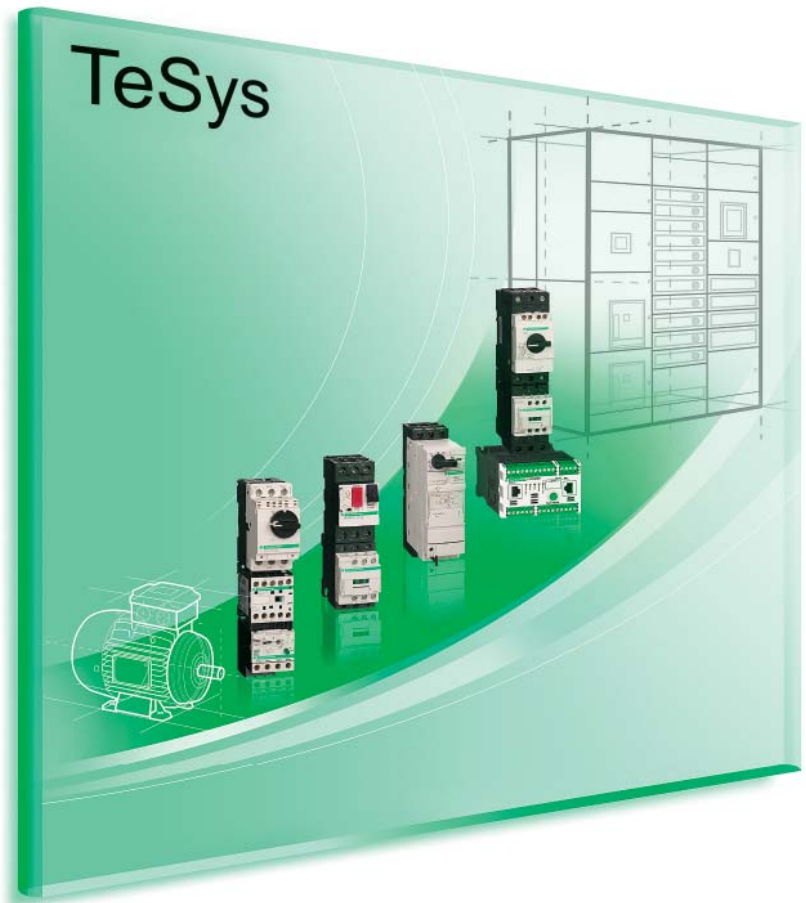


Motor control

TeSys range provide you more *simplicity, compactness, openness* and *flexibility*
... so many evolutions and new items to aid your productivity.

Accurate and reliable control of motors



Increase your productivity, adopt our solutions which help to simplify setting-up.

Motor starters

- Ready-to-use component combinations, designed to work together in perfect harmony.
- Safe operation and level of coordination guaranteed by a major manufacturer.

Power circuit control

- A wide range of components.
- Solutions for a variety of power control applications: lighting, capacitor switching, heating, changeover contactor pairs, resistive loads, upstream protection.

Contents

New

TeSys Motor starters up to 65 A



The new **TeSys GV3** circuit-breakers, **LC1D 40/50/65** contactors, **LRD3** thermal relays are equipped with the new terminal block:

EverLink



Long lasting connection quality. Schneider Electric patented technology.

TeSys T Motor management system



TeSys protected

TeSys T is an advanced motor management and protection system. It is able to guard against all motor malfunctions: overland, current peak, excessive consumption, etc.

TeSys U Communication modules



With open communication across CANopen, Profibus DP, Modbus, AS-interface, Advantys STB, DeviceNet and Ethernet networks, **TeSys U has openness in mind.**

Motor control components

TeSys contactors 5/2 to 5/11

- Contactors, **TeSys K, D, F, B**
- Variable composition contactors, **TeSys CV**

TeSys protection components 5/12 to 5/33

- Thermal-magnetic circuit-breakers
- Magnetic circuit-breakers
- Fuse carriers, switch-disconnector-fuses
- Thermal overload relays
- Electronic thermal overload relays
- Electronic overload relays
- Starter-controller, **TeSys T**
- Multifunction protection relays
- Switch disconnectors **Mini Vario and Vario**

TeSys starters 5/34 to 5/41

- Combination motor starters
- Starter-controller, **TeSys U**
- Controller, **TeSys U**
- Enclosed motor starters

TeSys installation system 5/42 to 5/43

- For motor starter components with spring terminals, **TeSys Quickfit** technology

Components for power control applications 5/44 to 5/50

- Lighting, capacitor switching, heating, changeover contactor pairs



Connections

screw clamp terminals

Rated operational current	le max AC-3 (Ue ≤ 440V)	6 A	9 A	12 A
	le AC-1 (θ ≤ 40° C)	-	20 A	-
Rated operational power	220/240 V	1.5 kW	2.2 kW	3 kW
in category AC3	380/400 V...415/440 V	2.2 kW	4 kW	5.5 kW
	660/690 V...500 V	3 kW	4 kW	4 kW
Contactor type ^{(1)*}	~	LC1-K06**	LC1-K09**	LC1-K12**
	≡	LP1-K06** or LP4-K06**	LP1-K09 or LP4-K09**	LP1-K12 or LP4-K12**
Reversing contactor type *	~	LC2-K06	LC2-K09	LC2-K12
with mechanical interlock	≡	LP2-K06 or LP5-K06	LP2-K09 or LP5-K09	LP2-K12 or LP5-K12

spring terminals

Add the figure 3 before the voltage code. Example **LC1-K0610**** becomes **LC1-K06103****

Faston connectors, 1 x 6.35 or 2 x 2.8

Add the figure 7 before the voltage code. Example **LC1-K0610**** becomes **LC1-K06107****

solder pins for printed circuit boards

Add the figure 5 before the voltage code. Example **LC1-K0610**** becomes **LC1-K06105****

(1) Basic reference, to be completed by adding 01 for N/C auxiliary contact, or 10 for N/O auxiliary contact.

* Basic reference to be completed by adding the coil voltage

Standard control circuit voltages

~ supply

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

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

Example of complete reference **LC1-K0910P7**

≡ supply

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

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

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

Low consumption

Contactors LP4-K (0.7...1.30 Uc), coil suppression as standard

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

Example of complete reference **LC1-K0910BD**



Auxiliary contact blocks

instantaneous, screw clamp connections

	■ for LC1, LP1-K, LP4			■ for LC1, LP1-K				
Composition	2N/O	- 2N/C	1N/O 1N/C	4N/O	3N/O 1N/C	2N/C 2N/C	1N/O 3N/C	- 4N/C
Reference	LA1-KN20	LA1-KN02	LA1-KN11	LA1-KN40	LA1-KN31	LA1-KN22	LA1-KN13	LA1-KN04

electronic time delay

Relay outputs, with common point changeover contact, \sim or \equiv 24...48, 2 A maximum

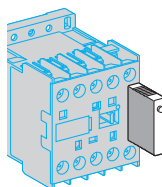
Control voltage 0.85...1.1Uc

Maximum switching capacity 250 VA or 150 W

Operating temperature -10...+60°C

Reset time: 1.5 s for 0.5 s after the time delay period

Type	On-delay	
Timing range	1...30 s	
Composition	1	
Voltage	\sim or \equiv 24...48 V	\sim 110...240
Reference	LA2-KT2E	LA2-KT2U



Suppressor modules

For LC1, LP1-K

Type	Varistor (\sim and \equiv)				Diode (\equiv) + zener		RC (\sim)
Voltage	12...24 V	32...48 V	50...129 V	130...250 V	12...24 V	32...48 V	220...250 V
Reference	LA4-KE1B	LA4-KE1E	LA4-KE1FC	LA4-KE1UG	LA4-KC1B	LA4-KC1E	LA4-KA1U



Connections

screw clamp terminals or connectors

Rated operational voltage		690 V					
Rated operational current	le max AC-3 (Ue ≤ 440V)	9 A	12 A	18 A	25 A	32 A	38 A
	le AC-1 (θ ≤ 60° C)	25 A		32 A	40 A	50 A	
Rated operational power in category AC3	220/240 V	2.2 kW	3 kW	4 kW	5.5 kW	7.5 kW	9 kW
	380/400 V	4 kW	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW
	415/440 V	4 kW	5.5 kW	9 kW	11 kW	15 kW	18.5 kW
	500 V	5.5 kW	7.5 kW	10 kW	15 kW	18.5 kW	18.5 kW
	660/690 V	5.5 kW	7.5 kW	10 kW	15 kW	18.5 kW	18.5 kW
	1000 V	–	–	–	–	–	–
Contactor type *		LC1-D09	LC1-D12	LC1-D18	LC1-D25	LC1-D32	LC1-D38
Reversing contactor type * with mechanical interlock		LC2-D09	LC2-D12	LC2-D18	LC2-D25	LC2-D32	LC2-D38

spring terminals ⁽¹⁾

Add the figure 3 before the voltage code. Example LC1-D09P7 becomes LC1-093P7

lug-clamps ⁽²⁾

Add the figure 6 before the voltage code. Example LC1-D09P7 becomes LC1-096P7

Faston connectors ⁽³⁾ 2 x 6.35 (power) and 1 x 6.35 (control) up to D12 only

Add the figure 9 before the voltage code. Example LC1-D09P7 becomes LC1-099P7

* Basic reference to be completed by adding the coil voltage



(1)



(2)



(3)

Standard control circuit voltages

~ supply

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

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

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

--- supply

Volts	12	24	36	48	60	72	110	125	220	250	440
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Contactors LC1-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
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Contactors LC1-D80...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	-	-

Contactors 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
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Low consumption

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

Volts ---	5	12	20	24	48	110	120	250
U 0.7...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL

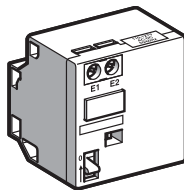
Example of complete reference **LC1-D09P7**



Mounting accessories for 3-pole reversing contactors

2 identical contactors with screw clamp terminals or connectors, horizontally mounted

Mechanical interlock	Set of connections	Mechanical interlock
■ with an electrical interlocking kit for the contactors LC1-D09...D38	LAD-9R1V	included
■ with integral electrical interlocking LC1-D80 and D95 (~) LC1-D80 and D95 (≡) LC1-D115 and D150	LA9-D8069 LA9-D8069 LA9-D11569	LA9-D4002 LA9-D8002 LA9-D11502
■ without electrical interlocking LC1-D09...D38	LA35 7217 .12545 -117217 .2546j/TT2	





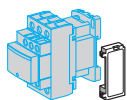
Contact type			instantaneous, connection by screw terminals	
Block mounting			Front mounting	Side mounting
References	Contact	1 "N/O"	LADN10	–
		1 "N/C"	LADN01	–
		1 "N/O" 1 "N/C"	LADN11	LAD8N11
		2 "N/O"	LADN20	LAD8N20
		2 "N/C"	LADN02	LAD8N02
		2 "N/O" 2 "N/C"	LADN22	–
		1 "N/O" 3 "N/C"	LADN13	–
		3 "N/O" 1 "N/C"	LADN31	–
		4 "N/O"	LADN40	–
	4 "N/C"	LADN04	–	



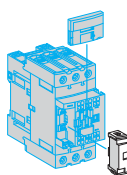
Type de contacts		Time delay, connection by screw terminals		
Block mounting		Front mounting		
Temporisation		0.1...3 s	0.1...30 s	10...180 s
References	On-delay	LADT0	LADT2	LADT4
	Off-delay	LADR0	LADR2	LADR4

Maximum number of auxiliary contacts that can be fitted

Type	Number of poles and size		Instantaneous						Time delay
			Side mounting			Front mounting			Front mounting
			on left side	on right side	and	1 contact	2 contacts	4 contacts	
AC	3P	LC1D09...D38	1	–	and	–	1	or 1	or 1
		LC1D40A...D65A	1	or 1	and	–	1	or 1	or 1
		LC1D80...95 (50/60Hz)	1	1	or	2	and 1	or 1	or 1
	4P	LC1D80...95 (50 or 60Hz)	1	1	and	2	and 1	or 1	or 1
		LC1D115 and D150	1	–	and	–	1	or 1	or 1
		LC1DT20...DT40	1	–	and	–	1	or 1	or 1
DC	3P	LC1DT60A...D80A	1	or 1	and	–	1	or 1	or 1
		LC1D115	1	1	and	1	or 1	or 1	or 1
		LC1D09...D38	–	–	and	–	1	or 1	or 1
	4P	LC1D40A...D65A	1	or 1	and	–	1	or 1	or 1
		LC1D80 and 95	–	–	and	1	or 1	or 1	or 1
		LC1D115 and D150	1	–	and	–	1	or 1	or 1
DC low consumption	3P	LC1D09...D38	–	–	and	–	1	–	–
	4P	LC1DT20...DT40	–	–	and	–	1	–	–

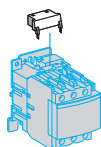


Type of module			RC circuits (Resistor-Capacitor)		
Mounting			Side clip-on	Front clip-on	Screw fixing
For use with contactor			D09...D38(3P) DT20...DT40(4P)	D40A...D65A(3P) DT60A...DT80A(4P)	D80...D150(3P) D40...D115(4P)
References	Voltage	24...48 VAC	LAD4RCE	LAD4RC3E	LA4DA2E
		50...127 VAC	LAD4RCG	LAD4RC3G	LA4DA2G
		110...240 VAC	LAD4RCU	LAD4RC3U	LA4DA2U
		380...415 VAC	–	LAD4RC3N	LA4DA2N

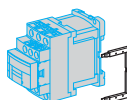


Type of module			Varistors (peak limiting)		
Mounting			Side clip-on	Front clip-on	Screw fixing
For use with contactor			D09...D38(3P) DT20...DT40(4P)	D40A...D65A(3P) DT60A...DT80A(4P)	D80...D150(3P) D40...D115(4P)
References	Voltage	24...48 VAC	LAD4VE	LAD4V3E	LA4DE2E
		50...127 VAC	LAD4VG	LAD4V3G	LA4DE2G
		110...240 VAC	LAD4VU	LAD4V3U	LA4DE2U
		24...48 VDC	–	–	LAD4DE3E (AC and DC)
		50...127 VDC	–	–	LAD4DE3G (AC and DC)
		110...240 VDC	–	–	LAD4DE3U (AC and DC)

5



Type of module			Flywheel diodes		
Mounting			Side clip-on	Front clip-on	Screw fixing
For use with contactor			D09...D38(3P) DT20...DT40(4P)	D40A...D65A(3P) DT60A...DT80A(4P)	D80...D150(3P) D40...D115(4P)
References	Voltage	24...250 VDC	LAD4DDL	LAD4D3U	LAD4DC3U



Type of module			Bidirectional peak limiting diode		
Mounting			Side clip-on	Front clip-on	Screw fixing
For use with contactor			D09...D38(3P) DT20...DT40(4P)	D40A...D65A(3P) DT60A...DT80A(4P)	D80...D150(3P) D40...D115(4P)
References	Voltage	24 VAC	LAD4TB	LAD4T3B	LA4DB2B
		24 VDC	LAD4TBDL	LAD4T3B	LA4DB2S
		72 VAC	LAD4TS	LAD4T3S	LA4DB3B
		72 VDC	LAD4TSDL	LAD4T3S	LA4DB3S
		125 VDC	LAD4TGDL	LAD4T3G (AC and DC)	–
		250 VDC	LAD4TUDL	LAD4T3U (AC and DC)	–
		600 VDC	LAD4TXDL	LAD4T3R (AC and DC)	–



Rated operational current	le max AC-3 (Ue ≤ 440V)	185 A	225 A	265 A	330 A
	le AC-1 (θ ≤ 40° C)	275 A	315 V	350 A	400 A
Rated operational voltage		1 000 V	1 000 V	1 000 V	1 000 V
Number of poles		3 or 4	3 or 4	3 or 4	3 or 4
Rated operational power	220/240 V	55 kW	63 kW	75 kW	100 kW
in category AC3	380/400 V	90 kW	110 kW	132 kW	160 kW
	415 V	100 kW	110 kW	140 kW	180 kW
	440 V	100 kW	110 kW	140 kW	200 kW
	500 V	110 kW	129 kW	160 kW	200 kW
	660/690 V	110 kW	129 kW	160 kW	220 kW
	1000 V	100 kW	100 kW	147 kW	160 kW
Contactor type*		LC1-F185	LC1-F225	LC1-F265	LC1-F330
Reversing contactor type*		LC2-F185	LC2-F225	LC2-F265	

* Basic reference to be completed by adding the coil voltage

5

Standard control circuit voltages													
~ supply													
Volts	24	48	110	115	120	208	220	230	240	380	400	415	440
Contactors LC1-F115...F225(0.85...1.1UC)													
50 Hz (coil LX1)	B5	E5	F5	FE5	-	-	M5	P5	U5	Q5	V5	N5	-
60 Hz (coil LX1)	-	E6	F6	-	G6	L6	M6	-	U6	Q6	-	-	R6U7
40...400 Hz (coil LX9)	-	E7	F7	FE7	G7	L7	M7	P7	U7	Q7	V7	N7	R7
Contactors LC1-F265...F330U7													
40...400 Hz (coil LX1)	B7	E7	F7	FE7	G7	L7	M7	P7	U7	Q7	V7	N7	R7
Contactors LC1-F400...F630U7													
40...400 Hz (coil LX1)	-	E7	F7	FE7	G7 ⁽¹⁾	L7	M7	P7	U7	Q7	V7	N7	R7
Contactor LC1-F780U7													
40...400 Hz (coil LX1)	-	-	F7	FE7	F7	L7	M7	P7	U7	Q7	V7	N7	R7
Contactor LC1-F800U7													
40...400 Hz (coil LX1)	-	-	FE7	FE7	FE7	-	P7	P7	P7	V7	V7	V7	V7Y7
≡ supply													
Volts	24	48	110	125	220	230	250	400	440				
Contactors LC1-F115...F330(0.85...1.1UC)													
(coil LX4-F)	BD	ED	FD	GD	MD	MD	UD	-	RD				
Contactors LC1-F400...F630(0.85...1.1UC)													
(coil LX4-F)	-	ED	FD	GD	MD	-	UD	-	RD				
Contactor LC1-F780(0.85...1.1UC)													
(coil LX4-F)	-	-	FD	GD	MD	-	UD	-	RD				
Contactor LC1-F800(0.85...1.1UC)													
(coil LX4-F)	-	-	FW	FW	MW	MW	-	QW	-				

Example: For a 630 A contactor with a 110 V ~ coil, order **LC1-F630F7**

(1) F7 for LC1-F630



400 A	500 A	630 A	780 A	800 A
500 A	700 A	1 000 A	1 600 A	1 000 A
1 000 V	1 000 V	1 000 V	1 000 V	1 000 V
2, 3 or 4	2, 3 or 4	2, 3 or 4	3 or 4	3
110 kW	147 kW	200 kW	220 kW	250 kW
200 kW	250 kW	335 kW	400 kW	450 kW
220 kW	280 kW	375 kW	425 kW	450 kW
250 kW	295 kW	400 kW	425 kW	450 kW
257 kW	355 kW	400 kW	450 kW	450 kW
280 kW	335 kW	450 kW	475 kW	475 kW
185 kW	335 kW	450 kW	450 kW	450 kW
LC1-F400	LC1-F500	LC1-F630	LC1-F780	LC1-F800

For customer assembly



Auxiliary contact blocks

instantaneous				dust & damp protected contacts				time delay 1N/O + 1 N/C		
Composition	Reference	Composition	Reference	Composition	Reference	Composition	Reference	Type	Range	Reference
N/O N/C		N/O N/C		N/O N/C		N/O N/C				
1 -	LAD-N10	1 1	LAD-N11	2 2	LAD-N22	2 - - -	LA1-DX20	On-delay	0.1...3 s	LAD-T0
- 1	LAD-N01	2 -	LAD-N20	1 3	LAD-N13	2 2 - -	LA1-DY20		0.1...30 s	LAD-T2
		- 2	LAD-N02	4 -	LAD-N40	2 - 2 -	LA1-DZ40		10...180 s	LAD-T4
				- 4	LAD-N04	2 - 1 1	LA1-DZ31		1...30 s	LAD-S2
				3 1	LAD-N31			Off-delay	0.1...3 s	LAD-R0
				2 2	LAD-C22				0.1...30 s	LAD-R2
									10...180 s	LAD-R4

Mounting accessories for 3-pole reversing contactors for motor control

2 identical contactors, horizontally mounted

Mechanical interlock with an electrical interlocking kit for the contactors

Contactor type	Set of connections	Mechanical interlock
LC1-F115	LA9-FF976	LA9-FF970
LC1-F150	LA9-F15076	LA9-FF970
LC1-F185	LA9-FG976	LA9-FG970
LC1-F225	LA9-F22576	LA9-FG970
LC1-F265	LA9-FH976	LA9-FJ970
LC1-F330	LA9-FJ976	LA9-FJ970
LC1-F400	LA9-FJ976	LA9-FJ970
LC1-F500	LA9-FK976	LA9-FJ970
LC1-F630 or LC1-F800	LA9-FL976	LA9-FL970

2017





Magnetic circuit-breakers GV2-LE and GV2-L for connection by screw clamp terminals

GV2-LE control by rocker lever, GV2-L control by rotary knob

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Magnetic protection	Tripping current	Use in association with thermal overload relay	Reference
400/415 V			500 V			690 V			rating	d ± 20%		
P	I _{cu}	I _{cs} ⁽¹⁾	P	I _{cu}	I _{cs} ⁽¹⁾	P	I _{cu}	I _{cs} ⁽¹⁾	A	A		
kW	kA		kW	kA		kW	kA					
0.06	★	★	-	-	-	-	-	-	0.4	5	LR2-K0302	GV2-LE03
0.09	★	★	-	-	-	-	-	-	0.4	5	LR2-K0304 or LRD-03	GV2-LE03 GV2-L03
0.12	★	★	-	-	-	0.37	★	★	0.63	8	LR2-K0304 or LRD-04	GV2-LE04 GV2-L04
0.18	★	★	-	-	-	-	-	-	0.63	8	LR2-K0305 or LRD-04	GV2-LE04 GV2-L04
-	-	-	-	-	-	0.55	★	★	1	13	LR2-K0305 or LRD-05	GV2-LE05 GV2-L05
0.25	★	★	-	-	-	-	-	-	1	13	LR2-K0306 or LRD-05	GV2-LE05 GV2-L05
-	-	-	-	-	-	0.75	★	★	1	13	LR2-K0306 or LRD-06	GV2-LE05 GV2-L05
0.37	★	★	0.37	★	★	-	-	-	1	13	LR2-K0306 or LRD-05	GV2-LE05 GV2-L05
0.55	★	★	0.55	★	★	1.1	★	★	1.6	22.5	LR2-K0307 or LRD-06	GV2-LE06 GV2-L06
-	-	-	0.75	★	★	-	-	-	1.6	22.5	LR2-K0307 or LRD-06	GV2-LE06 GV2-L06
0.75	★	★	1.1	★	★	1.5	3	75	2.5	33.5	LR2-K0308	GV2-LE07
0.75	★	★	1.1	★	★	1.5	4	100	2.5	33.5	LRD-07	GV2-L07
1.1	★	★	-	-	-	-	-	-	2.5	33.5	LR2-K0308 or LRD-08	GV2-LE08 GV2-L08
1.5	★	★	1.5	★	★	3	3	75	4	51	LR2-K0310	GV2-LE08
1.5	★	★	1.5	★	★	3	4	100	4	51	LRD-08	GV2-L08
-	-	-	2.2	★	★	-	-	-	4	51	LR2-K0312 or LRD-08	GV2-LE08 GV2-L08
2.2	★	★	3	50	100	4	3	75	6.3	78	LR2-K0312	GV2-LE10
2.2	★	★	3	★	★	4	4	100	6.3	78	LRD-10	GV2-L10
3	★	★	4	10	100	5.5	3	75	10	138	LR2-K0314	GV2-LE14
3	★	★	4	10	100	5.5	4	100	10	138	LRD-12	GV2-L14
4	★	★	5.5	10	100	-	-	-	10	138	LR2-K0316 or LRD-14	GV2-LE14 GV2-L14
-	-	-	-	-	-	7.5	3	75	10	138	LRD-14	GV2-LE14
-	-	-	-	-	-	7.5	4	100	10	138	LRD-14	GV2-L14
-	-	-	-	-	-	9	3	75	14	170	LRD-16	GV2-LE16
-	-	-	-	-	-	9	4	100	14	170	LRD-16	GV2-L16
5.5	15	50	7.5	6	75	11	3	75	14	170	LR2-K0321	GV2-LE16
5.5	50	50	7.5	10	75	11	4	100	14	170	LRD-16	GV2-L16
7.5	15	50	9	6	75	15	3	75	18	223	LRD-21	GV2-LE20
7.5	50	50	9	10	75	15	4	100	18	223	LRD-21	GV2-L20
9	15	40	11	4	75	18.5	3	75	25	327	LRD-22	GV2-LE22
9	50	50	11	10	75	18.5	4	100	25	327	LRD-22	GV2-L22
11	15	40	15	4	75	-	-	-	25	327	LRD-22	GV2-LE22
11	50	50	15	10	75	-	-	-	25	327	LRD-22	GV2-L22
15	10	50	18.5	4	75	22	3	75	32	416	LRD-32	GV2-LE32
15	50	50	18.5	10	75	22	4	100	32	416	LRD-32	GV2-L32

H > 100 kA

(1) as % of I_{cu}

Common accessories GV2 / GV3, see page 5/15



Thermal-magnetic circuit-breakers GV3-P for connection by EverLink terminal blocks (2)

Control by rotary knob

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Setting range	Reference
400/415 V			500 V			660/690 V			of thermal	
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)	trips	
kW	kA		kW	kA		kW	kA		A	
5,5	100	50	7,5	12	50	11	6	50	9...13	GV3-P13
7,5	100	50	11	12	50	15	6	50	12...18	GV3-P18
11	100	50	15	12	50	18,5	6	50	17...25	GV3-P25
15	100	50	18,5	12	50	22	6	50	23...32	GV3-P32
18,5	50	50	22	10	50	30	5	60	30...40	GV3-P40
22	50	50	30	10	50	37	5	60	37...50	GV3-P50
30	50	50	37	10	50	45	5	60	48...65	GV3-P65

(1) as % of Icu

Thermal-magnetic circuit-breakers GV3-P for connection by ring terminals

Add the figure 6 to the end of the reference. Example **GV3-P13** becomes **GV3-P136**

For motor starter solution, only 1 EverLink terminal block, add the figure 1 at the end of the reference. Example : GV3P65 becomes GV3P651

Magnetic 11...30 kW with EverLink terminal blocks



Magnetic circuit-breakers GV3-L for connection by EverLink terminal blocks (2)

Control by rotary knob

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Associated equipment	Circuit-breaker	
400/415 V			500 V			690 V			Thermal	Short-circuit	
P	Icu	Ics	P	Icu	Ics	P	Icu	Ics	overload	protection	Reference
kW	kA		kW	kA		kW	kA		relay	Rating A	
11	100	50	15	12	50	18,5	6	50	LRD-22	25	GV3-L25
15	100	50	18,5	12	50	22	6	50	LRD-32	32	GV3-L32
18,5	50	50	22	10	50	30	5	60	LRD-3355	40	GV3-L40
22	50	50	30	10	50	45	5	60	LRD-3357	50	GV3-L50
30	50	50	37	10	50	45	5	60	LRD-3359	65	GV3-L65

Magnetic circuit-breakers GV3-L for connection by ring terminals

Add the figure 6 to the end of the reference. Example **GV3-L25** becomes **GV3-L256**

For motor starter solution, only 1 EverLink terminal block, add the figure 1 at the end of the reference. Example : GV3L65 becomes GV3L651

(2) BTR screw of 4 mm

Add-on blocks and accessories (3)

Add-on blocks (front)

Fault signalling contact + instantaneous auxiliary contact

Contact type	N/O (fault) + N/C	N/O (fault) + N/O
Références (4)	GV-AED011	GV-AED101

Accessories

Type	for contactor for lug type terminals	IP20 cover for lug type terminals	Set of 3-pole 115 A busbars	2-pole busbars	"Wide spacing" UL 508 type E cover	Side by side mounting busbars
Références	LAD96575	LAD96570	GV3G364	GV36264	GV3G66	GV3S

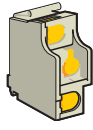
(3) Common add-on blocks and accessories GV2 / GV3, see page 5/15

(4) For spring terminal version add 3 to the end of the reference. Example **GV-AED011** becomes **GV-AED0113**



Accessories GV2						
Combination block						
For mounting on		LC1-K or LP1-K GV2-AF01	LC1-D09...D38 GV2-AF3	LAD-31 and LC1-D09...D38 GV2-AF4		
Sets of 3-pole busbars						
63 A	Pitch	45 mm	54 mm	72 mm		
Number of tap-offs	2	GV2-G245	GV2-G254	GV2-G272		
	3	GV2-G345	GV2-G354			
	4	GV2-G445	GV2-G454	GV2-G472		
	5		GV2-G554			
Protective end cover						
For unused busbar outlets		GV1-G10				
Terminal blocks						
For supply to one or more GV2-G busbar sets		connection from the top GV1-G09	can be fitted with current limiter GV1-L3 (GV2-ME and GV2-P) GV1-G05			
Padlockable external operator for GV2 and GV3 (150 to 290 mm)						
Padlocking		In "On" and "Off" position	In "Off" position			
Handle		black	red			
Legend plate		blue	yellow			
IP 54	For GV2-ME/P/L	GV2-AP01	GV2-AP02			
	For GV2-LE	GV2-AP03	-			
	For GV3-P/L	GV3-AP01	GV3-AP02			

Add-on blocks common to GV2 / GV3							
Contact blocks							
Contact types		N/O or N/C	N/O + N/C	N/O + N/O	(fault) + N/C	(fault) + N/O	C/O common point
Instantaneous auxiliary contacts							
Mounting	front	GV-AE1	GV-AE11	GV-AE20			
	LH side		GV-AN11	GV-AN20			
Fault signalling contact + instantaneous auxiliary contact							
	LH side	"F" fault			GV-AD1001	GV-AD1010	
		"O" fault			GV-AD0101	GV-AD0110	
Short-circuit signalling contact							
	LH side						GV-AM11
Electric trips							
Undervoltage or shunt trips (1)							
Side mounting (1 block on RH side of circuit-breaker)		50 Hz		60 Hz			
Voltage	24 V	GV-A*025		GV-A*026			
	48 V	GV-A*055		GV-A*056			
	100 V	GV-A*107					
	100...110 V			GV-A*107			
	110...115 V	GV-A*115		GV-A*116			
	120...127 V	GV-A*125					
	127 V			GV-A*115			
	200 V	GV-A*207					
	200...220 V			GV-A*207			
	220...240 V	GV-A*225		GV-A*226			
380...400 V	GV-A*385		GV-A*386				
415...440 V	GV-A*415						
415 V			GV-A*416				
Padlocking device							
For use with up to 4 padlocks (padlocks not supplied) Ø 6 mm shank max		GV2-V03					





TeSys DF Fuse carriers

0.5...125 A



Type			Fuse carriers without indicator			
Rated operational voltage (Ui)			500 V	690 V		
Fuse size			8,5 x 31,5 mm	10 x 38 mm	14 x 51 mm	22 x 58 mm
Conventional rated thermal current (Ith)			25 A	32 A	50 A	125 A
References	Number of poles	1P	DF81	DF101	DF141	DF221
		N	DF10N	DF10N	DF14N	DF22N
		1P+N	DF81N	DF10N	DF14N	DF22N
		2P	DF82	DF102	DF142	DF222
		3P	DF83	DF103	DF143C	DF223C
		3P+N	DF83N	DF103N	DF143NC	DF223NC



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Type			Fuse carriers with indicator			
Rated operational voltage (Ui)			500 V	690 V		
Fuse size			8,5 x 31,5 mm	10 x 38 mm	14 x 51 mm	22 x 58 mm
Conventional rated thermal current (Ith)			25 A	32 A	50 A	125 A
References	Number of poles	1P	DF81V	DF101V	DF141V	DF221V
		1P+N	DF81NV	DF10NV	DF14NV	DF22NV
		2P	DF82V	DF102V	DF142V	DF222V
		3P	DF83V	DF103V	DF143CV	DF223CV
		3P+N	DF83NV	DF103NV	DF143NCV	DF223NCV

Accessories

Type	Auxiliary early break and blown fuse signalling contacts			
Fuse carrier to be equipped	DF14		DF22	
Size of cartridge fuse or link	14 x 51 mm		22 x 58 mm	
Number of contacts	1	2	1	2
References	DF14AM1	DF14AM2	DF22AM1	DF22AM2

Type	Fuse carrier assembly kits			
Fuse carrier to be assembled	DF8	DF10	DF14	DF22
Size of cartridge fuse or link	8,5 x 31,5 mm	10 x 38 mm	14 x 51 mm	22 x 58 mm
Kit contents	1 pin, 2 clips		1 pin, 3 clips	
References	DF10AP		DF14AP	DF22AP



Fuse carriers

Rated operational voltage with links, a.c. supply	690 V	690 V	690 V	690 V
Maximum continuous current for ambient temperature ≤ 40° C				
with links	6/32 or 4/25 or 2.5/16	4/25 or 2.5/16	10/50 or 6/40	32/125 or 25/100
with aM fuses (mm ² /A)	6/32 or 4/22 or 2.5/20	4/22 or 2.5/20	10/50 or 6/35	32/125 or 25/100
with gG fuses (mm ² /A)	6/32 or 2.5/20 or 1.5/16	2.5/20 or 1.5/16	10/40 or 6/32	25/100 or 16/80
Conforming to standards	NF EN 60947-3			
	IEC 947-3			
Product certifications	BV, UR		-	-
Fuse carrier type	LS1-D32	LS1-D323	GK1-E•	GK1-F•



Basic blocks

Connection

Rating	25 A	32 A	50 A	125 A		
Cartridge fuse size	10 x 38	10 x 38	14 x 51	22 x 58		
■ by spring terminals						
Number of early break contacts	-					
Single-phase protection device	Without	Without	Without	With		
3-pole	LS1-D323					
■ by screw clamp terminals or connectors						
Number of early break contacts	-	-	1	1		
3-pole		LS1-D32	GK1-EK	GK1-EV	GK1-FK	GK1-FV
4-pole		LS1-D32 + LA8-D324	GK1-EM	GK1-EY	GK1-FM	GK1-FY
Number of early break contacts			2	2		
3-pole			GK1-ES	GK1-EW	GK1-FS	GK1-FW
4-pole			GK1-ET	GK1-EX	GK1-FT	GK1-FX



Operators					
Handles	side			front	
Number of poles, 3 or 4					
For fuse carrier rating	125 A			32, 50, 125 A	
For mounting on	RH side	LH side			
	GK1-AP07	GK1-AP08		Fitted as standard	
external					
For fuse carrier rating	32 A	50 A		125 A	
For mounting on	RH or LH side	RH side	LH side	RH side	LH side
	DK1-FB005	GK1-AP05	GK1-AP06	GK1-AP07	GK1-AP08

Padlocking devices					
For fuse carrier rating	32 A	50 A			
Number of poles	3 or 4	3		4	
Single-phase protection device	Without	Without	With	Without	With
	Integral	GK1-AV07	GK1-AV08	GK1-AV08	GK1-AV09

Links			
Tubular links			
Number of poles, 3 or 4			
For fuse carrier rating	32 A	50 A	125 A
Reference	DK1-CB92 ⁽¹⁾	DK1-EB92 ⁽²⁾	DK1-FA92 ⁽²⁾

(1) For use on a neutral circuit, the tubular link can be interlocked with special device LA8-D25906.

(2) 4-pole fuse carriers GK1-50 and 125 A 4 are fitted with an interlocked neutral tubular link as standard.

Add-on blocks				
Contact blocks				
For use on	LS1-D32		LS1-D323	
Contact type	N/O + N/C	N/O + N/O	N/O + N/C	N/O + N/O
Instantaneous auxiliary contacts				
Mounting	front	GV-AE11	GV-AE20	GV-AE113
				GV-AE203



4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	
			160 A			250 A			400 A		630 A		1250 A		
Size 00			Size 0			Size 00			Size 1		Size 2		Size 3		Size 4
GS1-KD4	GS1-KKD3	GS1-KKD4	GS1-LD3	GS1-LD4	GS1-LLD3	GS1-LLD4	GS1-ND3	GS1-ND4	GS1-QQD3	GS1-QQD4	GS1-SD3	GS1-SD4	GS1-VD3	GS1-VD4	
GS1-KG4	GS1-KKG3	GS1-KKG4	GS1-LG3	GS1-LG4	GS1-LLG3	GS1-LLG4	GS1-NG3	GS1-NG4	GS1-QQG3	GS1-QQG4					
GS1-K4	GS1-KK3	GS1-KK4	GS1-L3	GS1-L4	GS1-LL3	GS1-LL4	GS1-N3	GS1-N4	GS1-QQ3	GS1-QQ4	GS1-S3	GS1-S4	GS1-V3	GS1-V4	
200 A			250 A			315 A			400 V		630 A		800 A		1250 A
B1-B2			B1...B3			B1...B3			B1...B4		C1-C2		C1...C3		D1
GS1-LBR4	GS1-MMBR3	GS1-MMBR4	GS1-NBR3	GS1-NBR4	GS1-PPBR3	GS1-PPBR4	GS1-QQBR3	GS1-QQBR4	GS1-SBR3	GS1-SBR4	GS1-TBR3	GS1-TRB4	GS1-VRB3	GS1-VRB4	
GS1-LB4	GS1-MMB3	GS1-MMB4	GS1-NB3	GS1-NB4	GS1-PPB3	GS1-PPB4	GS1-QQB3	GS1-QQB4	GS1-SB3	GS1-SB4	GS1-TB3	GS1-TB4	GS1-VB3	GS1-VB4	

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250 and 400 A				630 A		1250 A		2 nd C/O	
T1 and T2		T3		T4		50...400 A		630...1250 A	
-		-		-		-		-	
3	4	3	4	3	4	3	4	3	4
GS1-AF43	GS1-AF44	GS1-AF63	GS1-AF64	GS1-AF73	GS1-AF74	GS1-AF	GS1-AF	GS1-AFF	GS1-AFF



Thermal overload relays, TeSys K adjustable from 0.11 to 12 A

Connection by screw clamp terminals, direct mounting on contactors LC1-K, manual or automatic reset

Relay setting range	Fuses to be used with selected relay			Reference
	aM	gG	BS88	
Class 10 A				
0.11...0.16 A	0.25 A	0.5 A	-	LR2-K0301
0.16...0.23 A	0.25 A	0.5 A	-	LR2-K0302
0.23...0.36 A	0.5 A	1 A	-	LR2-K0303
0.36...0.54 A	1 A	1.6 A	-	LR2-K0304
0.54...0.8 A	1 A	2 A	-	LR2-K0305
0.8...1.2 A	2 A	4 A	6 A	LR2-K0306
1.2...1.8 A	2 A	6 A	6 A	LR2-K0307
1.8...2.6 A	2 A	6 A	10 A	LR2-K0308
2.6...3.7 A	4 A	10 A	16 A	LR2-K0310
3.7...5.5 A	6 A	16 A	16 A	LR2-K0312
5.5...8 A	8 A	20 A	20 A	LR2-K0314
8...11.5 A	10 A	25 A	20 A	LR2-K0316

Thermal overload relays for use on class 10 A unbalanced loads: for above references LR2-K0305 to LR2-K0316 only, replace the prefix LR2 with LR7.

Example LR7-K0310.

Accessories

Prewiring kit

Allowing direct connection of the N/C contact of relay LRD-01...35 or LR3-D01... D35 to the contactor	For use on	
	LC1-D09...D18	LAD-7C1
	LC1-D25...D38	LAD-7C2

Terminal blocks (1)

For clip-on mounting on 35 mm mounting rail (AM1-DP200) or screw fixing	LRD-01...35 and LR3-D01...D35	LAD-7B10
	LRD-3***, LR3-D3***, LRD-35**	LA7-D3064 ⁽²⁾
For independent mounting of the relay	LR2-K***	LA7-K0064

EverLink Terminal blocks

Separate terminal block	LRD-313... LRD-365	LAD-9R3
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Terminal block adapter

For mounting a relay beneath an LC1-D115 or D150 contactor	LRD-3***, LR3-D3***, LRD-35**	LA7-D3058
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Stop or electrical reset

Remote ⁽³⁾	LRD-01...35 and LR3-D01...D35	LAD-703 ⁽⁴⁾
-----------------------	-------------------------------	------------------------

Tripping or electrical reset device

Remote ⁽³⁾	All relays except LRD-01...35 and LR3-D01...D35	LA7-D03 ⁽⁴⁾
-----------------------	---	------------------------

(1) Terminal blocks are supplied with terminals protected against direct finger contact and screws in the open "ready-to-tighten" position.

(2) To order a terminal block for connection by lug-clamps, the reference becomes LA7-D30646.

(3) The time for which the coil of remote tripping or electrical resetting device LA7-D03 or LAD-703 can remain energised depends on its rest time: 1 s pulse duration with 9 s rest time; maximum pulse duration of 20 s with a rest time of 300 s. Minimum pulse time 200 ms.

(4) Reference to be completed by adding the code indicating the control circuit voltage.

Standard control circuit voltages

~ supply

Volts	12	24	48	96	110	220/230	380/400	415/440
50/60 Hz. Consumption, inrush and sealed < 100 VA	-	B	E	-	F	M	Q	N

--- supply

Consumption, inrush and sealed < 100 W	J	B	E	DD	F	M	-	-
--	---	---	---	----	---	---	---	---



Thermal overload relays, TeSys D adjustable from 0.1 to 140 A

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

Connection by screw clamp terminals or connectors	Relay setting range	Fuses to be used with selected relay			With contactor	Reference
		aM	gG	BS88		
Class 10 A	0.10...0.16 A	0.25 A	2 A	-	LC1-D09...D38	LRD 01
	0.16...0.25 A	0.5 A	2 A	-	LC1-D09...D38	LRD 02
	0.25...0.40 A	1 A	2 A	-	LC1-D09...D38	LRD 03
	0.40...0.63 A	1 A	1.6 A	-	LC1-D09...D38	LRD 04
	0.63...1 A	2 A	4 A	-	LC1-D09...D38	LRD 05
	1...1.7 A	2 A	4 A	6 A	LC1-D09...D38	LRD 06
	1.6...2.5 A	4 A	6 A	10 A	LC1-D09...D38	LRD 07
	2.5...4 A	6 A	10 A	16 A	LC1-D09...D38	LRD 08
	4...6 A	8 A	16 A	16 A	LC1-D09...D38	LRD 10
	5.5...8 A	12 A	20 A	20 A	LC1-D09...D38	LRD 12
	7...10 A	12 A	20 A	20 A	LC1-D09...D38	LRD 14
	9...13 A	16 A	25 A	25 A	LC1-D12...D38	LRD 16
	12...18 A	20 A	35 A	32 A	LC1-D18...D38	LRD 21
	16...24 A	25 A	50 A	50 A	LC1-D25...D38	LRD 22
	23...32 A	40 A	63 A	63 A	LC1-D25...D38	LRD 32
	30...38 A	50 A	80 A	80 A	LC1-D32 et D38	LRD 35
	55...70 A	80 A	125 A	125 A	D50...D95	LRD 3361
	63...80 A	80 A	125 A	125 A	D65...D95	LRD 3363
	80...104 A	100 A	160 A	160 A	D80 et D95	LRD 3365
	80...104 A	125 A	200 A	160 A	D115 et D150	LRD 4365
95...120 A	125 A	200 A	200 A	D115 et D150	LRD 4367	
110...140 A	160 A	250 A	200 A	D150	LRD 4369	
80...104 A	100 A	160 A	160 A	Montage séparé	LRD 33656	
95...120 A	125 A	200 A	200 A	Montage séparé	LRD 33676	
110...140 A	160 A	250 A	200 A	Montage séparé	LRD 33696	
Class 20	6 A	10 A	16 A		LC1-D09...D32	LRD 1508
	4...6 A	8 A	16 A	16 A	LC1-D09...D32	LRD 1510
	5.5...8 A	12 A	20 A	20 A	LC1-D09...D32	LRD 1512
	7...10 A	16 A	20 A	25 A	LC1-D09...D32	LRD 1514
	9...13 A	16 A	25 A	25 A	LC1-D12...D32	LRD 1516
	12...18 A	25 A	35 A	40 A	LC1-D18...D32	LRD 1521
	17...25 A	32 A	50 A	50 A	LC1-D25 et D32	LRD 1522
	23...28 A	40 A	63 A	63 A	LC1-D25 et D32	LRD 1530
	25...32 A	40 A	63 A	63 A	LC1-D25 et D32	LRD 1532
	55...70 A	100 A	125 A	125 A	D65...D95	LRD 23561
	63...80 A	100 A	160 A	125 A	D80 et D95	LRD 23563
	Connection by EverLink terminal blocks, with BTR screws					
Class 10 A	9...13 A	16 A	25 A	25 A	LC1-D40A...D65A	LRD 313 (1)
	12...18 A	20 A	32 A	35 A	LC1-D40A...D65A	LRD 318 (1)
	17...25 A	25 A	50 A	50 A	LC1-D40A...D65A	LRD 325 (1)
	23...32 A	40 A	63 A	63 A	LC1-D40A...D65A	LRD 332 (1)
	30...40 A	40 A	80 A	80 A	LC1-D40A...D65A	LRD 340 (1)
	37...50 A	63 A	100 A	100 A	LC1-D40A...D65A	LRD 350 (1)
	48...65 A	63 A	100 A	100 A	LC1-D40A...D65A	LRD 365 (1)
Class 20	9...13 A	20 A	32 A	35 A	LC1-D40A...D65A	LRD 313L (1)
	12...18 A	25 A	40 A	40 A	LC1-D40A...D65A	LRD 318L (1)
	17...25 A	32 A	50 A	50 A	LC1-D40A...D65A	LRD 325L (1)
	23...32 A	40 A	63 A	63 A	LC1-D40A...D65A	LRD 332L (1)
	30...40 A	50 A	80 A	80 A	LC1-D40A...D65A	LRD 340L (1)
	37...50 A	63 A	100 A	100 A	LC1-D40A...D65A	LRD 350L (1)
	48...65 A	80 A	125 A	125 A	LC1-D40A...D65A	LRD 365L (1)

Class 10A with connection by lug-clamps:

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

- figure 6 for relays LRD01 to LRD35 and LRD313 to LRD365.
- figure A66 for relays LRD3361 to LRD3365.

Relays LRD43 are suitable as standard, for use with lug-clamps

(1) Independant mounting on a DIN rail, order an EverLink LAD96560 terminal block.

Thermal overload relays for use with unbalanced loads Class 10A

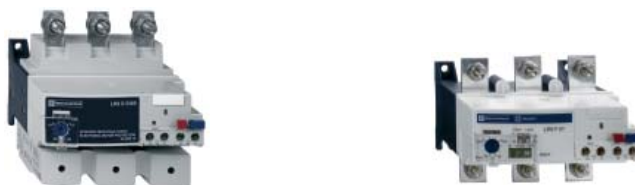
with connection by screw clamp terminals and lug-clamp terminals:

In the reference selected above, change LRD (except LRD 4●●●) by LR3D

Example: LRD01 becomes LR3D01

Example with screw clamp terminal: LRD340 becomes LR3D340

Example with lug-clamp terminal: LRD3406 becomes LR3D3406



For use with contactor	LC1-D	LC1-F
Motor current	60...150 A	30...630 A
Basic reference, to be completed	LR9-D	LR9-F

5

Relay setting range	Fuse to be used with selected relay		For mounting beneath contactor LC1-	Compensated and differential		or not with alarm Class 10 or 20
	aM	gG		Class 10	Class 20	
60...100	100	160	D115 and D150	LR9-D5367	LR9-D5567	
90...150	160	250	D115 and D150	LR9-D5369	LR9-F5569	
30...50	50	80	F115...F185	LR9-F5357	LR9-F5557	LR9-F57
48...80	80	125	F115...F185	LR9-F5363	LR9-F5563	LR9-F63
60...100	100	200	F115...F185	LR9-F5367	LR9-F5567	LR9-F67
90...150	160	250	F115...F185	LR9-F5369	LR9-F5569	LR9-F69
132...220	250	315	F185...F400	LR9-F5371	LR9-F5571	LR9-F71
200...330	400	500	F225...F500	LR9-F7375	LR9-F7575	LR9-F75
300...500	500	800	F225...F500	LR9-F7379	LR9-F7579	LR9-F79
380...630	630	800	F400...F630 and F800	LR9-F7381	LR9-F7581	LR9-F81

Accessories		
Remote control		
Function	Reset	Stop and/or Reset
Electrical reset ⁽¹⁾	LA7-D03 ⁽²⁾	
Reset by flexible cable (length 0.5 m)	LA7-D305	
Adapter for door interlock mechanism		LA7-D1020
Operating head for pushbutton		
Spring return	ZA2-BL639	ZA2-BL432
Rod with snap-off end		
Adjustable from 17 to 120 mm	ZA2-BZ13	
Insulated terminal blocks		
For relays LR9-F5•57, F5•63, F5•67, F5•69, F57, F63, F67 and F69	Set of 2 blocks	
	LA9-F103	

(1) The time for which the coil of remote electrical reset device LA7-D03 can remain energised depends on its rest time: 1 s pulse with 9 s rest time; 5 s pulse duration with 30 s rest time; 10 s pulse duration with 90 s rest time: maximum pulse duration 20 s with rest time of 300 s. Minimum pulse time: 200 ms.

(2) Reference to be completed by adding the coil voltage code, see page 5/27



Relay type		Electronic over current relays TeSys LR97D			
Relay setting range		0,3...1,5 A	1,2...7 A	5...25 A	20...38 A
For use with contactor		LC1D09...D38			LC1D25...D38
References	200... 240 VAC	LR97D015M7	LR97D07M7	LR97D025M7	LR97D038M7
	100... 120 VAC	LR97D015F7	LR97D07F7	LR97D025F7	LR97D038F7
	24 VAC/DC	LR97D015B	LR97D07B	LR97D025B	LR97D038B
	48 VAC/DC	LR97D015E	LR97D07E	LR97D025E	LR97D038E

0,5...60 A



Relay type		Electronic over current relays TeSys LT47 with manual reset		
Relay setting range		0,5...6 A	3...30 A	5...60 A
References	200... 240 VAC	LT4706M7S	LT47D30M7S	LT4760M7S
	100... 120 VAC	LT47D06F7S	LT47D30F7S	LT4760F7S
	24 VAC/DC	LT47D06BS	LT47D30BS	LT4760BS
	48 VAC/DC	LT47D06ES	LT47D30ES	LT4760ES

5



Relay type		Electronic over current relays TeSys LT47 with automatic reset		
Relay setting range		0,5...6 A	3...30 A	5...60 A
References	200... 240 VAC	LT4706M7A	LT47D30M7A	LT4760M7A
	100... 120 VAC	LT47D06F7A	LT47D30F7A	LT4760F7A
	24 VAC/DC	LT47D06BA	LT47D30BA	LT4760BA
	48 VAC/DC	LT47D06EA	LT47D30EA	LT4760EA

Accessories : please consult your Schneider Electric agency.



Type of transformer		External			
Operational current	primary	100 A	200 A	400 A	800 A
	secondary	1 A			
References		LT6CT1001	LT6CT2001	LT6CT4001	LT6CT8001

Earth fault toroids

Type of toroid	Closed						Split	
Maximum current	65 A	85 A	160 A	250 A	400 A	630 A	85 A	250 A
Internal diameter	Ø 30	Ø 50	Ø 80	Ø 120	Ø 200	Ø 300	Ø 46	Ø 110
References	TA30	PA50	IA80	MA120	SA200	GA300	POA	GOA

PTC thermistor probe

Type of probe	Triple							
Operating temperature	90°C	110°C	120°C	130°C	140°C	150°C	160°C	170°C
References	DA1TT090	DA1TT110	DA1TT120	DA1TT130	DA1TT140	DA1TT150	DA1TT160	DA1TT170

5

Accessories (1)



Type of accessory	Connecting cable Controller / Extension module		
Length of cable	0.04 m	0.3 m	1 m
References	LTMCC004	LU9R03	LU9R10



Type of accessory	Connecting cable Controller / Display	Connection kit PC serial port
Length of cable	2.5 m	-
References	XBTZ938	VW3A8106

(1) For other connection accessories, see www.schneider-electric.com



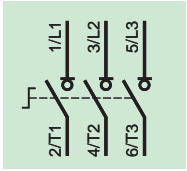
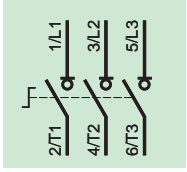
For use with contactor	LC1-D or LC1-F	LC1-D or LC1-F
Motor current	No limit	1...5 A
Basic reference, to be completed	LT3-S	LT6-P0M0*5FM

3-pole multifunction protection relays		
Operational current	A	0.2...1. 1...5
		LT6-P0M005FM
		5...25
		LT6-P0M025FM

Protection units with automatic reset with thermistor short-circuit detection without fault memory			
Connection	Voltage	Output contact	Reference
by cage connectors	~ 50/60 Hz	115 V	N/C
		230 V	N/C
	---	24 V	N/C
On front panel: fault and voltage signalling indicator			
	~ 50/60 Hz	115/230 V	N/C + N/O
	---	24/48 V	N/C + N/O
	~ 50/60 Hz or ---	24...230 V	2 C/O
			LT3-SA00M
			LT3-SA00ED
			LT3-SA00MW
with fault memory			
On front panel: fault and voltage signalling indicator, Test and Reset button			
	~ 50/60 Hz	400 V	N/C + N/O
		24/48 V	N/C + N/O
		115/230 V	N/C + N/O
	---	24/48 V	N/C + N/O
	~ 50/60 Hz1 or ---	24...230 V	2 C/O
			LT3-SM00V
			LT3-SM00E
			LT3-SM00M
			LT3-SM00ED
			LT3-SM00MW

Accessories									
PTC thermistor probes for LT3 and LT6 relays									
Normal operating temperature (NOT)	90 °C	110 °C	120 °C	130 °C	140 °C	150 °C	160 °C	170 °C	
Integrated triple probes	DA1-TT090	DA1-TT110	DA1-TT120	DA1-TT130	DA1-TT140	DA1-TT150	DA1-TT160	DA1-TT170	
Normal operating temperature (NOT)		60 °C	70 °C	80 °C	90 °C	100 °C			
Surface probes	DA1-TS060	DA1-TS070	DA1-TS080	DA1-TS090	DA1-TS100				
Configuration software for LT6 relays									
Languages: English, French, German, Italian, Spanish	Kit ⁽¹⁾					Diskette			
For use with all relay sizes	LA9-P620	LA9-P621							
Current transformers for LT6 relays									
Operational current	primary	100 A	400 A			800 A			
	secondary	1 A	1 A			1 A			
		LT6-CT1001	LT6-CT4001			LT6-CT8001			

(1) Comprising 2 x 3" 1/2 diskettes, 1 x 2 m connection cable with 2 SUB-D 9-pin connectors (female-female)







D.O.L. starters GV2-DM and GV2-DP

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3 (kW)				Setting range of thermal trips	Fixed magnetic tripping current	For customer assembly		Non-reversing	Reversing
400/415 V	440 V	500 V				Motor circuit-breaker	Contactor	Factory assembled	Basic reference, to be completed with code indicating control circuit voltage
0.06	0.06	-	0.16...0.25	2.4		GV2-ME02 GV2-P02	LC1-D09** LC1-D09**	GV2-DM102** GV2-DP102**	GV2-DM202** GV2-DP202**
0.09	0.09	-	0.25...0.40	5		GV2-ME03 GV2-P03	LC1-D09** LC1-D09**	GV2-DM103** GV2-DP103**	GV2-DM203** GV2-DP203**
-	0.12	-							
0.12	-	-	0.40...0.63	8		GV2-ME04 GV2-P04	LC1-D09** LC1-D09**	GV2-DM104** GV2-DP104**	GV2-DM204** GV2-DP204**
0.18	0.18	-							
0.25	0.25	-	0.63...1	13		GV2-ME05 GV2-P05	LC1-D09** LC1-D09**	GV2-DM105** GV2-DP105**	GV2-DM205** GV2-DP205**
0.37	0.37	-							
-	-	0.37	1...1.6	22.5		GV2-ME06 GV2-P06	LC1-D09** LC1-D09**	GV2-DM106** GV2-DP106**	GV2-DM206** GV2-DP206**
0.55	0.55	0.55							
-	-	0.75							
0.75	0.75	-	1.6...2.5	33.5		GV2-ME07 GV2-P07	LC1-D09** LC1-D09**	GV2-DM107** GV2-DP107**	GV2-DM207** GV2-DP207**
-	1.1	1.1							
1.1	-	1.5	2.5...4	51		GV2-ME08 GV2-P08	LC1-D09** LC1-D09**	GV2-DM108** GV2-DP108**	GV2-DM208** GV2-DP208**
1.5	1.5	2.2							
2.2	2.2	-	4...6.3	78		GV2-ME10 GV2-P10	LC1-D09** LC1-D09**	GV2-DM110** GV2-DP110**	GV2-DM210** GV2-DP210**
-	3	3							
3	-	4	6...10	138		GV2-ME14 GV2-P14	LC1-D09** LC1-D09**	GV2-DM114** GV2-DP114**	GV2-DM214** GV2-DP214**
4	4	5.5							
5.5	5.5	7.5	9...14	170		GV2-ME16 GV2-P16	LC1-D12** LC1-D25**	GV2-DM116** GV2-DP116**	GV2-DM216** GV2-DP216**
-	7.5	9							
7.5	9	-	13...18	223		GV2-ME20 GV2-P20	LC1-D18** LC1-D25**	GV2-DM120** GV2-DP120**	GV2-DM220** GV2-DP220**
9	11	11	17...23	327		GV2-ME21 GV2-P21	LC1-D25** LC1-D25**	GV2-DM121** GV2-DP121**	GV2-DM221** GV2-DP221**
11	-	15	20...25	327		GV2-ME22 GV2-P22	LC1-D25** LC1-D25**	GV2-DM122** GV2-DP122**	GV2-DM222** GV2-DP222**
15	15	18.5	24...32	416		GV2-ME32 GV2-P32	LC1-D32** LC1-D32**	GV2-DM132** GV2-DP132**	GV2-DM232** GV2-DP232**

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

Volts	24	220	230
~ 50...400 Hz	B7	M7	P7
--- ⁽¹⁾	BD		-

(1) Low consumption coil (1.5 W), wide range (0.7...1.3 Uc) with integral suppression device as standard.

Starter-controller for 3-phase motors STANDARD motor starter



Function characteristics, LUB... + LUCA...	Maximum motor power < 400/415 V	Power base		Standard control unit	
		Non-reversing	Reversing (1)	Class 10 (2)	Setting range
<ul style="list-style-type: none"> - Thermal overload protection against: short-circuit, overcurrent, phase failure or imbalance, insulation breaks (equipment only). - Manual reset following thermal fault. 	0.09 kW	LUB12	LU2B12●●	LUCA6X●●	0.15...0.6 A
	0.25 kW	LUB12	LU2B12●●	LUCA1X●●	0.35...1.4 A
	1.5 kW	LUB12	LU2B12●●	LUCA05●●	1.25...5 A
	5.5 kW	LUB12	LU2B12●●	LUCA12●●	3...12 A
	7.5 kW	LUB32	LU2B32●●	LUCA18●●	4.5...18 A
	15 kW	LUB32	LU2B32●●	LUCA32●●	8...32 A

ADVANCED motor starter



Function characteristics, LUB... + LUCA...	Maximum motor power < 400/415 V	Power base		Advanced control unit		Setting range
		Non-reversing	Reversing (1)	Class 10 (2) (3)	Class 20 (2)	
<ul style="list-style-type: none"> - Thermal overload protection against: short-circuit, overcurrent, phase failure or imbalance, insulation breaks (equipment only). - Manual reset following thermal fault. - Thermal overload test function. 	0.09 kW	LUB12	LU2B12●●	LUCB6X●●	LUCD6X●●	0.15...0.6 A
	0.25 kW	LUB12	LU2B12●●	LUCB1X●●	LUCD1X●●	0.35...1.4 A
	1.5 kW	LUB12	LU2B12●●	LUCB05●●	LUCD05●●	1.25...5 A
	5.5 kW	LUB12	LU2B12●●	LUCB12●●	LUCD12●●	3...12 A
	7.5 kW	LUB32	LU2B32●●	LUCB18●●	LUCD18●●	4.5...18 A
	15 kW	LUB32	LU2B32●●	LUCB32●●	LUCD32●●	8...32 A

(3) For single-phase-motors, replace LUCB●●●● by LUC●●●●.

MULTIFUNCTION motor starter



Function characteristics, LUB... + LUCA...	Maximum motor power < 400/415 V	Power base		Multifunction control unit	
		Non-reversing	Reversing (1)	Class 5 to 30	Setting range
<ul style="list-style-type: none"> - Thermal overload protection against: short-circuit, overcurrent, phase failure or imbalance, insulation breaks (equipment only). - Manual, automatic or remote reset, - Thermal overload test function, - Overtorque and no-load running, alarm, - Motor operation log, - Motor parameters display on LUCM..., PC or HMI, - Integrated Modbus communication. 	0.09 kW	LUB12	LU2B12●●	LUCM6XBL	0.15...0.6 A
	0.25 kW	LUB12	LU2B12●●	LUCM1XBL	0.35...1.4 A
	1.5 kW	LUB12	LU2B12●●	LUCM05BL	1.25...5 A
	5.5 kW	LUB12	LU2B12●●	LUCM12BL	3...12 A
	7.5 kW	LUB32	LU2B32●●	LUCM18BL	4.5...18 A
	15 kW	LUB32	LU2B32●●	LUCM32BL	8...32 A

(1) Complete the references of the power bases according to the following table.

Example: LU2B12

●●

(2) Complete the references of the control units according to the following table.

Example: LUCA/B/D/M6X

●●

Standard control circuit voltages

24 V DC	BL
24 V AC	B
48 V AC / 48...72 V DC	ES
110...240 V AC / 110...220 V DC	FU



Type of optional function	Thermal overload alarm	Thermal fault signalling			Motor load indication
Compatible with LUCA	NO	NO	NO	NO	NO
Compatible with LUCL	NO	NO	NO	NO	NO
Compatible with LUCB, LUCD	YES	YES	YES	YES	YES
Compatible with LUCM	NO	NO	NO	NO	YES
Output signal	1 NO	1 NO +1 NC	1 NC	1 NO	4...20 mA
Reset	NA	Manual	Automatic or remote		NA
References	LUFW10	LUFDH11	LUFDA01	LUFDA10	LUFV2

Communication modules



Type of communication	Modbus	Advantys STB	Profibus DP	CANopen	DeviceNet	AS-Interface	Parallel wiring
Only compatible with 24 V DC control units LUCA..BL, LUCB..BL, LUCD..BL, LUCM..BL	YES	YES	YES	YES	YES	YES	YES
Transfer speed	19.2 Kbps	Dpg. on NIM (1)	9,6...12 Mbps	20 K...1 Mbps	125...500 Kbaud	167 Kbps	NA
Number of slaves	31 per Modbus master	Dpg. on Network Interface Module	125 per Profibus DP module	128 per CANopen module	63 per DeviceNet module	62 per AS-Interface master	8 per LU9GC02 splitter box
Pre-wired coil connection (A1 A2)	LU9BN11C, LU9MRC	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9BN11C, LU9MRC	LU9Rxx
Connecting cable to PC	VW3 A8 306 R●●	LU9RCD●●, LU9RDD●●	TSXPBSCA●●	TSXCANC●●	DeviceNet standard	XZCG0142	TSXCDP●●●
References	LUFC033	LULC15	LULC07	LULC08	LULC09	ASILUFC51	LUFC00

(1) Network Interface Module.

Information carried by the Modbus, Advantys STB or CANopen bus

Type of control unit	LUCA●●BL	LUCB●●BL, LUCD●●BL	LUCM●●BL
Start and Stop commands	X	X	X
Starter status (ready, running, fault)	X	X	X
Thermal alarm		X	X
Remote reset via the bus		X	X
Indication of motor load		X	X
Signalling and fault differentiation		X	X
Alarms (overcurrent, ...)			X
Remote programming and monitoring of all the functions			X
"Log" function			X
Monitoring function			X

Contact blocks



Type of contact block	Add-on	Auxiliary				
Signalling contacts	of any fault	NC (95-96)	NO (97-98)	–	–	–
	position of control handle	NO (17-18)	NO (17-18)	–	–	–
2 auxiliary contacts module		–	–	NO (33-34)	NC (31-32)	NC (31-32)
				NO (43-44)	NO (43-44)	NC (41-42)
References	Screw clamp terminals	LUA1C11	LUA1C20	LUFN20	LUFN11	LUFN02
	Without connections	LUA1C110	LUA1C200	–	–	–

TeSys GV3L
Circuit-breakers

TeSys LC1D
Contactor



=



+



Function characteristics

- Thermal overload protection against: short-circuit, overcurrent, phase failure or imbalance, insulation breaks (equipment only).
- Manual, automatic or remote reset,
- Thermal overload test function,
- Overtorque and no-load running, alarm,
- Motor operation log,
- Motor parameters display on LUCM..., PC or HMI,
- Integrated Modbus communication.

Control base for use with contactors

TeSys D (LC1D..)

LUTM10BL

TeSys F (LC1F..)

LUTM20BL

Multifunction control unit

Class 5 to 35

LUCMT1BL

ADVANCED protection



Function characteristics

- Thermal overload protection against: short-circuit, overcurrent, phase failure or imbalance, insulation breaks (equipment only).
- Manual reset following thermal fault.
- Thermal overload test function.

Control base for use with contactors

TeSys D (LC1D..)

LUTM10BL

TeSys F (LC1F..)

LUTM20BL

Advanced control unit

Class 10

LUCBT1BL

Class 20

LUCDT1BL

Current transformers

Type of transformer							
Supply voltage		24 V DC					
Operating current	Primary	30 A	50 A	100 A	200 A	400 A	800 A
	Secondary	1 A					
References		LUTC0301	LUTC0501	LUTC01001	LUTC02001	LUTC04001	LUTC05001

Above 32 A, the TeSys U controller provides a motor starter management system solution identical to that provided by the TeSys U starter-controller.

Used in conjunction with a short-circuit protection device and a contactor, it provides a motor starter whose functions are the same as those of a TeSys U starter-controller and, in particular, provides the following functions: overload protection, motor starter control and application monitoring.

It comprises a control unit, whose adjustment range is compatible with the secondary of current transformers, and a control base that also enables the fitting of a function module or communication module.

It requires a 24 V DC external power supply.



Type of optional function	Thermal overload alarm	Motor load indication
Compatible with LUCA	NO	NO
Compatible with LUCL	NO	NO
Compatible with LUCB, LUCD	YES	YES
Compatible with LUCM	NO	YES
Output signal	1 NO	4...20 mA
Reset	NA	NA
References	LUFW10	LUFV2

Communication modules



Type of communication	Modbus	Advantys STB	CANopen	DeviceNet	Parallele wiring
Only compatible with 24 V DC control units LUCA..BL, LUCB..BL, LUCD..BL, LUCM..BL	YES	YES	YES	YES	YES
Transfer speed	19.2 Kbps	Dpg. on NIM (1)	20 K...1 Mbps	125...500 Kbaud	NA
Number of slaves	31 per Modbus master	Dpg. on Network Interface Module	128 per CANopen module	63 per DeviceNet module	8 per LU9GC02 splitter box
Pre-wired coil connection (A1 A2)	LU9BN11C, LU9MRC	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9Rxx
Connecting cable to PC	VW3 A8 306 R●● LU9RDD●●	LU9RCD●●,	TSXCANC●●	DeviceNet standard	TSXCDP●●●
References	LUFC033	LULC15	LULC08	LULC09	LUFC00

Information carried by the Modbus, Advantys STB or CANopen bus

Type of control unit	LUCBT1BL, LUCDT1BL	LUCMT1BL
Start and Stop commands	X	X
Starter status (ready, running, fault)	X	X
Thermal alarm	X	X
Remote reset via the bus	X	X
Indication of motor load	X	X
Signalling and fault differentiation	X	X
Alarms (overcurrent, ...)		X
Remote programming and monitoring of all the functions		X
"Log" function		X
Monitoring function		X



Starters

D.O.L.

■ standard

Standard power ratings of 3-phase motors in category AC3 400/415 V		4...37 kW	0.06...37 kW	0.55...30 kW	0.37...5.5 kW	0.25...45 kW
Starters	manual	●	●	●	-	-
	auto	-	-	-	●	●
Isolating device	switch-disconnector-fuse	●	-	-	-	-
	circuit-breaker	-	●	●	●	-
	fuse carrier	-	-	-	-	-
Protection	short-circuit	-	●	●	●	-
	overload	-	●	-	●	●
Communication		-	-	-	-	-
Basic reference	Non reversing	V•F	GV2-ME	GV2-LC	LE1-GVME	LE1-M
		VCFN	GV3-PC	GV-NGC		LE1-D
		V•FX	GV3-CE			
	Reversing					LE2-K
						LE2-D

5



2 stage

	■ safety applications			■ AS-i bus		standard star-delta	
2.2...45 kW	0.06...11 kW	0.06...9 kW	0.06...9 kW	0.06...5.5 kW	5.5...132 kW	7.5...75 kW	
-	●	-	-	-	-	-	
●	-	●	●	●	●	●	
-	-	●	-	-	-	-	
-	●	●	●	●	-	-	
●	-	-	-	-	-	●	
●	●	●	●	●	-	●	
●	●	●	●	●	●	●	
-	-	-	-	●	-	-	
LE4-K	GV2-ME	LG1-K	LG7-K	LF1-M	LE3-K	LE6-D	
LE4-D		LG1-D	LG7-D	LF1-P	LE3-D	LE3-D	
			LJ7-K	LF7-P	LE3-F		
LE8-K			LG8-K	LF2-M			
LE8-D			LJ8-K	LF2-P			
LE2-D				LF8-P			

Components Lighting applications (AC5)

Sodium vapour lamps															
low pressure															
	Non corrected							With parallel compensation							
P (W)	3-	55	90	135	150	180	200	35	55	90	135	150	180	200	
IB (A)	1.2	1.6	2.4	3.1	3.2	3.3	3.4	0.3	0.4	0.6	0.9	1	1.2	1.3	
C (µF)	-	-	-	-	-	-	-	17	17	25	36	36	36	36	LC1-
Max. number of lamps	6	5	3	2	2	2	2	-	-	-	-	-	-	-	K09
accordint to P (W), per contactor	10	7	5	3	3	3	3	40	30	-	-	-	-	-	D09, D12
	12	9	6	4	4	4	4	50	37	25	-	-	-	-	D18
	15	11	7	6	5	5	5	63	47	31	21	19	15	14	D25
	21	16	10	8	8	7	7	86	65	43	28	26	21	20	D32, D38
	27	20	13	10	10	10	9	110	82	55	36	33	27	25	D40
	35	26	17	13	13	12	12	140	105	70	46	42	35	32	D50, D65
	50	37	25	19	18	18	17	200	150	100	66	60	50	46	D80, D95
	100	75	50	38	36	36	34	400	300	200	132	120	100	92	D115, D150
	140	104	70	54	52	50	48	560	420	280	186	168	140	128	F185
	152	114	76	58	56	54	54	606	454	302	202	182	152	140	F225
	174	130	88	68	66	64	62	700	524	350	232	210	174	162	F265
	198	148	98	76	74	72	70	792	594	396	264	238	198	182	F330
	250	188	124	96	94	90	88	1002	752	502	334	300	250	252	F400
	338	254	168	130	126	122	118	1352	1014	676	450	406	338	312	F500
	496	372	248	192	186	180	174	1982	1488	992	660	594	496	458	F600, F800
high pressure															
P (W)	150	250	400	700	1000			150	250	400	700	1000			
IB (A)	1.9	3.2	5	8.8	12.4			0.84	1.4	2.2	3.9	5.5			
C (µF)	-	-	-	-	-			20	32	48	96	120			LC1-
Max. number of lamps	4	2	1	-	-			-	-	-	-	-			K09
accordint to P (W), per contactor	6	3	2	1	-			-	-	-	-	-			D09, D12
	7	4	3	1	1			17	-	-	-	-			D18
	10	5	3	2	1			22	13	8	-	-			D25
	13	8	5	2	2			30	18	11	6	-			D32, D38
	17	10	6	3	2			39	23	15	8	6			D40
	22	13	8	4	3			50	30	19	10	7			D50, D65
	31	18	12	6	4			71	42	27	15	10			D80, D95
	62	36	24	12	8			142	84	54	30	20			D115, D150
	88	52	34	18	14			200	120	76	42	30			F185
	96	56	36	20	16			216	130	82	46	32			F225
	110	66	42	24	18			250	150	94	54	38			F265
	124	74	48	26	20			282	170	108	60	42			F330
	158	94	60	34	24			358	214	136	76	54			F400
	214	126	80	46	32			482	290	184	104	74			F500
	312	186	118	68	48			708	424	270	152	108			F630, F800
Metal iodine vapour lamps															
P (W)	250	400	1000	2000				250	400	1000	2000				
IB (A)	2.5	3.6	9.5	20				1.4	2	5.3	11.2				
C (µF)	-	-	-	-				32	32	64	140				LC1-
Max. number of lamps	3	2	-	-				-	-	-	-				K09
accordint to P (W), per contactor	4	3	1	-				-	-	-	-				D09, D12
	6	4	1	-				-	-	-	-				D18
	7	5	2	-				13	9	-	-				D25
	10	7	2	1				18	13	4	-				D32, D38
	13	9	3	1				23	16	6	-				D40
	16	11	4	2				30	21	7	-				D50, D65
	24	16	6	3				42	30	11	5				D80, D95
	48	32	12	6				84	60	22	10				D115, D150
	66	46	18	8				120	84	32	14				F185
	72	50	20	10				130	90	34	16				F225
	84	58	22	12				150	104	40	18				F265
	94	66	24	14				170	118	44	20				F330
	120	84	32	16				214	150	56	26				F400
	162	112	42	20				290	202	76	36				F500
	238	164	62	30				424	298	112	52				F630, F800

Incandescent and halogen lamps

P (W)	60	75	100	150	200	300	500	750	1000	
IB (A)	0.27	0.34	0.45	0.68	0.91	1.40	2.30	3.40	4.60	LC1-
Max. number of lamps	35	28	21	14	10	6	4	2	2	K09
accordint to P (W), per contactor	59	47	35	23	17	11	7	4	3	D09, D12
	77	61	46	30	23	15	9	6	4	D18
	92	73	55	36	27	18	11	7	5	D25
	129	103	77	51	38	25	15	10	7	D32, D38
	163	129	97	64	48	31	19	13	9	D40
	207	164	124	82	62	40	24	16	12	D50, D65
	296	235	177	117	88	57	34	23	17	D80, D95
	430	340	256	170	126	82	50	34	24	D115
	466	370	280	184	138	90	54	36	26	D150
	710	564	426	282	210	136	82	56	40	F185
	770	610	462	304	228	148	90	60	44	F225
	888	704	532	352	262	170	104	70	52	F265
	1006	800	604	400	298	194	118	80	58	F330
	1274	1010	764	504	378	244	148	100	74	F400
	1718	1364	1030	682	508	330	200	136	100	F500
	2328	1850	1396	924	690	448	272	184	136	F600
	2776	2204	1666	1102	824	534	326	220	162	F800

Fluorescent lamps with starter single fitting

	Non-corrected					With parallel correction					
	20	40	65	80	110	20	40	65	80	110	
P (W)	0.39	0.45	0.70	0.80	1.2	0.17	0.26	0.42	0.52	0.72	
IB (A)	-	-	-	-	-	5	5	7	7	16	LC1-
C (µF)	24	21	13	12	8	56	36	22	18	-	K09
Max. number of lamps	41	35	22	20	13	94	61	38	30	22	D09, D12
accordint to P (W), per contactor	53	46	30	26	17	123	80	50	40	29	D18
	66	57	37	32	21	152	100	61	50	36	D25
	89	77	50	43	29	205	134	83	67	48	D32, D38
	112	97	62	55	36	258	169	104	84	61	D40
	143	124	80	70	46	329	215	133	107	77	D50, D65
	205	177	114	100	66	470	367	190	153	111	D80, D95
	410	354	228	200	132	940	614	380	306	222	D115, D150
	492	426	274	240	160	1128	738	456	368	266	F185
	532	462	296	260	172	1224	800	490	400	288	F225
	614	532	342	300	200	1412	922	570	462	332	F265
	696	604	388	340	226	1600	1046	648	522	378	F330
	882	764	490	430	286	2024	1322	818	662	478	F400
	1190	1030	662	580	386	2728	1724	1104	892	644	F500
	1612	1398	698	786	524	3700	2418	1498	1210	874	F630, F800

twin fitting

P (W)	2x20	2x40	2x65	2x80	2x110	2x20	2x40	2x65	2x80	2x110	
IB (A)	2x0.22	2x0.41	2x0.67	2x0.82	2x1.1	2x0.13	2x0.24	2x0.39	2x0.48	2x0.65	LC1-
Max. number of lamps	2x21	2x11	2x7	2x5	2x4	2x36	2x20	2x12	2x10	2x7	K09
accordint to P (W), per contactor	2x36	2x18	2x10	2x8	2x6	2x60	2x32	2x20	2x16	2x12	D09, D12
	2x46	2x24	2x14	2x12	2x8	2x80	2x42	2x26	2x20	2x16	D18
	2x58	2x30	2x18	2x14	2x10	2x100	2x54	2x32	2x26	2x20	D25
	2x78	2x42	2x26	2x20	2x14	2x134	2x72	2x44	2x36	2x26	D32, D38
	2x100	2x52	2x32	2x26	2x18	2x168	2x90	2x56	2x44	2x32	D40
	2x126	2x68	2x40	2x34	2x24	2x214	2x116	2x70	2x58	2x42	D50, D65
	2x180	2x96	2x58	2x48	2x36	2x306	2x166	2x102	2x82	2x60	D80, D95
	2x360	2x194	2x118	2x96	2x72	2x614	2x332	2x204	2x166	2x122	D115, D150
	2x436	2x234	2x142	2x116	2x86	2x738	2x400	2x246	2x200	2x148	F185
	2x472	2x254	2x154	2x126	2x94	2x800	2x432	2x266	2x216	2x160	F225
	2x544	2x292	2x178	2x146	2x108	2x922	2x500	2x308	2x250	2x184	F265
	2x618	2x332	2x202	2x166	2x124	2x1046	2x566	2x348	2x282	2x208	F330
	2x782	2x420	2x256	2x210	2x156	2x1322	2x716	2x440	2x358	2x264	F400
	2x1054	2x566	2x346	2x282	2x210	2x1784	2x966	2x594	2x482	2x356	F500
	2x1430	2x766	2x468	2x384	2x286	2x2418	2x1310	2x806	2x654	2x484	F630, F800

On-load capacitor switching

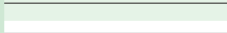
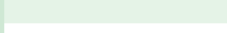
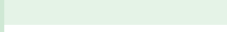
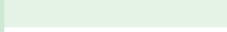
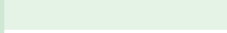
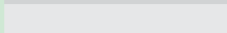
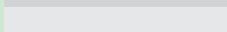
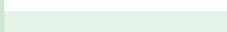
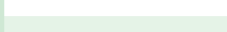
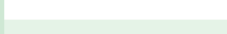
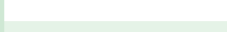
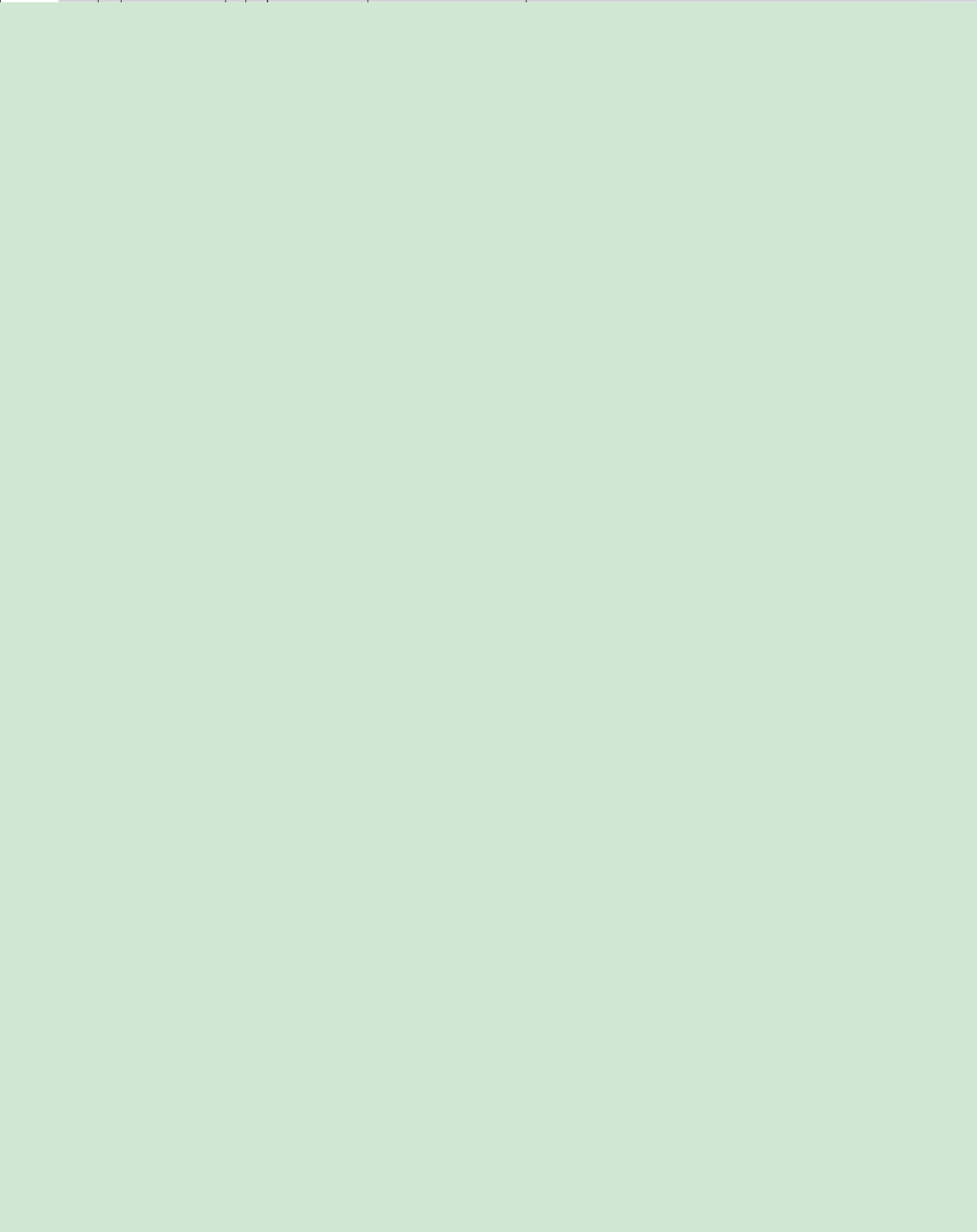
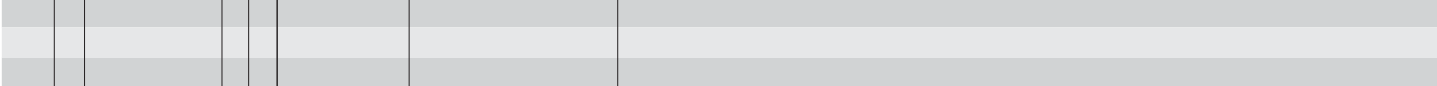
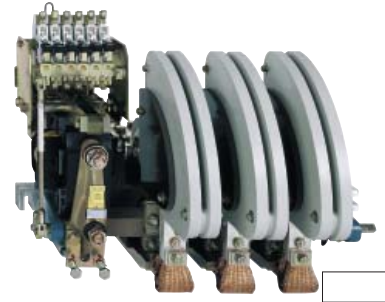
for bar-mounted contactors, a.c. control circuit

Rated operational voltage (V)	Without damping resistor				With damping resistor			
	Number of poles	Max. operational current (A)		Basic reference, to be completed	Number of poles	Max. operational current (A)		Basic reference, to be completed
		50 Hz	180 Hz			50 Hz	180 Hz	
1300	1	80	60	CE5-FB11•11	1 + 1 staggered pole	80	60	CE6-FB12•11
		160	125	CE5-GB11•11		160	125	CE6-GB12•11
		240	190	CE5-HB11•11		240	190	CE6-HB12•11
	2	80x2	60x2	CE5-FB21•11	2 + 2 staggered poles			
		160x2	125x2	CE5-GB21•11				
		240x2	190x2	CE5-HB21•11		240x2	190x2	CE6-HB22•11
3	80x3	60x3	CE5-FB31•11	1 + 2 staggered poles				
	160x3	125x3	CE5-GB31•11					
	240x3	190x3	CE5-HB31•11					
1500	2 poles in series	160	125	CE5-GB12•11		160	125	CE6-GB13•11
		280	220	CE5-HB12•11		280	220	CE6-HB13•11
	2 x 2 poles in series	280x2	220x2	CE5-HB22•11				
2000	2 poles in series	240	190	CS5-HB12•11	1 + 2 staggered poles	240	190	CS6-HB13•11
	2 x 2 poles in series	240x2	190x2	CS5-HB22•11				
3000	3 poles in series	280	220	CS5-HB13•11	1 + 3 staggered poles	280	220	CS6-HB14•11

Standard control circuit voltages

~ supply

Volts	110	125	127	200	220	240	250	380	415	440	500
50 Hz (coil LX1)	F	-	G	L	M	U	-	Q	N	R	S





Maximum operational current (device in open air)

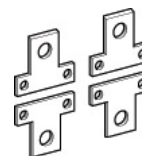
Contactors			LC1-/LP1- K09	LC1-/LP1- K12	LC1- D09	LC1- DT20	LC1- D12	LC1- D18	LC1- D25	LC1- D32	LC1- D38	LC1- D40A
■ 3-pole												
■ 4-pole												
LC2- changeover contactor pairs, factory assembled				K09004	K12004		DT20	DT25	DT32	DT40		DT60A
Operational current in AC-1, in A, ≤ 40° C	A		20	20	25	20	25	32	40	50	50	60
according to ambient temperature ≤ 60° C	A		20	20	25	20	25	32	40	50	50	60
	≤ 70° C											
Maximum operational power ≤ 60° C	220/230 V	kW	8	8	9	8	9	11	14	18	18	21
	240 V	kW	8	8	9	8	9	12	15	19	19	23
	380/400 V	kW	14	14	15	14	15	20	25	31	31	37
	415 V	kW	14	14	17	14	17	21	27	34	34	41
	440 V	kW	15	15	18	15	18	23	29	36	36	43
	500 V	kW	17	17	20	17	20	23	33	41	41	49
	660/690 V	kW	22	22	27	22	27	34	43	54	54	65

5

Increase in operational current by parallel connection of poles

Apply the following coefficients to the currents or powers above; these coefficients take into account an often unbalanced distribution of current between the poles:

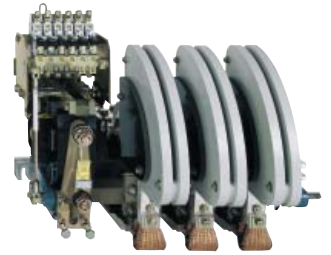
- 2 poles in parallel K = 1.6
- 3 poles in parallel K = 2.25
- 4 poles in parallel K = 2.8



Connection accessories for heating applications

Paralleling links for:		Reference
■ TeSys K	2 poles	with screw clamp terminals LA9-E01
	4 poles	with screw clamp terminals LA9-E02
■ TeSys D	2 poles	D09...D38 LA9-D2561
		DT20 and DT25 (4P) LA9-D1261
		DT32...DT40 (4P) LAD-D96061
	3 poles	D40A...D65A LAD-9P32
		D80 LA9-D80961
		D09...D38 LAD-9P3 (1)
4 poles	D40A...D65A LAD-9P33	
	D80 LA9-D80962	
	DT20...DT25 LA9-D1263	
	D40A...D65A 2 x LAD-9P33	
■ TeSys F	2 to 2	D80 LA9-D80963
		LC1-F1154 LA9-FF602
		LC1-F1504, F1854 LA9-FG602
		LC1-F2254, F2654, F3304, F4004 LA9-FH602
		LC1-F5004 LA9-FK602
		LC1-F6304 LA9-FL602

(1) Link that can be split, allowing parallel connection of 2 poles



	LC1-D50A	LC1-D65A	LC1-D80	LC1-D115	LC1-F185	LC1-F225	LC1-F265	LC1-F330	LC1-F400	LC1-F500	LC1-F630	LC1-F780	LC1-F800	LC1-BL	LC1-BM	LC1-BP	LC1-BR
		DT80A	D80004	D115004	F1854	F2254	F2654										
	80	80	125	250	275	315	350	400	500	700	1000	1600	1000	800	1250	2000	2750
	80	80	125	200	275	280	300	360	430	580	850	1350	850	700	1100	1750	2400
					180	200	250	290	340	500	700	1100	700	600	900	1500	2000
	29	29	45	80	90	100	120	145	170	240	350	550	350	300	425	700	1000
	31	31	49	83	100	110	125	160	180	255	370	570	370	330	450	800	1100
	50	50	78	135	165	175	210	250	300	430	600	950	600	500	800	1200	1600
	54	54	85	140	170	185	220	260	310	445	630	1000	630	525	825	1250	1700
	58	58	90	150	180	200	230	290	330	370	670	1050	670	550	850	1400	2000
	65	65	102	170	200	220	270	320	380	660	750	1200	750	600	900	1500	2100
	86	86	135	235	280	300	370	400	530	740	1000	1650	1000	800	1100	1900	2700

Mounting accessories for changeover contactor pairs

(for customer assembly)

Contactor type	Set of power connections	Mechanical interlock	Contactor type	Set of power connections	Mechanical interlock
2 contactors, vertically mounted					
■ 4-pole changeover pairs with locking device components					
LC1-B		EZ2-LB0601			
2 identical contactors, horizontally mounted					
■ with electrical interlocking kit for the contactors					
LC1-DT20...DT40	LAD-T9R1V ⁽¹⁾				
■ mechanical interlock with integral electrical interlocking					
LP1-D80004	LA9-D8070	LA9-D8002	LC1-D115004	LA9-D11570	LA9-D11502
■ without electrical interlocking ⁽²⁾					
LC1-DT20...DT32	LAD-T9R1 ⁽²⁾		LC1-DT40 and DT60	LAD-T9R2 ⁽²⁾	
LP1-D80004	LA9-D8070	LA9-D80978			
2 contactors of identical rating, horizontally mounted					
■ 4-pole changeover pairs					
LC1-F1154	LA9-FF977	LA9-FF970	LC1-F1504	LA9-F15077	LA9-FF970
LC1-F1854	LA9-FG977	LA9-FG970	LC1-F2254	LA9-F22577	LA9-FG970
LC1-F2654	LA9-FH977	LA9-FJ970	LC1-F3304	LA9-FJ977	LA9-FJ970
LC1-F4004	LA9-FJ977	LA9-FJ970	LC1-F5004	LA9-FK977	LA9-FJ970
LC1-F6304	LA9-FL977	LA9-FL970			
■ 3-pole changeover pairs with electrical interlocking					
LC1-D115 and D150	LA9-D11571	LA9-D11502			
reversers assembled using 2 contactors, vertically mounted					
■ 4-pole changeover pairs using contactors of identical rating ⁽³⁾			■ 3 or 4-pole changeover pairs using contactors of different rating		
			At bottom	At top	
LC1-F1154 or F1505	(3)	LA9-FF4F	LC1-F115 or F1154	LC1-F185 or F1854	LA9-FG4F
LC1-F1854	(3)	LA9-FG4G	or LC1-F150 or F1504	LC1-F225 or F2254	LA9-FG4F
LC1-F2254	(3)	LA9-FG4G		LC1-F265 or F2654	LA9-FH4F
LC1-F2654 or F3304	(3)	LA9-FH4H		LC1-F300 or F3304	LA9-FH4F
LC1-F4004	(3)	LA9-FJ4J		LC1-F400 or F4004	LA9-FJ4F
LC1-F5004	(3)	LA9-FK4K		LC1-F500 or F5004	LA9-FK4F
LC1-F6304	(3)	LA9-FL4L		LC1-F630, F6304 or F800	LA9-FL4F
LC1-F7804	(4)	LA9-FX971 ⁽⁴⁾	LC1-F185 or F1854	LC1-F265 or F2654	LA9-FH4G
			or LC1-F225 or F2254	LC1-F330 or F3304	LA9-FH4G
				LC1-F400 or F4004	LA9-FJ4G
				LC1-F500 or F5004	LA9-FK4G
				LC1-F630, F6304 or F800	LA9-FL4G
			LC1-F265 or F2654	LC1-F400 or F4004	LA9-FJ4H
			or LC1-F330 or F3304	LC1-F500 or F5004	LA9-FK4H
				LC1-F630, F6304 or F800	LA9-FL4H
			LC1-F400 or F4004	LC1-F500 or F5004	LA9-FK4J
				LC1-F630, F6304 or F800	LA9-FL4J
			LC1-F500 or F5004	LC1-F630, F6304 or F800	LA9-FL4K

(1) Including mechanical interlock, (2) Order separately 2 auxiliary contact blocks LAD-N*1 to obtain electrical interlocking between the two contactors, (3) Power connections to be made by the customer. (4) Double mechanical interlock mechanism with 2 interlock connecting rods and 4 power connecting links.

Large green-lined area for notes, consisting of a solid green header bar and a series of horizontal green lines on a white background.