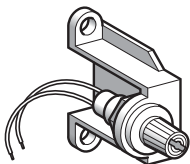
GV2 G245



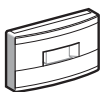
GV1 G09



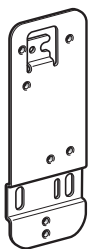
GV3 S



LA9 D941



LAD 9ET●



LAD 7X3

## Sets of contacts and arc chambers

Description	For contactor		Reference	Weight kg
Sets of contacts	3-pole	LC1 D115	LA5 D1158031	0.260
		LC1 D150	LA5 D150803	0.260
	4-pole	LC1 D115004	LA5 D115804	0.330
		LC1 D115	LA5 D11550	0.395
Arc chambers	3-pole	LC1 D115	LA5 D11550	0.395
		LC1 D150	LA5 D15050	0.395
	4-pole	LC1 D115004	LA5 D115450	0.470

## Power connection accessories

Terminal block	For supply to one or more GV2 G busbar sets		GV1 G09	0.040
Set of 63 A busbars for paralleling of contactors	2 contactors LC1 D09...D18 or D25...D38		GV2 G245	0.036
	4 contactors LC1 D09...D18 or D25...D38		GV2 G445	0.077
Set of 115 A busbars for paralleling of contactors	2 contactors LC1 D40A...D65A		GV3 G264	0.150
	3 contactors LC1 D40A...D65A		GV3 G364 (1)	0.250
Set of S-shape busbars	For circuit-breakers GV3 P●● and GV3 L●● and contactors LC1 D40A...D65A		GV3 S	0.111

## Protection accessories

Description	Use	Sold in lots of	Reference	Weight kg
Miniature control circuit fuse holder	5 x 20 with 4 A-250 V fuse	1	LA9 D941	0.025
Sealing cover	For LAD T, LAD R	1	LA9 D901	0.005
Safety cover preventing access to the moving contact carrier	LC1 D09...D65A and DT20...DT80A	1	LAD 9ET1	0.026
	LC1 D80 and D95	1	LAD 9ET3	0.004
	LC1 D115 and D150	1	LAD 9ET4	0.004

## Marking accessories

Description	Use	Sold in lots of	Unit reference	Weight kg
Sheet of 64 blank legends, self-adhesive, 8 x 33 mm (2)	Contactors (except 4P) LC1 D80...D115, LAD N (4 contacts), LA6 DK	10	LAD 21	0.020
Sheet of 112 blank legends, self-adhesive, 8 x 12 mm (2)	LAD N (2 contacts), LAD T, LAD R, LRD	10	LAD 22	0.020
Sheet of 64 blank legends for marking using plotter or 8 x 33 mm engraver	Contactors (except 4P) LC1 D80...D115, LAD (4 contacts), LA6 DK	10	LAD 23	0.050
Sheet of 440 blank legends for marking using plotter or 8 x 12 mm engraver	All products	35	LAD 24	0.200
Marker holder snap-in, 8 x 22 mm	4-pole contactors, LC1 D80...D115, LA6 DK	100	LA9 D92	0.001
Marker holder snap-in, 8 x 18 mm	LC1 D09...D65A, LC1 DT20...DT80A, LAD N (4 contacts), LAD T, LAD R	100	LAD 90	0.001
Bag of 300 blank legends self-adhesive, 7 x 21 mm	On holder LA9 D92	1	LA9 D93	0.001
"SIS Label" labelling software supplied on CD-Rom	Multi-language version: English, French, German, Italian, Spanish	1	XBY 2U	0.100

## Mounting accessories

Retrofit plate for screw fixing	For replacement of LC1 D40 to D65 with LC1 D40A to D65A	1	LAD 7X3	0.150
Mounting plate	For replacement of LC1 F115 or F150 with LC1 D115 or D150	1	LA9 D730	0.360
Set of shims	For fitting side mounting blocks LAD 8N on LC1 D80 and D95	1	LA9 D511	0.020
Size 4 Allen key, insulated, 1000 V	For use on contactors LC1 D40A to LC1 D150	5	LAD ALLEN4	0.026

(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 LC1 D65A supplied directly + 1 contactor LC1 D65A and 1 contactor LC1 D50 A supplied via the busbar set = 115 A. This combination is compatible with busbar set GV3 G364.

(2) These legends are for sticking onto the safety cover of the contactors or add-on block, if fitted.



## TeSys contactors

a.c. coils

for TeSys D, 3 or 4-pole contactors

## For ~ contactors LC1 D09...D38 and LC1 DT20...DT40

## Specifications

Average consumption at 20 °C:

- inrush ( $\cos \varphi = 0.75$ ) 70 VA,- sealed ( $\cos \varphi = 0.3$ ) 50 Hz: 7 VA, 60 Hz: 7.5 VAOperating 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)	Weight
V	$\Omega$	H	50/60 Hz	kg
12	1.33	0.05	LXD 1J7	0.070
21 (2)	4.17	0.17	LXD 1Z7	0.070
24	5.37	0.22	LXD 1B7	0.070
32	10.1	0.39	LXD 1C7	0.070
36	12.8	0.49	LXD 1CC7	0.070
42	17	0.67	LXD 1D7	0.070
48	21.7	0.87	LXD 1E7	0.070
60	34.6	1.4	LXD 1EE7	0.070
100	100.4	3.8	LXD 1K7	0.070
110	124.1	4.6	LXD 1F7	0.070
115	129.8	5	LXD 1FE7	0.070
120	150.6	5.4	LXD 1G7	0.070
127	158.5	6.1	LXD 1FC7	0.070
200	410.7	15	LXD 1L7	0.070
208	430.4	16	LXD 1LE7	0.070
220	515.4	18	LXD 1M7 (3)	0.070
230	538.6	20	LXD 1P7	0.070
240	562.3	22	LXD 1U7	0.070
277	800.7	29	LXD 1W7	0.070
380	1551	55	LXD 1Q7 (4)	0.070
400	1633	60	LXD 1V7	0.070
415	1694	65	LXD 1N7	0.070
440	1993	73	LXD 1R7	0.070
480	2398	87	LXD 1T7	0.070
500	2499	95	LXD 1S7	0.070
575	3294	125	LXD 1SC7	0.070
600	3810	136	LXD 1X7	0.070
660	4656	165	LXD 1YC7	0.070
690	5020	180	LXD 1Y7	0.070

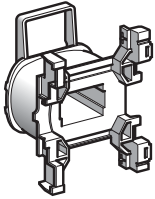
(1) The last 2 digits in the reference represent the voltage code.

(2) Voltage for special coils fitted in contactors with serial timer modules, with 24 V supply.

(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 24505/4 and 24505/5).

(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 24505/4 and 24505/5).

537406



LXD 1●●

# TeSys contactors

a.c. coils  
for TeSys D, 3 or 4-pole contactors

## For ~ contactors LC1 D40A...D65A, LC1 DT60A and LC1 DT80A

### Specifications

Average consumption at 20 °C:  
 - inrush ( $\cos \varphi = 0.75$ ) 160 VA.  
 - sealed ( $\cos \varphi = 0.3$ ) 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.

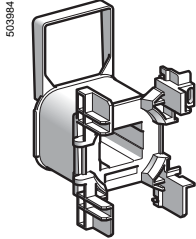
Control circuit voltage Uc	Average resistance at 20 °C ± 10%	Inductance of closed circuit	Reference (1)	Weight
V	Ω	H	50/60 Hz	kg
12	0.49	0.03	LXD 3J5 (2)	0.070
24	1.98	0.12	LXD 3B7	0.070
32	3.76	0.22	LXD 3C7	0.070
42	6.18	0.37	LXD 3D7	0.070
48	7.97	0.48	LXD 3E7	0.070
100	37.63	2.07	LXD 3K7	0.070
110	42.28	2.50	LXD 3F7	0.070
115	48.76	2.74	LXD 3FE7	0.070
120	37.63	2.07	LXD 3G7	0.070
127	60.29	3.34	LXD 3FC7	0.070
200	149	8.27	LXD 3L7	0.070
208	105	6.22	LXD 3LE7	0.070
220	182	10	LXD 3M7 (3)	0.070
230	192	10.9	LXD 3P7	0.070
240	202	11.9	LXD 3U7	0.070
277	193	11	LXD 3W7	0.070
380	512	29.9	LXD 3Q7 (4)	0.070
400	607	33.1	LXD 3V7	0.070
415	635	35.6	LXD 3N7	0.070
440	682	40.1	LXD 3R7	0.070
480	607	33.1	LXD 3T7	0.070
500	878	51.7	LXD 3S7	0.070
575	1238	68.4	LXD 3SC7	0.070
600	1304	74.5	LXD 3X7	0.070
660	1593	90.1	LXD 3YC7	0.070
690	1683	98.5	LXD 3Y7	0.070

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

(2) This coil can only be used on 50 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 24505/4 and 24505/5).

(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 24505/4 and 24505/5).



LXD 3●●

## For 3 or 4-pole contactors LC1D40, D50, D65, D80, D95

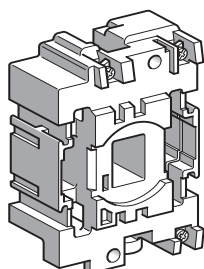
## Specifications

Average consumption at 20 °C:

- inrush ( $\cos \varphi = 0.75$ ) 50 Hz: 200 VA, 60 Hz: 220 VA,- sealed ( $\cos \varphi = 0.3$ ) 50 Hz: 20 VA, 60 Hz: 22 VAOperating range ( $\theta \leq 55$  °C): 0.85...1.1 Uc.

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)	Weight
				Ω	H	Ω	H		
				50 Hz		60 Hz			
24	1.4	0.09	LX1 D6B5	1.05	0.06	LX1 D6B6	0.280		0.280
32	2.6	0.16	LX1 D6C5	–	–	–	0.280		0.280
42	4.4	0.27	LX1 D6D5	–	–	–	0.280		0.280
48	5.5	0.35	LX1 D6E5	4.2	0.23	LX1 D6E6	0.280		0.280
110	31	1.9	LX1 D6F5	22	1.2	LX1 D6F6	0.280		0.280
115	31	1.9	LX1 D6FE5	–	–	–	0.280		0.280
120	–	–	–	28	1.5	LX1 D6G6	0.280		0.280
127	41	2.4	LX1 D6G5	–	–	–	0.280		0.280
208	–	–	–	86	4.3	LX1 D6L6	0.280		0.280
220	–	–	–	98	4.8	LX1 D6M6	0.280		0.280
220/230	127	7.5	LX1 D6M5	–	–	–	0.280		0.280
230	133	8.1	LX1 D6P5	–	–	–	0.280		0.280
240	152	8.7	LX1 D6U5	120	5.7	LX1 D6U6	0.280		0.280
256	166	10	LX1 D6W5	–	–	–	0.280		0.280
277	–	–	–	157	8	LX1 D6W6	0.280		0.280
380	–	–	–	300	14	LX1 D6Q6	0.280		0.280
380/400	381	22	LX1 D6Q5	–	–	–	0.280		0.280
400	411	25	LX1 D6V5	–	–	–	0.280		0.280
415	463	26	LX1 D6N5	–	–	–	0.280		0.280
440	513	30	LX1 D6R5	392	19	LX1 D6R6	0.280		0.280
480	–	–	–	480	23	LX1 D6T6	0.280		0.280
500	668	38	LX1 D6S5	–	–	–	0.280		0.280
575	–	–	–	675	33	LX1 D6S6	0.280		0.280
600	–	–	–	775	36	LX1 D6X6	0.280		0.280
660	1220	67	LX1 D6Y5	–	–	–	0.280		0.280

537457



LX1 D6●●

## Specifications

Average consumption at 20 °C:

- inrush ( $\cos \varphi = 0.75$ ) 50/60 Hz: 245 VA at 50 Hz,- sealed ( $\cos \varphi = 0.3$ ) 50/60 Hz: 26 VA at 50 Hz.Operating range ( $\theta \leq 55$  °C): 0.85...1.1 Uc.

			50/60 Hz		Reference (1)	Weight
24	–	–	1.22	0.08	LX1 D6B7	0.280
42	–	–	3.5	0.25	LX1 D6D7	0.280
48	–	–	5	0.32	LX1 D6E7	0.280
110	–	–	26	1.7	LX1 D6F7	0.280
115	–	–	–	–	LX1 D6FE7	0.280
120	–	–	32	2	LX1 D6G7	0.280
220/230 (2)	–	–	102	6.7	LX1 D6M7	0.280
230	–	–	115	7.7	LX1 D6P7	0.280
230/240 (3)	–	–	131	8.3	LX1 D6U7	0.280
380/400 (4)	–	–	310	20	LX1 D6Q7	0.280
400	–	–	349	23	LX1 D6V7	0.280
415	–	–	390	24	LX1 D6N7	0.280
440	–	–	410	27	LX1 D6R7	0.280

(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 pages 24505/4 and 24505/5. 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 pages 24505/4 and 24505/5.

# TeSys contactors

## a.c. coils

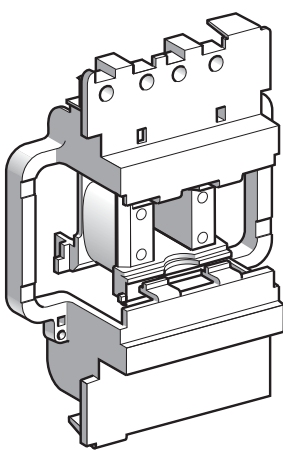
### for TeSys D, 3 or 4-pole contactors

#### For 3 or 4-pole contactors LC1 D115

##### Specifications

Average consumption at 20 °C:  
 - inrush ( $\cos \varphi = 0.8$ ) 50 or 60 Hz: 300 VA,  
 - sealed ( $\cos \varphi = 0.3$ ) 50 or 60 Hz: 22 VA  
 Operating range ( $\theta \leq 55$  °C): 0.85...1.1 Uc.

Control circuit voltage Uc	Average resistance at 20 °C $\pm 10$ %	Inductance of closed circuit	Reference (1)	Average resistance at 20 °C $\pm 10$ %		Reference (1)	Weight
				$\Omega$	H		
V	$\Omega$	H		$\Omega$	H		kg
			50 Hz			60 Hz	
24	1.24	0.09	LX1 D8B5	0.87	0.07	LX1 D8B6	0.260
32	2.14	0.17	LX1 D8C5	–	–	–	0.260
42	3.91	0.28	LX1 D8D5	–	–	–	0.260
48	4.51	0.36	LX1 D8E5	3.91	0.28	LX1 D8E6	0.260
110	26.53	2.00	LX1 D8F5	19.97	1.45	LX1 D8F6	0.260
115	26.53	2.00	LX1 D8FE5	–	–	–	0.260
120	–	–	–	24.02	1.70	LX1 D8G6	0.260
127	32.75	2.44	LX1 D8FC5	–	–	–	0.260
208	–	–	–	67.92	5.06	LX1 D8L6	0.260
220	104.77	7.65	LX1 D8M5	79.61	5.69	LX1 D8M6	0.260
230	104.77	8.29	LX1 D8P5	–	–	–	0.260
240	125.25	8.89	LX1 D8U5	97.04	6.75	LX1 D8U6	0.260
277	–	–	–	125.75	8.89	LX1 D8W6	0.260
380	338.51	22.26	LX1 D8Q5	243.07	17.04	LX1 D8Q6	0.260
400	368.43	25.55	LX1 D8V5	–	–	–	0.260
415	368.43	27.65	LX1 D8N5	–	–	–	0.260
440	441.56	30.34	LX1 D8R5	338.51	22.26	LX1 D8R6	0.260
480	–	–	–	368.43	25.55	LX1 D8T6	0.260
500	566.62	38.12	LX1 D8S5	–	–	–	0.260



LX1 D8●●

#### For 3 or 4-pole contactors LC1 D115, LC1 D150

##### Specifications

Average consumption at 20 °C:  
 - inrush:  $\cos \varphi = 0.9$  - 280 to 350 VA,  
 - sealed:  $\cos \varphi = 0.9$  - 2 to 18 VA.  
 Operating range ( $\theta \leq 55$  °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 $\pm 10$ %	Inductance of closed circuit	Reference (1)	Average resistance at 20 °C $\pm 10$ %		Reference (1)	Weight
				$\Omega$	H		
V	$\Omega$	H		$\Omega$	H		kg
				50/60 Hz			
24	–	–	–	147	3.03	LX1 D8B7	0.290
32	–	–	–	301	8.28	LX1 D8C7	0.290
42	–	–	–	498	13.32	LX1 D8D7	0.290
48	–	–	–	1061	24.19	LX1 D8E7	0.290
110	–	–	–	4377	109.69	LX1 D8F7	0.290
115	–	–	–	4377	109.69	LX1 D8FE7	0.290
120	–	–	–	4377	109.69	LX1 D8G7	0.290
127	–	–	–	6586	152.65	LX1 D8FC7	0.290
208	–	–	–	10 895	260.15	LX1 D8LE7	0.290
220	–	–	–	9895	210.72	LX1 D8M7	0.290
230	–	–	–	9895	210.72	LX1 D8P7	0.290
240	–	–	–	9895	210.72	LX1 D8U7	0.290
277	–	–	–	21 988	533.17	LX1 D8UE7	0.290
380	–	–	–	21 011	482.42	LX1 D8Q7	0.290
400	–	–	–	21 011	482.42	LX1 D8V7	0.290
415	–	–	–	21 011	482.42	LX1 D8N7	0.290
440	–	–	–	21 501	507.47	LX1 D8R7	0.290
480	–	–	–	32 249	938.41	LX1 D8T7	0.290
500	–	–	–	32 249	938.41	LX1 D8S7	0.290

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

## TeSys contactors

d.c. coils

for TeSys D, 3 or 4-pole contactors

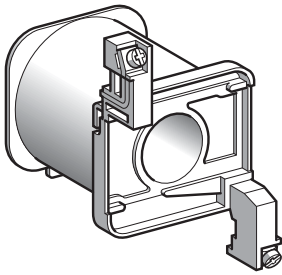
## For 3-pole contactors LC1 D80 or 4-pole contactors LP1 D80

## Specifications

Average consumption: 22 W.

Operating range: 0.85...1.1 U<sub>c</sub>.

537903



LX4 D7●D

Control circuit voltage U <sub>c</sub>	Average resistance at 20 °C ± 10%	Inductance of closed circuit	Reference (1)	Weight
V	Ω	H		kg
12	6.6	0.46	LX4 D7JD	0.680
24	27	1.89	LX4 D7BD	0.680
36	57	4	LX4 D7CD	0.680
48	107	7.5	LX4 D7ED	0.680
60	170	11.9	LX4 D7ND	0.680
72	230	16.1	LX4 D7SD	0.680
110	564	39.5	LX4 D7FD	0.680
125	718	50.3	LX4 D7GD	0.680
220	2215	155	LX4 D7MD	0.680
250	2850	200	LX4 D7UD	0.680
440	9195	640	LX4 D7RD	0.680

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

# TeSys contactors

## d.c. coils for TeSys D, 3 or 4-pole contactors

### For contactors LC1 D115, D150

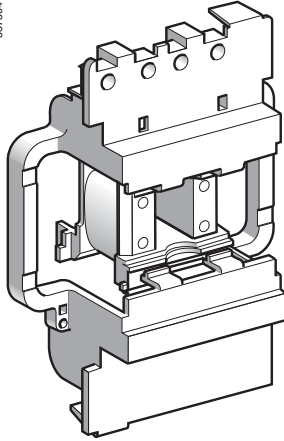
#### Specifications

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	LX4 D8BD	0.300
48	1061	24.19	LX4 D8ED	0.300
60	1673	38.44	LX4 D8ND	0.300
72	2500	56.27	LX4 D8SD	0.300
110	4377	109.69	LX4 D8FD	0.300
125	6586	152.65	LX4 D8GD	0.300
220	9895	210.72	LX4 D8MD	0.300
250	18 022	345.40	LX4 D8UD	0.300
440	21 501	684.66	LX4 D8RD	0.300



LX4 D8D

### For 3-pole contactors LC1 D80 or 4-pole contactors LP1 D80

#### Specifications

Wide range coils for specific applications

Average consumption: 23 W.

Operating range: 0.75 to 1.2 Uc.

Coils with "TH" treatment as standard.

Control circuit voltage Uc	Average resistance at 20 °C ± 10 %	Inductance of closed circuit	Reference (1)	Weight
V	Ω	H		kg
12	6.2	0.49	LX4 D7JW	0.680
24	23.5	1.75	LX4 D7BW	0.680
36	51.9	4.18	LX4 D7CW	0.680
48	94.2	7	LX4 D7EW	0.680
72	204	15.7	LX4 D7SW	0.680
110	483	36	LX4 D7FW	0.680
220	1922	144	LX4 D7MW	0.680

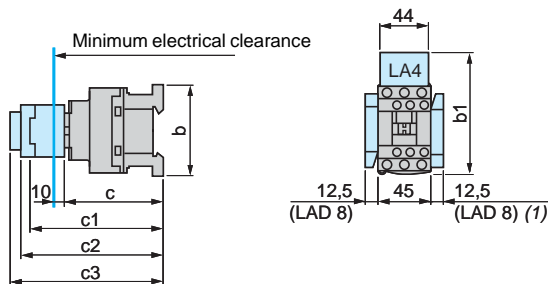
(1) The last 2 digits in the reference represent the voltage code.

# TeSys contactors

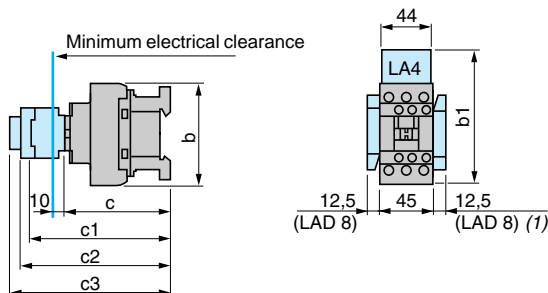
## TeSys D contactors

Control circuit: a.c.

### LC1 D09...D18 (3-pole)



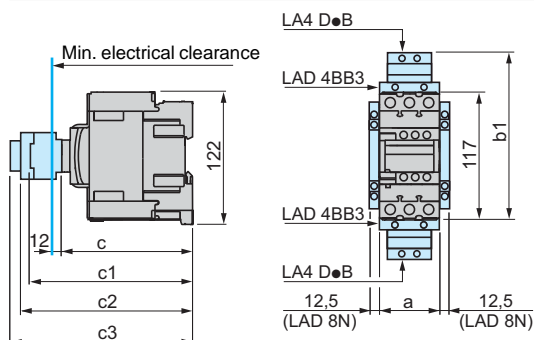
### LC1 D25...D38 (3-pole), LC1 DT20...DT40 (4-pole)



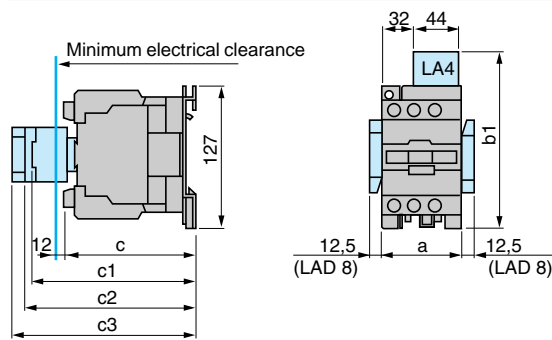
LC1	D09...D18	D093... D123	D099... D129	D25... D38	D183... D323	D098, D128, DT20 and DT25	DT203 and DT253	DT32 and DT40	D188, D258, DT323 and DT403
b without add-on blocks	77	99	80	85	99	85	99	91	105
b1 with LAD 4BB	94	107	95,5	98	107	98	-	-	-
with LA4 D●2	110 (1)	123 (1)	111,5 (1)	114 (1)	123 (1)	114	-	-	-
with LA4 DF, DT	119 (1)	132 (1)	120,5 (1)	123 (1)	132 (1)	129	-	-	-
with LA4 DW, DL	126 (1)	139 (1)	127,5 (1)	130 (1)	139 (1)	190	-	-	-
c without cover or add-on blocks	84	84	84	90	90	90	90	97	97
with cover, without add-on blocks	86	86	86	92	92	92	92	99	99
c1 with LAD N or C (2 or 4 contacts)	117	117	117	123	123	123	123	131	131
c2 with LA6 DK10, LAD 6K10	129	129	129	135	135	135	135	143	143
c3 with LAD T, R, S	137	137	137	143	143	143	143	151	151
with LAD T, R, S and sealing cover	141	141	141	147	147	147	147	155	155

(1) Including LAD 4BB.

### LC1 D40A...D65A (3-pole), LC1 DT60A...DT80A (4-pole)



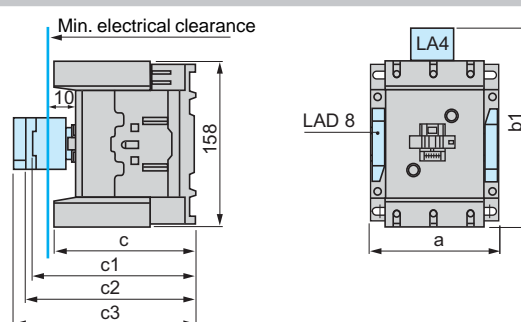
### LC1 D80 and D95 (3-pole), LC1 D80004 and D80008 (4-pole), D40008 and D65008 (4-pole)



LC1	D40A...D65A	DT60A...DT80A	D40008	D80	D95, D65008	D80004	D80008
a	55	70	85	85	85	96	96
b1 with LA4 D●2	-	-	135	135	135	135	135
with LA4 DB3 or LAD 4BB3	136	-	-	135	-	-	-
with LA4 DF, DT	157	-	142	142	142	142	142
with LA4 DM, DW, DL	166	-	150	150	150	150	150
c without cover or add-on blocks	118	118	125	125	125	125	140
with cover, without add-on blocks	120	120	-	130	130	-	-
c1 with LAD N (1 contact)	-	-	139	150	150	150	150
with LAD N or C (2 or 4 contacts)	150	150	147	158	158	158	158
c2 with LAD 6K10 or LA6 DK	163	163	159	170	170	170	170
c3 with LAD T, R, S	171	171	167	178	178	178	178
with LAD T, R, S and sealing cover	175	175	171	182	182	182	182

### LC1 D115 and D150 (3-pole), LC1 D115004 (4-pole)

LC1	D115, D150	D115004	D1150046
a	120	150	155
b1 with LA4 DA2	174	174	174
with LA4 DF, DT	185	185	185
with LA4 DM, DL	188	188	188
with LA4 DW	188	188	188
c without cover or add-on blocks	132	132	115
with cover, without add-on blocks	136	-	-
c1 with LAD N or C (2 or 4 contacts)	150	150	150
c2 with LA6 DK20	155	155	155
c3 with LAD T, R, S	168	168	168
with LAD T, R, S and sealing cover	172	172	172

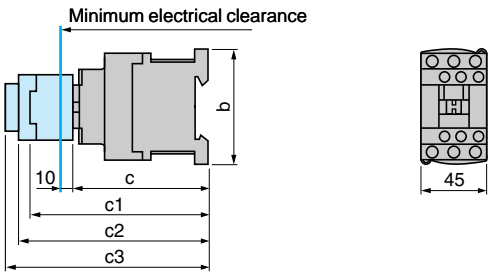


# TeSys contactors

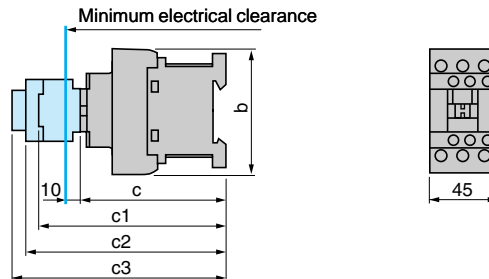
## TeSys D contactors

Control circuit: d.c. or low consumption

**LC1 D09...D18 (3-pole)**

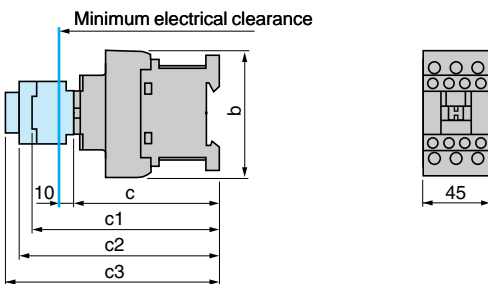


**LC1 D25...D38 (3-pole)**



LC1	D09...D18	D093...D123	D099...D129	D25...D38	D183...D323
b	77	99	80	85	99
c without cover or add-on blocks	93	93	93	99	99
c with cover, without add-on blocks	95	95	95	101	101
c1 with LAD N or C (2 or 4 contacts)	126	126	126	132	132
c2 with LA6 DK10	138	138	138	144	144
c3 with LAD T, R, S	146	146	146	152	152
with LAD T, R, S and sealing cover	150	150	150	156	156

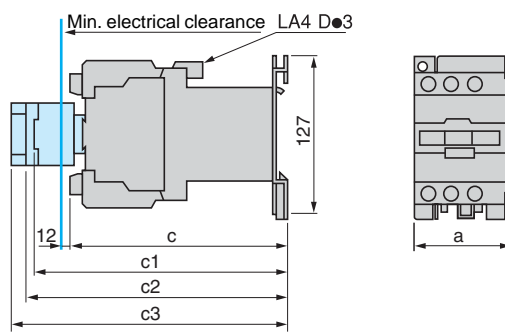
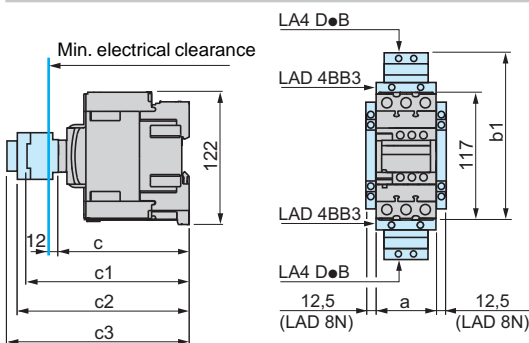
**LC1 DT20...DT40 (4-pole)**



LC1	DT20 and DT25 D098 and D128	DT203 and DT253 D0983 and D1283	DT32 and DT40 D188...D258	DT323 and DT403 D1883 and D2583
b	85	99	91	105
c with cover	99	99	107	107
c1 with LAD N or C (2 or 4 contacts)	123	123	131	131
c2 with LA6 DK10	135	135	143	143
c3 with LAD T, R, S	143	143	151	151
with LAD T, R, S and sealing cover	147	147	155	155

**LC1 D40A...D65A (3-pole), LC1 DT60A...DT80A (4-pole)**

**LC1 D80 and D95 (3-pole), LP1 D80004, LP1 D80008 (4-pole), LP1 D40008 and D65008 (4-pole)**



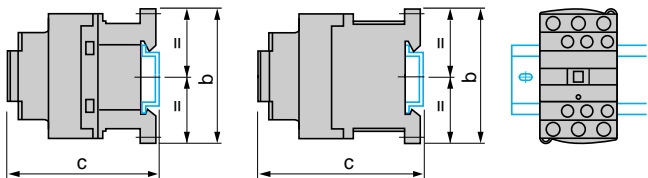
	LC1 D40A ... D65A	LC1 DT60A...DT80A	LP1 D40008 and D65008	LC1 D80 and D95	LP1 D80004	LP1 D80008
a	55	70	85	96	96	96
b1 with LAD 4BB3	136	136	—	—	—	—
with LA4 DF, DT	157	157	—	—	—	—
c without cover or add-on blocks	118	118	182	181	181	196
c with cover, without add-on blocks	120	120	—	186	—	—
c1 with LAD N (1 contact)	—	—	196	204	204	204
with LAD N or C (2 or 4 contacts)	150	150	202	210	210	210
c2 with LA6 DK10	163	163	213	221	221	221
c3 with LAD T, R, S	171	171	221	229	229	229
with LAD T, R, S and sealing cover	175	175	225	233	233	233

LC1 D115●●● and LC1 D150●●● with ☐ coil: see page 24531/2



### LC1 D09...D38, DT20...DT40

On mounting rail AM1 DP200, DR200 or AM1 DE200 (width 35 mm)



Control circuit: a.c.

LC1	D09... D18	D25... D38	DT20 and DT25	DT32 and DT40
b	77	85	85	100
c (AM1 DP200 or DR200) (1)	88	94	94	109
c (AM1 DE200) (1)	96	102	102	117

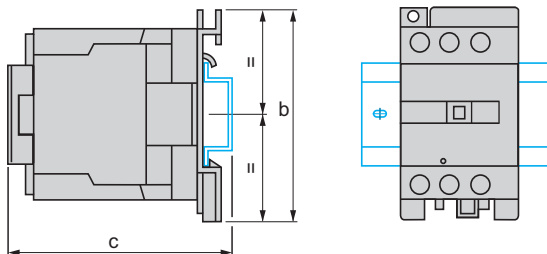
Control circuit: d.c.

LC1	D09... D18	D25... D38	DT20 and DT25	DT32 and DT40
b	77	85	94	109
c (AM1 DP200 or DR200) (1)	97	103	103	118
c (AM1 DE200) (1)	105	110	111	1236

(1) with safety cover.

### LC1 D40A...D65A, LC1 DT60A and DT80A, LC1 D80 and D95, LC1 D40008 and D65008

On mounting rail AM1 DL200 or DL201 (width 75 mm)  
On mounting rail AM1 ED... or AM1 DE200 (width 35 mm)



Control circuit: a.c.

LC1	D40A...D65A DT60A...DT80A	D80 and D95	D40008 and D65008
b	122	127	127
c (AM1 DL200) (1)	–	147	143
c (AM1 DL201) (1)	–	137	133
c (AM1 ED... or DE200) (1)	128	137	133

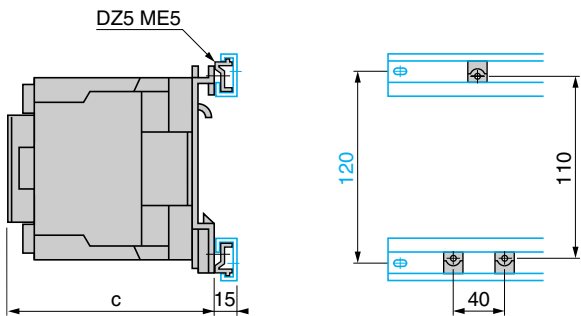
Control circuit: d.c.

LC1	D40A...D65A DT60A...DT80A	D80 and D95	D40008 and D65008
c (AM1 DL200) (1)	–	205	200
c (AM1 DL201) (1)	–	195	190
c (AM1 ED... or DE200) (1)	128	128	190

(1) with safety cover.

### LC1 D80 and D95, LP1 D80

On 2 mounting rails DZ5 MB on 120 mm centres



Control circuit: a.c.

LC1	D80 and D95
c with cover	130

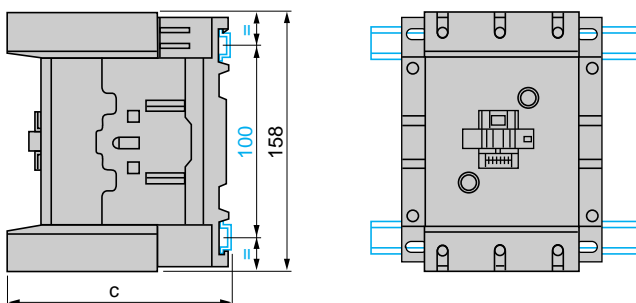
Control circuit: d.c.

LC1	D80 and D95
c with cover	186

LP1	D80
c	181

### LC1 D115, D150

On 2 mounting rails DZ5 MB on 120 mm centres

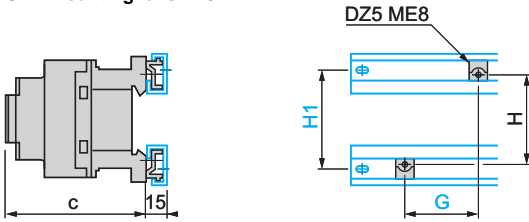


Control circuit: a.c. or d.c.

LC1	D115 and D150	D1156 and D1506
c (AM1 DP200 or DR200)	134,5	117,5
c (AM1 DE200 or ED...)	142,5	125,5

### LC1 D09...D38 and LC1 DT20...DT40

On 2 mounting rails DZ5 MB



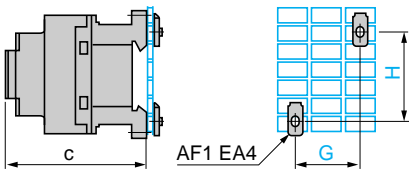
Control circuit:	a.c.		d.c.	
	D09...D18	D25...D38	D09...D18	D25...D38
<b>LC1</b>				
c with cover	86	92	95	101
<b>G</b>	35	35	35	35
H	60	60	70	70
<b>H1</b>	70	70	70	70

### 4-pole contactors

LC1	DT20 and DT25	DT32 and DT40	DT20 and DT25	DT32 and DT40
	c with cover	92	100	101
<b>G</b>	35	35	35	35
H	60	60	70	70
<b>H1</b>	70	70	70	70

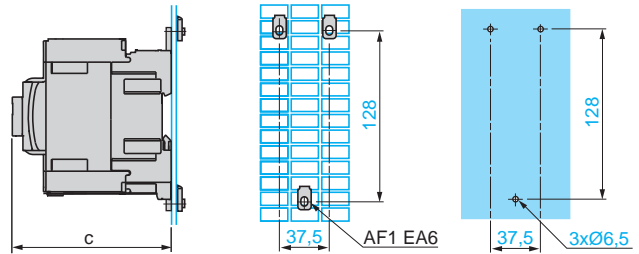
### LC1 D09...D38 and LC1 DT20...DT40

On pre-slotted mounting plate AM1 PA, PB, PC



### LC1 D40A...D65A, LC1 DT60A...DT80A

On pre-slotted mounting plate AM1 PA, PB, PC and panel mounted

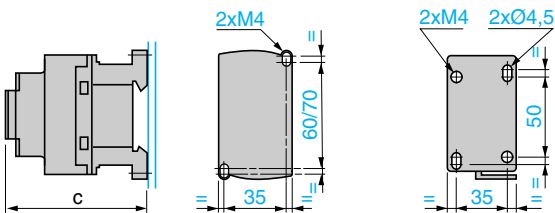


Control circuit:	a.c.		d.c.	
	D09...D18	D25...D38	D09...D18	D25...D38
<b>LC1</b>				
c with cover	86	92	95	101
<b>G</b>	35	35	35	35
H	60/70	60/70	70	70
LC1	DT20 and DT25	DT32 and DT40	DT20 and DT25	DT32 and DT40
	c with cover	80	93	118
<b>G</b>	35	35	35	35
H	60	60	70	70

Control circuit:	a.c.		d.c.	
	D40A...65A, DT60A...DT80A	D40A...65A, DT60A...DT80A	D40A...65A, DT60A...DT80A	D40A...65A, DT60A...DT80A
<b>LC1</b>				
c with cover	120	120	120	120

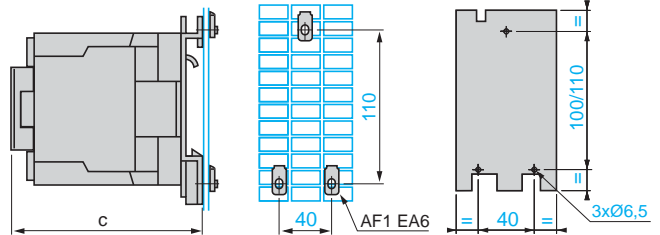
### LC1 D09...D38, LC1 DT20...DT40

Panel mounted



### LC1 D80 and D95, LC1 D40008 and D65008, LP1 D80

On pre-slotted mounting plate AM1 PA, PB, PC and panel mounted

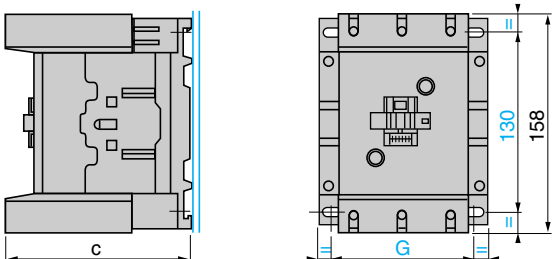


Control circuit:	a.c.		d.c.	
	D09...D18	D25...D38	D09...D18	D25...D38
<b>LC1</b>				
c with cover	86	92	95	101
4-pole contactors				
LC1	DT20 and DT25	DT32 and DT40	DT20 and DT25	DT32 and DT40
	c with cover	90	98	90

Control circuit:	a.c.		d.c.	
	D80 and D95, D40008 and D65008	D80 and D95, D40008 and D65008	D80 and D95, D40008 and D65008	D80 and D95, D40008 and D65008
<b>LC1</b>				
c with cover	130	130	186	186
<b>LP1</b>	–	–	D80	D80
c without cover	–	–	181	181

### LC1 D115, D150

Panel mounted

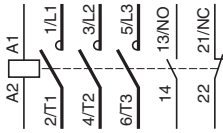


LC1	D115	D1156	D150	D1506
	c	132	115	132
<b>G (3-pole)</b>	96/110	96/110	96/110	96/110
<b>G (4-pole)</b>	130/144	130/144	–	–

### Contactors

**3-pole contactors** (References: pages 24501/2 to 24502/3)

LC1 D09 to D150



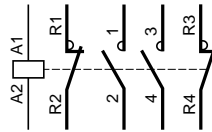
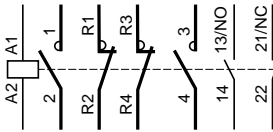
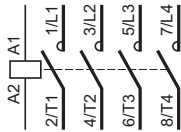
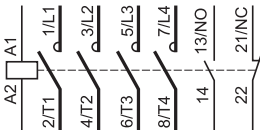
**4-pole contactors** (References: pages 24502/2 and 24502/3)

LC1 DT20 to DT80A

LC1 D115004

LC1 D098 to D258

LC1 and LP1 D40008 to D80008



### Front mounting add-on contact blocks

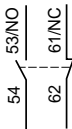
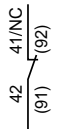
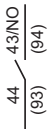
**Instantaneous auxiliary contacts** (References: page 24511/3)

1 N/O LAD N10 (1)

1 N/C LAD N01 (1)

1 N/O + 1 N/C LAD N11

2 N/O LAD N20

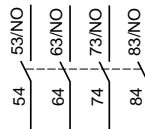
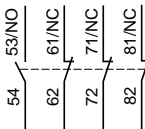
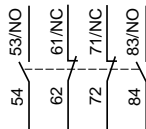
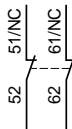


2 N/C LAD N02

2 N/O + 2 N/C LAD N22

1 N/O + 3 N/C LAD N13

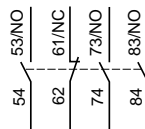
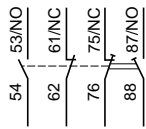
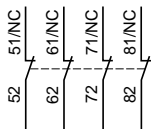
4 N/O LAD N40



4 N/C LAD N04

2 N/O + 2 N/C including 1 N/O + 1 N/C make before break LAD C22

3 N/O + 1 N/C LAD N31



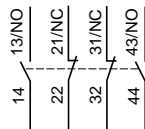
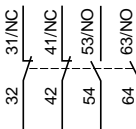
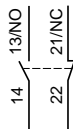
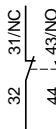
**Instantaneous auxiliary contacts conforming to standard EN 50012** (References: page 24511/3)

1 N/O + 1 N/C LAD N11G

1 N/O + 1 N/C LAD N11P

2 N/O + 2 N/C LAD N22G

2 N/O + 2 N/C LAD N22P

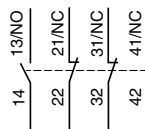
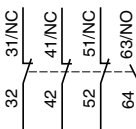
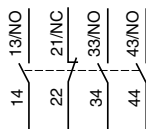
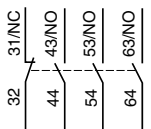


3 N/O + 1 N/C LAD N31G

3 N/O + 1 N/C LAD N31P

1 N/O + 3 N/C LAD N13G

1 N/O + 3 N/C LAD N13P

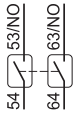


(1) Items in brackets refer to blocks mounted on right-hand side of contactor.

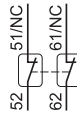
### Front mounting add-on contact blocks

Dust and damp protected instantaneous auxiliary contacts (References: page 24511/3)

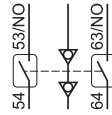
2 N/O (24-50 V)  
LA1 DX20



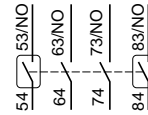
2 N/C (24-50 V)  
LA1 DX02



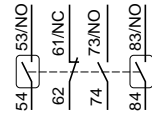
2 N/O (5-24 V)  
LA1 DY20



2 N/O protected (24-50 V)  
2 N/O standard LA1 DZ40

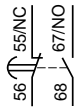


2 N/O protected (24-50 V)  
+ 1 N/O + 1 N/C standard LA1 DZ31

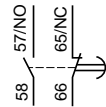


Time delay auxiliary contacts (References: page 24511/4)

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



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

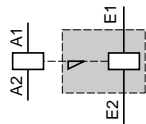


On-delay 1 N/C + 1 N/O break before make LAD S



### Mechanical latch blocks (References: page 24511/4)

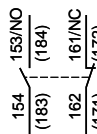
LAD 6K10 and LA6 DK20



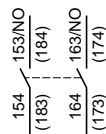
### Side mounting add-on contact blocks

Instantaneous auxiliary contacts (References: page 24511/3)

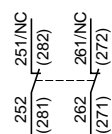
1 N/O + 1 N/C LAD 8N11 (1)



2 N/O LAD 8N20 (1)



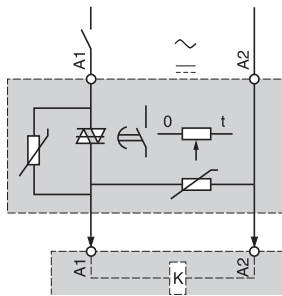
2 N/O LAD 8N02 (1)



(1) Items in brackets refer to blocks mounted on right-hand side of contactor.

### Electronic serial timer modules

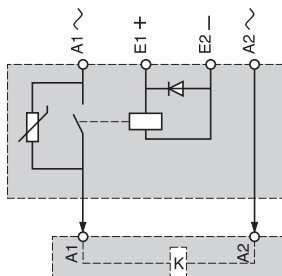
On-delay LA4 DT•U



### Interface modules

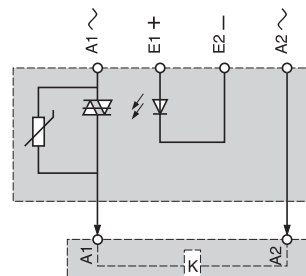
Relay output

LA4 DFB



Solid state

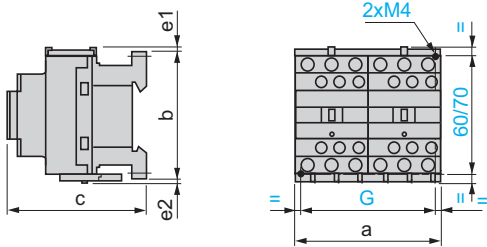
LA4 DWB



References: page 24511/7.

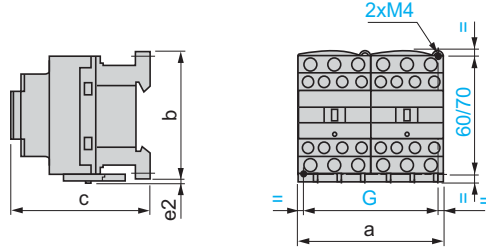
### LC2 D09 to D38

2 x LC1 D09 to D38



### LC2 DT20 to DT40

2 x LC1 DT20 to DT40



LC2 or 2 x LC1	a	b	c (1)	e1	e2	G
D09 to D18 ~	90	77	86	4	1.5	80
D093 to D123 ~	90	99	86	-	-	80
D09 to D18 ⋮	90	77	95	4	1.5	80
D093 to D123 ⋮	90	99	95	-	-	80
D25 to D38 ~	90	85	92	9	5	80
D183 to D383 ~	90	99	92	-	-	80
D25 to D32 ⋮	90	85	101	9	5	80
D183 to D383 ⋮	90	99	101	-	-	80

e1 and e2: including cabling.

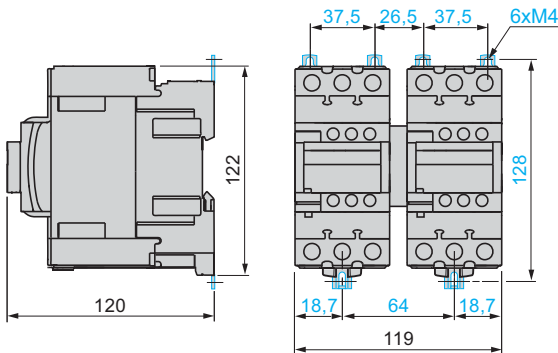
(1) With safety cover, without add-on block.

LC2 or 2 x LC1	a	b	c	G
DT20 and DT25	90	85	90	80
DT32 and DT40	90	91	98	80

c, e: including cabling.

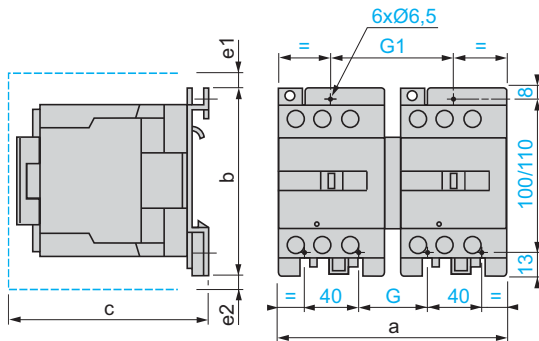
### LC2 D40A to D65A

2 x LC1 D40A to D65A

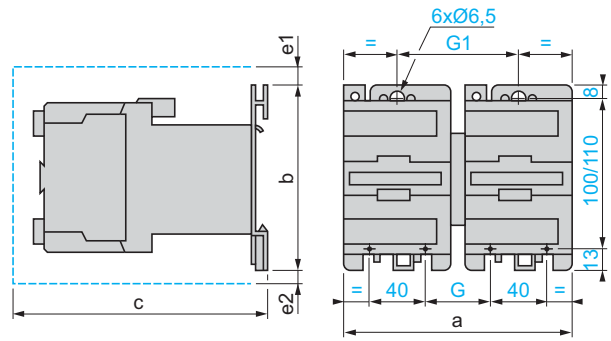


**LC2 D80 and D95**

2 x LC1 D80 and D95 ~



2 x LC1 D80 and D95 ...



LC2 or 2 x LC1	a	b	c	e1	e2	G	G1
D80 and D95 ~	182	127	158	13	-	57	96
D80004 ~	207	127	158	-	20	71	111

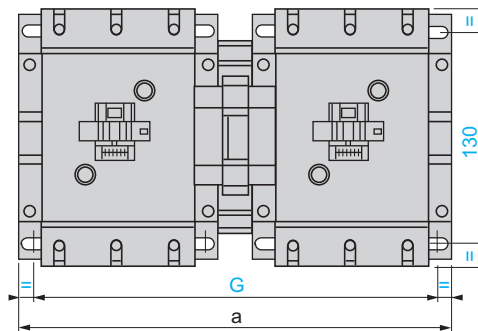
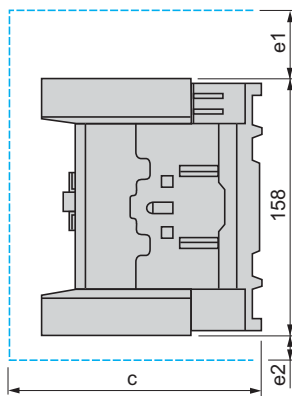
c, e1 and e2: including cabling.

2 x LC1	a	b	c	e1	e2	G	G1
D80 and D95	207	127	215	13	20	96	111

c, e1 and e2: including cabling.

**LC2 D115 and D150**

2 x LC1 D115 and D150



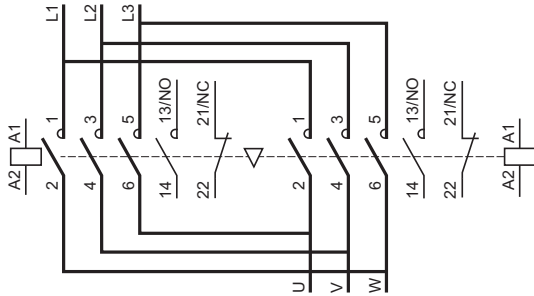
LC2 or 2 x LC1	a	c	e1	e2	G
D115 and D150	266	148	56	18	242/256
D115004	334	148	-	60	310/324

c, e1 and e2: including cabling.

### Reversing contactors for motor control

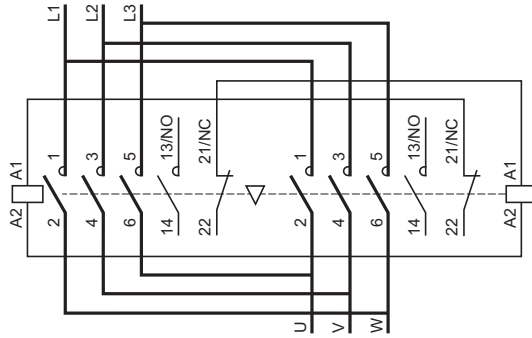
LC2 D09...D150

Horizontally mounted



LAD 9R1V

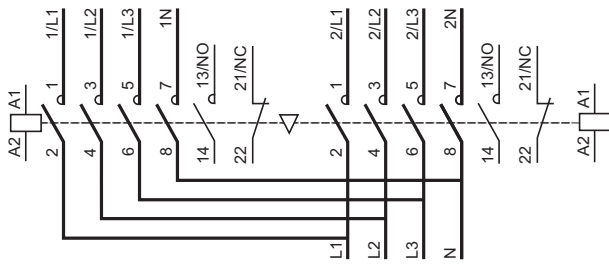
With integral electrical interlocking



### Changeover contactor pairs

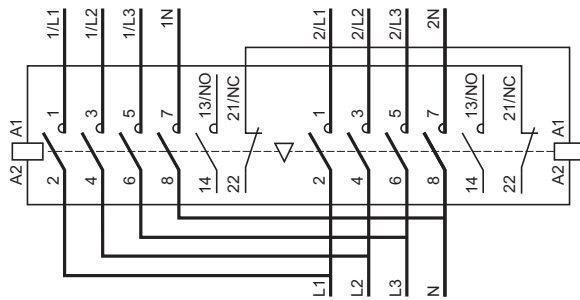
LC2 DT20...DT40

Horizontally mounted



LAD T9R1V

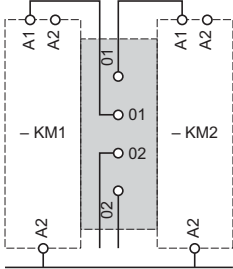
With integral electrical interlocking



**Electrical interlocking of reversing contactors fitted with:**

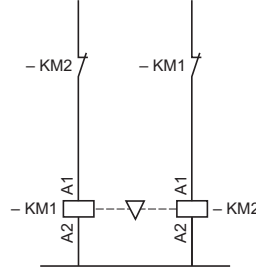
Mechanical interlock with integral electrical contacts

LA9 D4002, LA9 D8002 and LA9 D11502

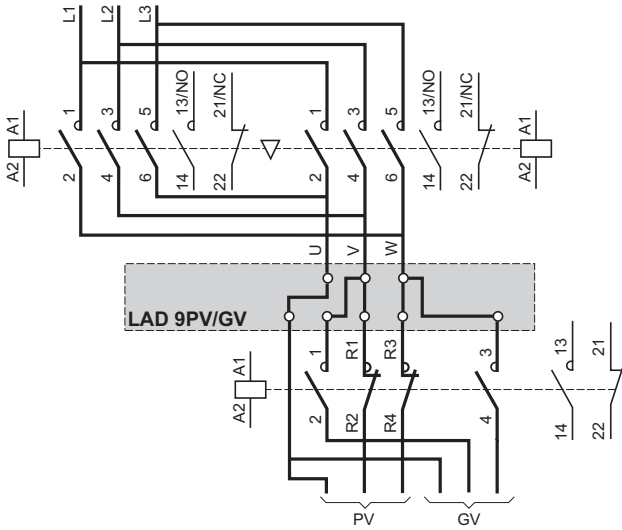


Mechanical interlock without integral electrical contacts

LAD 9V2, LAD 4CM, LA9 D50978 and LA9 D80978



**Low speed-High speed cabling kit, screw clamp terminals**



**Low speed-High speed cabling kit, spring terminals**

