TeSys contactors

Component parts for assembling reversing contactors for motor control or low speed - high speed starters



TeSys contactors

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

power connections

Including mechanical interlock and an electrical interlocking kit for the contactors

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

Set of

Reference

Using

2 identical

contactors (1)

Component parts for assembling changeover contactor pairs for distribution

Mechanical

Weight

kg

interlock

Reference of kit

Weight

ka

810384	

LA9-D4002



LA9-D50978



LA9-D6570



LA9-D8070

LC1-DT20DT32	LAD-T9R1V ▲ (2)	0.040		
LC1-DT40 and DT60	LAD-T9R2V ▲ (2)	0.045		
Including mechanical interlo	ock with integral electrical interle	ocking		
LC1-D65004	LA9-D6570	0.150	LA9-D4002	0.170
LC1-D80004	LA9-D8070	0.280	LA9-D4002	0.170
LP1-D80004	LA9-D8070	0.280	LA9-D8002	0.170
LC1-D115004	LA9-D11570	1.100	LA9-D11502	0.280
Including mechanical interlo	ock without electrical interlockin	g (3)		
LC1-DT20DT32	LAD-T9R1 ▲ (2)	0.035	-	
LC1-DT40 and DT60	LAD-T9R2 ▲ (2)	0.040		
LC1 or LP1-D65004	LA9-D6570	0.150	LA9-D50978	0.155
LC1-D80004	LA9-D8070	0.280	LA9-D50978	0.155
LP1-D80004	LA9-D8070	0.280	LA9-D80978	0.180
For 3-pole changeo	ver contactor pairs			
Including mechanical interlo	ock with integral electrical interle	ocking		
C1-D115 and D150	I 49-D11571	0.960	L 49-D11502	0.280

(1) To order the 2 contactors: see pages 2/9 and 2/10.

(2) Including mechanical interlock.

(3) Order 2 contact blocks LAD-Ne1 to obtain electrical interlocking between the contactors, see page 2/17.

 Available 4th quarter 2001.

Selection:	
pages 1/6 to 1/9	

Characteristics: pages 2/32 to 2/37 Dimensions, schemes: pages 2/50 and 2/51

Telemeconique



TeSys contactors Contactors and reversing contactors, model d Instantaneous auxiliary contact blocks

Clip-on mounting (1) Front	Number of contacts per block 1 2	$\begin{array}{c c} Composition \\ \hline \\ $	Reference	Weigh
mounting (1) Front	of contacts per block 1 2		LAD-N10	
(1) Front	contacts per block 1 2		LAD-N10	
Front	per block 1 2		LAD-N10	
Front	block 1 2	<u> 1 -</u> 1 -	LAD-N10	
Front	1 2	<u> 1 -</u> 1	LAD-N10	k
	2	1		0.02
	2		LAD-N01	0.02
		<u> </u>	LAD-N11 (2)	0.03
		2 _	LAD-N20 (2)	0.03
		2	LAD-N02 (2)	0.03
	4	2 2	LAD-N22 (2)	0.05
		<u> </u>	LAD-N13	0.05
		<u> </u>	LAD-N40 (2)	0.05
		<u> </u>	LAD-N04 (2)	0.05
		<u> </u>	LAD-N31	0.05
0.1	4 incl. 1 N/O & 1 N/C make before	break 2 2	LAD-C22 (2)	0.05
Side	2	<u> </u>	LAD-8N11	0.03
		2 _	LAD-8N20	0.03
Note: Order LAS	-D511 for LC1-D40 to D95	2	LAD-8NU2	0.03
4P contactors & 4P contactors 20 to 60A	<u>2</u> 4	1 1	LAD-N11G	0.03
Front, on				
4P contactors	2	1 1	LAD-N11P	0.03
80 to 200A	4	2 2	LAD-N22P	0.05
			in description descenter	
Front	amp protected terminals, for u	se in particularly narsr	A1 DY20	0.04
FIOII	Z	- 2		0.04
		_ 2 2		0.04
	4	_ 2 _ 2		0.04
	4	$\frac{-2}{-2}$ - 1 1		0.05
Instantane	ous auxiliary contact blo	cks for connection	n by lugs	
contact blocks, ad	dd the digit 6 to the end of the refere	ences selected above. Exa	mple: LAD-N10 becomes LA	\D-N106 .
Instantane	ous auxiliary contact blo	cks for connection	h by spring terminal by spring	IS
This type of conn all other contact b	ection is not possible for LAD-8, LAI blocks, add the digit 3 to the end of t	D-N with 1 contact or block he references selected abo	s with dust and damp protection of the second	ted contacts. Fo mes LAD-N113
Instantane	ous auxiliary contact bl	locks for connect	ion by Faston con	nectors

	Conta	ctors		Instantaneous auxiliary contact blocks					lime delay		
:		Side		Front mou	Front mounted						
	Туре	Nun	nber of poles and size	mounted		1 contact	2 contacts	4 contacts	mounted		
	\sim	3P	LC1-D09D38	1 on left-hand side	&	-	1	or 1	or 1		
			LC1-D40D95 (50/60 Hz)	1 on each side	or	2	and 1	or 1	or 1		
			LC1-D40D95 (50 or 60 Hz)	1 on each side	&	2	and 1	or 1	or 1		
			LC1-D115 and D150	1 on left-hand side	&	-	1	or 1	or 1		
		4P	LC1-DT20DT60	1 on left-hand side	&	_	1	or 1	or 1		
			LC1-D65 and D80	1 on each side	or	1	or 1	or 1	or 1		
			LC1-D115/150	1 on right-hand side	&	1	or 1	or 1	or 1		
		3P	LC1-D09D38	-		_	1	or 1	or 1		
			LC1-D40D95	-		1	or 1	or 1	or 1		
			LC1-D115 and D150	1 on left-hand side	&	-	1	or 1	or 1		
		4P	LC1-DT20DT80	1 on left-hand side	or	_	1	or 1	or 1		
			LP1-D65 and D80	-		2	and 1	or 1	or 1		
			LC1-D115	1 on each side		-	and 1	or 1	or 1		
	LC (4)	3P	LC1-D09D38	-		_	1 (5)	-	_		
		4P	LC1-DT20DT60	1 on left-hand side	&	-	1	or 1	or 1		
	(2) For	purc	hase in bulk packs, see page i/7.								
	(0) D										

(3) Device fitted with 4 earth screen continuity terminals.(4) LC: low consumption.(5) Except LAD-N02.

Characteristics: pages 2/38 to 2/40

TeSys contactors Contactors and reversing contactors, model d Time-delay auxiliary contact blocks Mechanical latch blocks

Time delay auxiliary contact blocks for connection by screw clamp terminals

	Maximum number Sealing cover to LAD-T0 and LAD LAD-S2: with swith Clip-on mounting	er of auxiliary contact b be ordered separately 0-R0: with extended sc tching time of 40 ms ± Number of	blocks that can be f , see page 2/23. ale from 0.1 to 0.6 <u>15 ms between op</u> <u>Time da</u> Type	iitted per contac s. ening of the N/C elay Setting	tor, see page 2/17. C contact and closing of the N _ Reference	/ <u>O contact.</u> Weight		
		contacts	71 -	range		kg		
	Front	1 N/O +	On- delay	0.13 s	LAD-T0 (1)	0.060		
LAD-T		TN/C		0.130 s	LAD-T2 (1)	0.060		
				10180 s	LAD-T4 (1)	0.060		
10430 				130 s	LAD-S2	0.060		
000			Off- delay	0.13 s	LAD-R0 (1)	0.060		
				0.130 s	LAD-R2 (1)	0.060		
				10180 s	LAD-R4 (1)	0.060		
LA6-DK	Time delay auxiliary contact blocks for connection by lugs							
	Add the digit 6 to	the end of the referen	ces selected above	e. Example: LA	D-T0 becomes LAD-T06.			
81041	Time delay auxiliary contact blocks for connection by spring terminals							
	Add the digit 3 to	the end of the referen	ces selected above	e. Example: LA	D-T0 becomes LAD-T03.			
	Time delay auxiliary contact blocks for connection by Faston connectors							
	Add the digit 9 to	the end of the referen	ces selected above	e. Example: LA	D-T0 becomes LAD-T09.			
LAD-103	Mechanica	l latch blocks (3)					
	Clip-on mounting	Unlatching control	For use on contactor		Basic reference. Complete with code indicating	Weight		
440					control voltage (2)	kg		
	Front	Manual or electric	LC1-D40D6 LC1-D65 4P ~ LP1-D65 4P _	5 3P ∼ or ∼ =-	LA6-DK10●	0.070		
			LC1-D80…D1 LC1-D80 and LP1-D80 and	50 3P ~ D115 3P LC1-D115 4P 	LA6-DK20●	0.090		
LA6-DK			LC1-D09D3 LC1-DT20D	$38 \sim \text{or} = 0$ T60 $\sim \text{or} = 0$	LAD-6K10●	0.070		

For purchase in bulk pack	s. see page i/7
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(1) For purchase in bulk packs, see page i/7.									
(2) Control circuit voltages (for other voltages please call our Customer information centre on 0870 608 8 608).									
Volts 50/60 Hz,	- 24	32/36	42/48	60/72	100	110/127	220/240	256/277	380/415
Code	В	С	E	EN	К	F	Μ	U	Q
(3) The mechanical latching block must not be powered up at the same time as the contactor. The duration of the control									
signal for the mechanical latching block and the contactor should be \geq 100 ms.									

Characteristics:	Dimensions:	Schemes:		
pages 2/38 to 2/40	pages 2/44 to 2/47	pages 2/48 and 2/49		
2/18		Telemeranique		

810442

LAD-4

810443

TeSys contactors

Contactors and reversing contactors, model d Coil suppressor modules

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 maximum and oscillating frequency limited to 400 Hz maximum.
 - Slight increase in drop-out time (1.2 to 2 times the normal time).

Mounting	For use with contacted	or (1)	Reference	Weight	
-	Rating	Туре			-
		V \sim	٧		kg
Clip-on (3)	D09D38 (3P)	2448	_	LAD-4RCE	0.012
• ()	DT20DT60	110240	-	LAD-4RCU	0.012
Screw fixing (4)	D40D150 (3P)	2448	_	LA4-DA2E	0.018
• • •	and	50127	-	LA4-DA2G	0.018
	D65D115 (4P)	110240	_	LA4-DA2U	0.018
		380415	_	LA4-DA2N	0.018

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).

		04 40			0.012
Clip-on (3)	D09D38 (3P) (2)	2448	-	LAD-4VE	0.012
	DT20DT60	50127	-	LAD-4VG	0.012
		110250	-	LAD-4VU	0.012
Screw mounting (4)	D40D115 (3P)	2448	-	LA4-DE2E	0.018
	and	50127	-	LA4-DE2G	0.018
	D65D115 (4P)	110250	-	LA4-DE2U	0.018
	D40 D115 (3P)	_	24 48	A4-DF3F	0.018
	B40B110 (01)		<u>2</u> 440		0.010
	and		50127	LA4-DE3G	0.018
	D65D115 (4P)	-	110250	LA4-DE3U	0.018

Diodes

No overvoltage or oscillating frequency.

Increase in drop-out time (6 to 10 times the normal time).

Polarised component.

Screw fixing (4)	D40…D95 (3P) D65 and D80 (4P)	-	24250	LA4-DC3U	0.018
Bidirectional pe	ak limiting diode				

• Protection provided by limiting the transient voltage to 2 Uc max.

• Maximum reduction of transient voltage peaks.

Clip-on (3)	D09D38 (3P) (2)	24	_	LAD-4TB	0.012
• • • • •	DT20DT60	72	-	LAD-4TS	0.012
Screw mounting (4)	D40D95 (3P)	24	_	LA4-DB2B	0.018
	D65 and D80 (4P)	72	_	LA4-DB2S	0.018
	D40D95 (3P)	_	24	LA4-DB3B	0.018
	D65 and D80 (4P)	_	72	LA4-DB3S	0.018

For satisfactory protection, a suppressor module must be fitted across the coil of each contactor.
 From LC1-D09 to D38 and LC1-DT20 to DT60, d.c. and low consumption 3-pole contactors are fitted with built-in suppression as standard.

(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.

LA4-D

cheme



3-pole LC1-D09...D38 4-pole LC1-DT20...DT60

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

References

TeSys contactors Contactors and reversing contactors, model d Add-on blocks

Electronic serial timer modules (1)

- 3-pole contactors LC1-D09 to D38 and 4-pole contactors LC1-DT20 to DT60: mounted using adaptor LAD-4BB, to be ordered separately, see page 2/23.
 3-pole contactors LC1-D40 to D150 and 4-pole contactors LC1-D65 to D115: mounted directly across terminals A1
 - and A2 of contactor (screw fixing).

On-delay type				
Operational voltage		Time	Reference	Weight
\sim				
24250 V	100250 V			kg
LC1-	LC1-	0.12 s	LA4-DT0U	0.040
D09D38 (3P)	D40D150 (3P)	1.530 s	LA4-DT2U	0.040
and DT20DT60 (4P)		25500 s	LA4-DT4U	0.040

Off-delay type

LC1-	LC1-	0.12 s	LA4-DR0U	0.050
D09D18 (3P)	D25D150 (3P)	1.530 s	LA4-DR2U	0.050
and DT20DT60 (4P)	and D65D115 (4P)	25500 s	LA4-DR4U	0.050

Interface modules

 3-pole contactors LC1-D09 to D38 and 4-pole contactors LC1-DT20 to DT60: mounted using adaptor LAD-4BB, to be ordered separately, see page 2/23.

3-pole contactors LC1-D40 to D150 and 4-pole contactors LC1-D65 to D115: mounted directly across terminals A1 and A2 of contactor (screw fixing).

Relay interface				
Operational voltage		Supply	Reference	Weight
\sim		voltage		-
24250 V	380415 V	E1-E2 ()		kg
-	LC1-D09D150 (3P) and DT20DT60 (4P)	24 V	LA4-DFBQ	0.055
LC1-D09D150 (3P)	_	24 V	LA4-DFB	0.050
and D120D160 (4P)		48 V	LA4-DFE	0.050
Relay interface with man	ual override switch (output	forced "ON")		
Operational voltage		Supply	Reference	Weight
\sim		voltage		0
24250 V	100250 V	E1-E2 (<u></u>)		kg
LC1-D09D150 (3P)	_	24 V	LA4-DLB	0.045
and D120D160 (4P)		48 V	LA4-DLE	0.045
Solid state interface				
LC1-D09D38 (3P) and DT20DT60 (4P)	LC1-D40D115 (3P)	24 V	LA4-DWB	0.045

Auto-Man-Stop control modules

For local override operation tests with 2-position "Auto-Man" switch and "O-I" switch

- 3-pole contactors LC1-D09 to D38 and 4-pole contactors LC1-DT20 to DT60: mounted using adaptor LAD-4BB, to be ordered separately, see page 2/23.
 3-pole contactors LC1-D40 to D150 and 4-pole contactors LC1-D65 to D115: mounted directly across terminals A1
 - and A2 of contactor (screw fixing) onal voltage Reference Woight

Operational voltage		IVEIGIGI ICG	weigin	
\sim				
24100 V	100250 V		kg	
LC1-D09D150 (3P) and DT20DT60 (4P)	_	LA4-DMK	0.040	
_	LC1-D40D150 (3P)	LA4-DMU	0.040	
(4) For 24 // or protion the	e contractor recet ha fitted with a 24 V a		4	

(1) For 24 V operation, the contactor must be fitted with a 21 V coil (code Z). See pages 2/26 to 2/31. Characteristics: pages 2/41 to 2/43 Dimensio pages 2/44 to 2/47 s 2/48 and 2/49

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TeSys contactors Contactors and reversing contactors, model d

Accessories



Accessorie	s for ma	ain pole and c	ontrol connec	tions		
Description		For use on contactors		Sold in	Unit reference	Weight
		\sim		IOLS OI		кд
Connectors for cable, sizes	4-pole 10 mm ²	D09, D12 DT20, DT25	D09, D12 DT20, DT25	1	LA9-D1260	0.030
(1 connector)	3-pole 25 mm ²	D09D38	D09D38	1	LA9-D3260	0.040
	4-pole 25 mm ²	DT32DT60	DT32DT60	1	LAD-96060	0.060
Connectors for cable,	3-pole 120 mm ²	D115, D150	D115, D150	1	LA9-D115603B	0.560
(2 connectors)	4-pole 120 mm ²	D115	D115	1	LA9-D115604	0.740
Connector for lug type	3-pole	D115, D150	D115, D150	1	LA9-D115503B	0.300
terminals (2 connectors)	4-pole	D115	D115	1	LA9-D115504	0.360
Protective covers for	3-pole (1)	D115, D150	D115, D150	1	LA9-D115703	0.250
lug type terminals	4-pole (1)	D115, D150	D115, D150	1	LA9-D115704	0.300
Links for parallel	2 poles	D09D38	D09D38	10	LA9-D2561	0.060
connection of		DT20 & DT25 (4P)	DT20 & DT25 (4P)	10	LA9-D1261	0.012
		DT32DT60 (4P)	DT32DT60 (4P)	10	LA9-D2561	0.060
		D40D65	D40D65	2	LA9-D40961	0.021
		D80, D95	D80	2	LA9-D80961	0.060
	3 poles (star connection)	D09D38	D09D38	10	LAD-9P3 (2)	0.005
		D80, D95	D80	1	LA9-D80962	0.080
	4 poles	DT20DT60	DT20DT60	2	LA9-D1263	0.024
		D40D65	D40D65	2	LA9-D40963	0.070
		D80, D95	D80	2	LA9-D80963	0.100
Staggered coil connection		-	D40D80	10	LA9-D09966	0.006
Control circuit take-off from		D40D65	D40D65	10	LA9-D6567	0.010
main pole		D80, D95	D80	10	LA9-D8067	0.010
Spreaders for increasing the pole pitch to 45 m	hm	D115, D150	D115, D150	3	GV7-AC03	0.180

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TeSys contactors Contactors and reversing contactors, model d Accessories

	Sets of contacts and arc chambers					
	Description	For use on contactors	on ors		Reference	Weight kg
	Set of contacts	3-pole	LC1-D115 LC1-D150 LC1-D115004		LA5-D1158031 LA5-D150803 LA5-D115804	0.260
	Arc chambers	3-pole	LC1-D115 LC1-D150		LA5-D11550 LA5-D15050B	0.395 0.395
GV2-G245	Cabling accessories	4-pole	LC1-D115004		LA5-D115450B	0.470
	For adapting existing wiring to a new product	LC1-D09D38 LC1- DT20DT60		ression 48 V 127 V 0250 V	LAD-4BB LAD-4BBVE LAD-4BBVG LAD-4BBVU	0.019 0.014 0.014 0.014
	Set of 63 A busbars for parallelling of contactors	2 contactors LC 4 contactors LC	C1-D09D18 or D2 C1-D09D18 or D2	25D38 25D38	GV2-G245 GV2-G445	0.036 0.077
AMA	Terminal block for supply to:	One or more G	V2-G busbar sets		GV1-G09	0.040
СV1-G09	Protection accessories					
	Description	Application		Sold in lots of	Unit reference	Weight kg
	Miniature 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	LC1-D09D38	and DT20DT60	1	LAD-9ET1	0.026
	preventing access to the moving contact carrier	LC1-D40D65 LC1-D80 and D	995	1	LAD-9ET2 LAD-9ET3	0.012
		LC1-D115 and	D150	1	LAD-9ET4	0.004
I A9-D941	Lens cap for safety cover	LC1-D09D38 and DT20DT60 100		LAD-9ECT1	0.001	
	Marking accessories					
	Description	Application Sold in lots of		Unit reference	Weight kg	
	Sheet of 64 blank legends self-adhesive, 8 x 33 (1)	Contactors (excluding 10 4-pole LC1-D65D115) LAD-N (4 contacts), LA6-DK		LAD-21	0.020	
LAD-9ET•	Sheet of 112 blank legends self-adhesive, 8 x 12 (1)	LAD-N (2 conta LAD-T, LAD-R,	icts), LRD	10	LAD-22	0.020
	Sheet of 64 blank legends for marking using plotter or 8 x 33 engraver	Contactors (excluding 10 4-pole LC1-D65D115) LAD (4 contacts), LA6-DK		LAD-23	0.050	
	Sheet of 112 blank legends for marking using plotter or 8 x 12 mm engraver	All products 35		35	LAD-24	0.200
	Legend holder snap-in, 8 x 22 mm	4-pole contactors LC1-D65 100 and D80, LA6-DK		100	LA9-D92 (2)	0.001
	Bag of 300 blank legends self-adhesive, 7 x 21 mm	On holder LA9-D92 1		LA9-D93	0.001	
Ø	creation software Mounting accessories	Multi-language version (EN, FR, GE) 1		XBY-1U	0.060	
	Mounting plate	For replacemer	nt of LC1-F115	1	LA9-D730	0.360
XBY-1U	Set of shims	or F150 by LC1	-D115 or D150	1	LA9-D511	0 020
		LAD-8N on LC1	1-D40 to D95			0.020

(1) These legends are for sticking onto the safety cover of the contactors or add-on block, if fitted.
(2) For purchase in bulk packs, see page i/7.