

TeSys contactors

For motor control up to 75 kW at 400 V, in category AC-3

Control circuit: a.c., d.c. or low consumption



LC1 D09



LC1 D25



LC1 D95



LC1 D115

3-pole contactors for connection by screw clamp terminals or connectors

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		Basic reference, to be completed by adding the voltage code (2) Fixing (1)	Weight (3)
220 V	380 V	415 V	440 V	500 V	660 V	690 V	1000 V		A			
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	
11	18.5	22	22	22	30	22	40	1	1	LC1 D40	1.400	
15	22	25	30	30	33	30	50	1	1	LC1 D50	1.400	
18.5	30	37	37	37	37	37	65	1	1	LC1 D65	1.400	
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	

3-pole contactors for connection by lugs or bars

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

Example: LC1 D09 becomes LC1 D096.

Accessories

Auxiliary contact blocks and add-on modules: see pages 5/68 to 5/75.

- (1) LC1 D09 to D38: clip-on mounting on 35 mm rail AM1 DP or screw fixing.
LC1 D40 to D95: clip-on mounting on 35 mm rail AM1 DP or 75 mm rail AM1 DL or screw fixing.
LC1 D40 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
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	-
LC1 D40...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...D38 (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 D40...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					

For other voltages between 5 and 690 V, see pages 5/76 to 5/81.

(3) The weights indicated are for contactors with a.c. control circuit. For d.c. or low consumption control circuit, add 0.160 kg for contactors LC1 D09 to D38, 0.785 kg for contactors LC1 D40 to D65 and 1 kg for contactors LC1 D80 and D95.

TeSys protection components

3-pole thermal overload relays, model d

810464



LRD 08●●

810465



LRD 21●●

810466



LRD 33●●

533573



LRD 083●●

Differential thermal overload relays for use with fuses

- Compensated relays with manual or automatic reset,
- with relay trip indicator, ■ for a.c. or d.c.

Relay setting range (A)	Fuses to be used with selected relay			For use with contactor LC1	Reference	Weight kg
	aM (A)	gG (A)	BS88 (A)			
Class 10 A (1) with connection by screw clamp terminals or connectors						
0.10...0.16	0.25	2	–	D09...D38	LRD 01	0.124
0.16...0.25	0.5	2	–	D09...D38	LRD 02	0.124
0.25...0.40	1	2	–	D09...D38	LRD 03	0.124
0.40...0.63	1	2	–	D09...D38	LRD 04	0.124
0.63...1	2	4	–	D09...D38	LRD 05	0.124
1...1.6	2	4	6	D09...D38	LRD 06	0.124
1.6...2.5	4	6	10	D09...D38	LRD 07	0.124
2.5...4	6	10	16	D09...D38	LRD 08	0.124
4...6	8	16	16	D09...D38	LRD 10	0.124
5.5...8	12	20	20	D09...D38	LRD 12	0.124
7...10	12	20	20	D09...D38	LRD 14	0.124
9...13	16	25	25	D12...D38	LRD 16	0.124
12...18	20	35	32	D18...D38	LRD 21	0.124
16...24	25	50	50	D25...D38	LRD 22	0.124
23...32	40	63	63	D25...D38	LRD 32	0.124
30...38	40	80	80	D32 and D38	LRD 35	0.124
17...25	25	50	50	D40...D95	LRD 3322	0.510
23...32	40	63	63	D40...D95	LRD 3353	0.510
30...40	40	100	80	D40...D95	LRD 3355	0.510
37...50	63	100	100	D40...D95	LRD 3357	0.510
48...65	63	100	100	D50...D95	LRD 3359	0.510
55...70	80	125	125	D50...D95	LRD 3361	0.510
63...80	80	125	125	D65...D95	LRD 3363	0.510
80...104	100	160	160	D80 and D95	LRD 3365	0.510
80...104	125	200	160	D115 and D150	LRD 4365	0.900
95...120	125	200	200	D115 and D150	LRD 4367	0.900
110...140	160	250	200	D150	LRD 4369	0.900
80...104	100	160	160	(2)	LRD 33656	1.000
95...120	125	200	200	(2)	LRD 33676	1.000
110...140	160	250	200	(2)	LRD 33696	1.000
Class 10 A (1) with spring terminal connections (only for direct mounting on the contactor)						
0.10...0.16	0.25	2	–	D09...D38	LRD 013	0.140
0.16...0.25	0.5	2	–	D09...D38	LRD 023	0.140
0.25...0.40	1	2	–	D09...D38	LRD 033	0.140
0.40...0.63	1	2	–	D09...D38	LRD 043	0.140
0.63...1	2	4	–	D09...D38	LRD 053	0.140
1...1.6	2	4	6	D09...D38	LRD 063	0.140
1.6...2.5	4	6	10	D09...D38	LRD 073	0.140
2.5...4	6	10	16	D09...D38	LRD 083	0.140
4...6	8	16	16	D09...D38	LRD 103	0.140
5.5...8	12	20	20	D09...D38	LRD 123	0.140
7...10	12	20	20	D09...D38	LRD 143	0.140
9...13	16	25	25	D12...D38	LRD 163	0.140
12...18	20	35	32	D18...D38	LRD 213	0.140
16...24	25	50	50	D25...D38	LRD 223	0.140

Class 10 A (1) with spring terminal connections (only for direct mounting on the contactor)

Relay setting range (A)	Fuses to be used with selected relay	For use with contactor LC1	Reference	Weight kg
0.10...0.16	0.25	D09...D38	LRD 013	0.140
0.16...0.25	0.5	D09...D38	LRD 023	0.140
0.25...0.40	1	D09...D38	LRD 033	0.140
0.40...0.63	1	D09...D38	LRD 043	0.140
0.63...1	2	D09...D38	LRD 053	0.140
1...1.6	2	D09...D38	LRD 063	0.140
1.6...2.5	4	D09...D38	LRD 073	0.140
2.5...4	6	D09...D38	LRD 083	0.140
4...6	8	D09...D38	LRD 103	0.140
5.5...8	12	D09...D38	LRD 123	0.140
7...10	12	D09...D38	LRD 143	0.140
9...13	16	D12...D38	LRD 163	0.140
12...18	20	D18...D38	LRD 213	0.140
16...24	25	D25...D38	LRD 223	0.140

Class 10 A (1) with connection by lug-clamps

Select overload relay with screw clamp terminals or connectors from the table above and add one of the following suffixes:

- figure 6 for relays LRD 01 to LRD 35, ■ A66 for relays LRD 3322 to LRD 3365.

The remaining references are suitable, as standard, for use with lug-clamps.

Thermal overload relays for use with unbalanced loads

Class 10 A (1) with connection by screw clamp terminals

In the references selected above, change LRD (except LRD 4●●●) to LR3 D. Example: LRD 01 becomes LR3 D01.

Thermal overload relays for use on 1000 V supplies

Class 10 A (1) with connection by screw clamp terminals

For relays LRD 06 to LRD 35 only, for an operating voltage of 1000 V, and only for independent mounting, the reference becomes LRD 33●●A66. Example: LRD 12 becomes LRD 3312A66.

Order an LA7 D3064 terminal block separately, see page 6/19.

(1) Standard IEC 60947-4-1 specifies a tripping time for 7.2 times the setting current I_R :
class 10 A: between 2 and 10 seconds.

(2) Independent mounting

810468



LRD 15

810470



LR2 D35

Differential thermal overload relays for use with fuses

- Compensated relays with manual or automatic reset,
- with relay trip indicator,
- for a.c. or d.c.

Relay setting range (A)	Fuses to be used with selected relay			For use with contactor LC1	Reference	Weight
	aM (A)	gG (A)	BS88 (A)			
Class 20 (1) with connection by screw clamp terminals						
2.5...4	6	10	16	D09...D32	LRD 1508	0.190
4...6	8	16	16	D09...D32	LRD 1510	0.190
5.5...8	12	20	20	D09...D32	LRD 1512	0.190
7...10	16	20	25	D09...D32	LRD 1514	0.190
9...13	16	25	25	D12...D32	LRD 1516	0.190
12...18	25	35	40	D18...D32	LRD 1521	0.190
17...25	32	50	50	D25 and D32	LRD 1522	0.190
23...28	40	63	63	D25 and D32	LRD 1530	0.190
25...32	40	63	63	D25 and D32	LRD 1532	0.190
17...25	32	50	50	D40...D95	LR2 D3522	0.535
23...32	40	63	63	D40...D95	LR2 D3553	0.535
30...40	50	100	80	D40...D95	LR2 D3555	0.535
37...50	63	100	100	D50...D95	LR2 D3557	0.535
48...65	80	125	100	D50...D95	LR2 D3559	0.535
55...70	100	125	125	D65...D95	LR2 D3561	0.535
63...80	100	160	125	D80 and D95	LR2 D3563	0.535

Electronic differential thermal overload relays for use with fuses

- Compensated relays, with relay trip indicator,
- for a.c.,
- for direct mounting on contactor or independent mounting (2).

Relay setting range (A)	Fuses to be used with selected relay		For direct mounting beneath contactor LC1	Reference	Weight
	aM (A)	gG (A)			
Class 10 or 10A (1) with connection using bars or connectors					
60...100	100	160	D115 and D150	LR9 D5367	0.885
90...150	160	250	D115 and D150	LR9 D5369	0.885
Class 20 (3) with connection using bars or connectors					
60...100	125	160	D115 and D150	LR9 D5567	0.885
90...150	200	250	D115 and D150	LR9 D5569	0.885

Electronic thermal overload relays for use with balanced or unbalanced loads

- Compensated relays,
- with separate outputs for alarm and tripping.

Relay setting range (A)	Fuses to be used with selected relay		For direct mounting beneath contactor LC1	Reference	Weight
	aM (A)	gG (A)			
Class 10 or 20 (1) selectable with connection using bars or connectors					
60...100	100	160	D115 and D150	LR9 D67	0.900
90...150	160	250	D115 and D150	LR9 D69	0.900

(1) Standard IEC 60947-4-1 specifies a tripping time for 7.2 times the setting current I_R :

- class 10: between 4 and 10 seconds,
- class 10 A: between 2 and 10 seconds,
- class 20: between 6 and 20 seconds.

(2) Power terminals can be protected against direct finger contact by the addition of shrouds and/or insulated terminal blocks, to be ordered separately (see page 5/74).

Other versions

Thermal overload relays for resistive circuits in category AC-1.
Please consult your Regional Sales Office.