Low Voltage

EasyPact TVS

4 Pole Contactors from 16A to 125A

Catalog
2014

Schneider Electric™

Schneider Electric™ Worldwide

24
billion sales in 2013

43
% of sales in new economies

150000+
people in 100+ countries

394
Rank in Fortune 500 ranking

4-5%
Revenue devoted to R&D

Schneider Electric™ in India*

19000+
Employees

31
Global Manufacturing Plants

10+
Distribution Centres

1000+
R&D engineers in Bangalore

1
Regional Project & Engineering Centre

EasyPact TVS

Designed for the essential

EasyPact TVS range is the perfect fit between quality, features and price.

A cost-effective offer

> The best price for the performance and quality level you need.
> A maximum of solutions with an optimal number of products.
> Designed to perform the essential starter's functions: control and overload protection.

Simple and intuitive

> Easy to install.
> Covering 80 % of applications.
> With the key accessories to easily build lots of Do-It-Yourself solutions.
> With an intuitive commercial references system: easy to order, easy to understand and easy to remember.

Guaranteed availability

> Available in distribution.
> EasyPact TVS fully benefits from Schneider Electric world wide policies: in terms of standards of production, distribution, quality, availability, services and after-sales support.

EasyPact TVS adds the 4th Dimension...

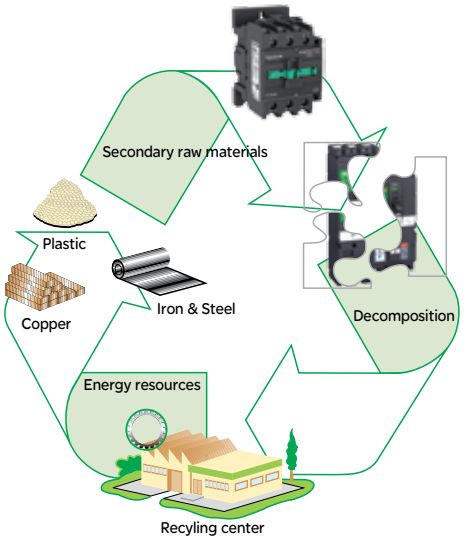
Switching
Protection
Control

Power Continuity +

One Easy Solution for all Power Needs!

- 4 Pole contactors from 16 to 125A AC-1 duty
- Available with 4NO and 2NO+2NC combination main contacts
- Global offer, Conformity to IEC 60947-4-1 & CE marking
- Wide band Coil for all ratings in 220Vac and 415Vac 70% to 120% Uc
- High operational ambient temperature: upto 60°C
- High electrical and mechanical life

EasyPact TVS is part of the Schneider Electric energy efficiency approach.Designed for easy disassembly and recycling at end of life, EasyPact TVS complies with environmental direcctives RoHS* and WEEE**, and with ISO 14001 standards, thanks to non - polluting factories.



EasyPact TVS

The easy choice for simplicity & flexiblity

EasyPact TVS 4-pole contactors from 16A to 125A

Size			1				2			3		4	
Rated Operational current AC-3		A	6	9	12	18	25	32	38	40	65	80	95
Rated operational current AC-1		A	16	20	25	32	40	45	50	60	80	100	125
Rated operational power in AC-3	220/230 V	kW	1.1	2.2	3	4	5.5	7.5	9	11	18.5	22	25
	380/400 V		2.2	4	5.5	7.5	11	15	18.5	18.5	30	37	45
	415/440 V		2.2	4	5.5	9	11	15	18.5	22	37	45	45
	500 V		3	5.5	7.5	10	15	18.5	18.5	22	37	45	55
	660/690 V		3	5.5	7.5	10	15	18.5	18.5	30	37	45	45
Width		mm	45				56			84.5		95.5	
Coil rated operating voltage			24V - 415VAC coil voltages available.Special wide band coil available in 220V and 415V										
Auxiliary built in contact			No built in auxiliary contact										
References (1)			LC1E 0600*	LC1E 0900*	LC1E 1200*	LC1E 1800*	LC1E 2500*	LC1E 3200*	LC1E 3800*	LC1E 4000*	LC1E 6500*	LC1E 8000*	LC1E 9500*

(1) Reference to be completed by adding coil voltage code

Common characteristics

> Contactors compatible with:

LAEN● auxiliary contact blocks (see page 14)

LAETSD time delay auxiliary contact (LC1E2500* onwards) (see page 14)

LAERC● RC switch suppressor (up to 95 A) (see page 13)

LAEM● mechanical inter lock block (see page 13)

*Coil Voltage Code

AC Coil Voltage		24	48	110	220Δ	380	415Δ
LC1E0600*-9500*	50/60Hz	B7	E7	F7	-	Q7	-
	50Hz/Wide band	-		-	M5WB		N5WB

Contactor: how to determine the full commercial reference ?

Example:

LC1E | 32 | 004 | M | 5WB

5WB	50Hz Wide Band
7	50/60Hz
Coil voltage code	220V
Main Contacts	004 4NO 008 2NO+2NC
Rated operational Current (AC-3)	32A (**AC-1: 45A)
Contactor	EasyPact TVS

* Reference to be completed by adding Coil voltage code

** Refer AC-1 current of AC-3 rating In the reference

Δ For 220Vac and 415Vac standard coil with 50/60Hz .Pls contact Regional Sales Office

Example 1: you need a 45A AC-1 duty contactor, 4 NO main contacts, 24 Vac - 50/60Hz coil ⇨ LC1E32004B7

Example 2: you need a 125A AC-1 duty contactor, 2NO+2NC main contacts, 110 Vac - 50/60Hz coil ⇨ LC1E95008F7

Example 3: you need a 100A AC-1 duty contactor, 2NO+2NC main contacts, 415 Vac - 50Hz wide band coil ⇨ LC1E80008N5WB

EasyPact TVS 4-pole contactors
16A to 125A
Power characteristics

Power circuit connections							
Contactor type				LC1E0600*	LC1E0900*	LC1E1200*	LC1E1800*
Number of poles				4			
Rated operational current (Ie) (Ue 415 V)		In AC-3 (θ ≤ 60°C)	A	6	9	12	18
		In AC-1 (θ ≤ 60°C)		16	20	25	32
Rated operational voltage (Ue)		Up to	VAC	690			
Frequency limits		Of the operational current	Hz	50/60			
Conventional thermal current (Ith)		θ ≤ 60°C	A	16	20	25	32
Rated breaking capacity at 440 V		Conforming to IEC 60947	A	48	72	96	144
Rated making capacity at 440 V		Conforming to IEC 60947-4-1	A	60	90	120	180
Permissible short time rating No current flowing for preceding 15 minutes with θ ≤ 40°C		10 s	A	80	105		145
		1 min		45	61		84
		10 min		20	30		40
Maximum permissive current No current flowing for previous 60 minutes, at θ ≤ 40°C		For 10 s	A	–			
Protection by fuses against short-circuits (U 690 VAC)	Without thermal overload relay gG fuse	Type 1	A	12	20	25	35
	With thermal overload relay			For corresponding aM or gG fuse ratings corresponding to the associated LRE● thermal overload relay, please refer the Thermal O/L relay catalogue			
Average impedance per pole		At Ith and 50 Hz	mΩ	2.5			
Power dissipation per pole for the above operational currents		AC-3	W	0.09	0.20	0.36	0.81
		AC-1		1.0	1.6		2.6
Electrical durability		AC-3 (Ue ≤ 440 V)	Million cycles	1.4			1.2
		AC-1 (Ue ≤ 440 V)		0.15		0.3	
Mechanical durability				10			
Power circuit connections							
Connection maximum c.s.a.							
	Flexible cable with cable end	1 conductor	mm²	1...4			
		2 conductors		1...2.5			
	Solid cable without cable end	1 conductor	mm²	1...4			1.5...6
		2 conductors		1...4			1.5...6
	Cable with lug		mm	–			
	Bar	Number of bars		–			
		Bar	mm x mm	–			
	Bolt diameter	1 conductor	mm	–			
Tightening torque		Power circuit connection	N.m	1.2			
Tool				Philips N 2 or Ø6mm flat			

	LC1E2500*	LC1E3200*	LC1E3800*	LC1E4000*	LC1E6500*	LC1E8000*	LC1E9500*
	25	32	38	40	65	80	95
	40	45	50	60	80	100	125
	40	45	50	60	80	100	125
	200	256	304	320	520	640	760
	250	320	380	400	650	800	950
	240	260	310	320	520	640	800
	120	138	150	165	260	320	400
	50	60		72	110	135	
	40	63		80	125	160	
	2.5			1.5	1	0.8	
	1.6	2.0	2.9	2.4	4.2	5.1	7.2
	3.2	5.0		5.4	6.4	9.7	12
		1	0.9				
	0.35						
		8		5		3	
	1...6			2.5...25		4...50	
	1...4			2.5...10		4...16	
				2.5...25		4...50	
				2.5...16		4...50	
	1.5	2.1		5		9	
				Ø8mm flat		Ø8mm flat or Allen key n 4	

EasyPact TVS 4-pole contactors
16A to 125A
Control circuit: coil characteristics

Control circuit: coil characteristics with a.c. supply							
Contactor type					**LC1E0600***	**LC1E0900***	**LC1E1200***	**LC1E1800***
Rated control circuit voltage (Uc) 50/60 Hz				VAC	24,48,110,380 According to the coil voltage code			
Control voltage limits (θ ≤ 55°C)								
	50/60 Hz coils	Operational			0.85...1.1 Uc			
		Drop-out			0.3...0.6 Uc			
Average consumption at 20°C and at Uc								
	∿ 50 Hz coils	Inrush	coil	VA	95			
			cos φ		0.75			
		Sealed	coil	VA	8.5			
			cos φ		0.3			
	∿ 60 Hz coils	Inrush	coil	VA	95			
			cos φ		0.75			
		Sealed	coil	VA	8.5			
			cos φ		0.3			
Heat dissipation				W	2.3			
Operating time		Closing "C"		ms	12...22			
		Opening "O"			4...19			
Maximum operating rate at ambiant temperature 60°C				In operating cycles per hour	1800			
Maximum operating rate at ambiant temperature 55°C					–			
Control circuit connections								
Connection maximum c.s.a.								
	Flexible cable without cable end	1 or 2 conductors		mm²	1...4			
	Flexible cable with cable end	1 conductor		mm²	1...4			
		2 conductors			1...2.5			
	Solid cable without cable end	1 or 2 conductors		mm²	1...4			
Tightening torque				N.m	1.5			
Screwdriver					Philips N 2 - Ø6 mm flat			

Control circuit : Coil characteristic for Wide band a.c. supply							
Contactor Type					**LC1E0600***	**LC1E0900***	**LC1E1200***	**LC1E1800***
Rated control voltage				VAC	220V and 415V			
Control voltage limits (θ ≤ 55°C)								
	50 Hz	Operational			0.7…1.2Uc			
		Drop-out			0.3…0.6Uc			
Average consumption at 20°C and at Uc								
	~50Hz coils (220/415 Vac)	Inrush	coil	VA	68			
			cos φ		0.75			
		Sealed	coil	VA	7.9			
			cos φ		0.3			
Ambient Operating Temperature					-5 to 55˚C			
Operating Time		Closing "C"		ms	12...22			
		Opening "O"			4...19			

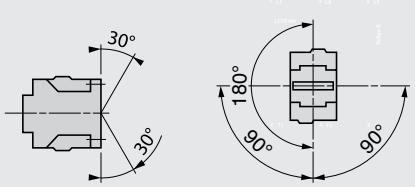
Δ *For values please contact regional sales office*

	LC1E2500*	LC1E3200*	LC1E3800*	LC1E4000*	LC1E6500*	LC1E8000*	LC1E9500*
	95			160		200	
	8.3			15		20	
	95			140		220	
	8.3			13		22	
				6...10			
				20...26		20...35	
				8...12		6...20	
				1200			

				1.2			

	LC1E2500*	LC1E3200*	LC1E3800*	LC1E4000*	LC1E6500*	LC1E8000*	LC1E9500*
		103		Δ			
		8.8		Δ			
				20...26		20...35	
				8...12		6...20	

EasyPact TVS 4-pole contactors
16A to 125A
Environment

Environment					
Contactor type				LC1E0600*...E1800*	LC1E2500*....E3800*
Rated insulation voltage (Ui)		Conforming to IEC 60947-4-1, overvoltage category III, degree of pollution: 3	VAC	690	
Rated impulse withstand voltage (Uimp)		Conforming to IEC 60947	kV	6	
Conforming to standards				IEC 60947-4-1, IEC 60947-5-1	
Degree of protection		Conforming to IEC 60529		IP20	
Protective treatment		Conforming to IEC 60068		"TH"	
Ambiant air temperature around the device		Storage	°C	-60...+80	
		Operation		-5...+55	
		Permissible at UC		-20...+70	
Maximum operating altitude		Without derating (1)	m	3000	
Operating positions		Without derating		±30 in relation to normal vertical mounting plane 	
Flame resistance		Conforming to IEC 60695-2-1	°C	850 C	
Shock resistance (2)		Contactor open		7 gn	6 gn
1/2 sinewave = 11 ms		Contactor closed		10 gn	
Vibration resistance (2)		Contactor open		1.5 gn	
5...300 Hz		Contactor closed		3 gn	

(1) Derating, please contact regional sales office
(2) Without change of contact states, in the most unfavorable direction (coil energised at Ue).

	LC1E4000*...E6500*	LC1E8000*....E9500*
	7 gn	

EasyPact TVS 4-pole contactors
Contactors in category AC-1

CPB100417

*LC1E600**

CPB100419

*LC1E6500**

4-pole contactors

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3					Rated operational current in AC-1 440 VAC	main contacts		Basic reference, to be completed by adding the coil voltage code	Weight
220 V 230 V	380 V 400 V	415V 440V	500 V	660V 690 V				Fixing (1)	
kW	kW	kW	kW	kW	A				kg
Connection by screw clamp terminals									
1.1	2.2	2.2	3	3	16	4	0	LC1E06004●●	0.34
1.1	2.2	2.2	3	3	16	2	2	LC1E06008●●	0.34
2.2	4	4	5.5	5.5	20	4	0	LC1E09004●●	0.34
2.2	4	4	5.5	5.5	20	2	2	LC1E09008●●	0.34
3	5.5	5.5	7.5	7.5	25	4	0	LC1E12004●●	0.34
3	5.5	5.5	7.5	7.5	25	2	2	LC1E12008●●	0.34
4	7.5	9	10	10	32	4	0	LC1E18004●●	0.34
4	7.5	9	10	10	32	2	2	LC1E18008●●	0.34
5.5	11	11	15	15	40	4	0	LC1E25004●●	0.52
5.5	11	11	15	15	40	2	2	LC1E25008●●	0.52
7.5	15	15	18.5	18.5	45	4	0	LC1E32004●●	0.52
7.5	15	15	18.5	18.5	45	2	2	LC1E32008●●	0.52
9	18.5	18.5	18.5	18.5	50	4	0	LC1E38004●●	0.52
9	18.5	18.5	18.5	18.5	50	2	2	LC1E38008●●	0.52
11	18.5	22	22	30	60	4	0	LC1E40004●●	1.3
11	18.5	22	22	30	60	2	2	LC1E40008●●	1.3
18.5	30	37	37	37	80	4	0	LC1E65004●●	1.3
18.5	30	37	37	37	80	2	2	LC1E65008●●	1.3
22	37	45	45	45	100	4	0	LC1E80004●●	1.6
22	37	45	45	45	100	2	2	LC1E80008●●	1.6
25	45	45	55	45	125	4	0	LC1E95004●●	1.6
25	45	45	55	45	125	2	2	LC1E95008●●	1.6

Coil Voltage Code

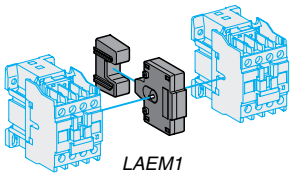
Coil Voltage		24	48	110	220Δ	380	415Δ
LC1E0600*-9500*	50/60Hz	B7	E7	F7	-	Q7	-
	50Hz/Wide band				M5WB		N5WB

Δ For 220Vac and 415Vac standard coil with 50/60Hz please contact regional sales office

Seperate components

Auxiliary contact blocks, add-on modules and accessories, see pages 13 to 14.

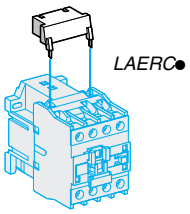
(1) LC1E0600 to E3800*: clip-on mounting on 35 mm ⊓ rail AM1 DP or screw fixing.*
LC1E4000 to E9500*: clip-on mounting on 35 mm ⊓ rail AM1DP or 75 mm ⊓ rail AM1 DL or screw fixing.*



LAEM1

Mechanical Interlock

Using 2 identical contactors	Mechanical interlock	
	Cat. no.	Weight kg
LC1E0600*...E1200*	LAEM1	0.030
LC1E1800*/E2500*	LAEM1	0.030
LC1E3200*/E3800*	LAEM1	0.030
LC1E4000*...E6500*	LAEM1	0.030
LC1E8000*/E9500*	LAEM4	0.095



LAERC●

LC1E●●

RC surge suppressor

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

Mounting	For use with contactor		Cat. no.	Weight
	Rating	Type		
		V~		kg
Screw mounting	LC1E0600* E9500*	24...48	LAERCE	0.025
		50...127	LAERCG	0.025
		110...240	LAERCU	0.025
		380...415	LAERCN	0.025

EasyPact TVS 4-pole Contactors
Accessories

LAEN22

LAETSD

Instantaneous auxiliary contact blocks for connection by screw clamp terminals

For use in normal operating environment

Clip-on mounting	Number of contacts per block	Cat. no.	Weight kg
Front	1 NO+1 NC	LAEN11	0.035
	2 NO	LAEN20	0.035
	2 NC	LAEN02	0.035
	2 NO+2 NC	LAEN22	0.060
	4NO	LAEN40	0.060

Time delay auxiliary contact blocks for connection by screw clamp terminals 8 A - 690 V

Clip-on mounting	Number of contacts per block	Time delay Type	Setting range	Cat. no. (1)	Weight kg
Front	1 NO+1 NC	On-delay	1...30 s	LAETSD	0.060

(1) Available LC1E2500 onwards*

Instantaneous and time delay contact characteristics

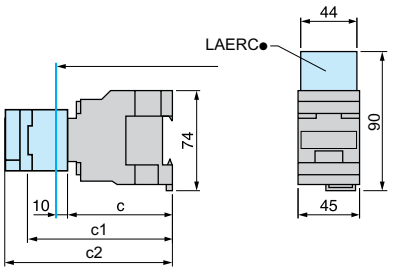
Contact block type				LAEN11,20,02,22,40			LAETSD		
Number of contacts				2 or 4			2		
Rated operational voltage (Ue)	Up to		VAC	690					
Rated insulation voltage (Ui)	Conforming to IEC 60947-5-1			690					
Conventional thermal current (Ith)	For ambient temperature $\theta \leq 60°C$		A	8					
Minimum switching capacity		U min	VAC	17					
		I min	mA	5					
Short-circuit protection	Conforming to IEC 60947-5-1		A	10					
Rated making Capacity (Irms)	Conforming to IEC 60947-5-1		A	∿ 140					
Short-time rating	Permissible for	1 s	A	100					
		500 ms		120					
		100 ms		140					
Insulation resistance			mΩ	> 10					
Non-overlap time	Guaranteed between NC and NO contacts		ms	1.5 (on energisation and on de-energisation)					
Overlap time	Guaranteed between LAE N22 N/C and N/O contacts		ms	–					
Time delay	Ambient air temperature for operation		°C	–			-20...+70		
	Repeat accuracy			–			±2 %		
	Drift up to 0.5 million operating cycles			–			+15 %		
	Drift depending on ambient air temperature			–			0.25 % per °C		
Mechanical durability			In millions of operating cycles	10			4		
Rated operational power of contacts (Conforming to IEC 60947-5-1)	a.c. supply categories AC14/15		V	24	48	115	230	400	440
	1 million operating cycles		VA	60	120	280	560	960	1050
	3 million operating cycles			16	32	80	160	280	300
	10 million operating cycles			4	8	20	4	70	80

Environment				
Contact block type			**LAEN11,20,02,22,40**	**LAETSD**
Conforming to standard			IEC 60947-5-1	
Product certifications			GOST	
Protective treatment	Conforming to IEC 60068		"TH"	
Degree of protection	Conforming to IEC 60529		IP20	
Ambiant air temperature	Storage	°C	-60...+80	
	Operation		-5...+55	
	Permissible for operation at Uc		-20...+70	
Maximum operating altitude	Without derating	m	3000	
Connection by cable	Philips N 2 and Ø 6 mm. Flexible or solid cable with or without cable end	mm^2	Min: 1 x 1 Max: 2 x 2.5	

4-pole Accessories compatibility			
Contactor	**LAEN●●**	**LAETSD**	**LAERC●**
LC1E0600* LC1E0900* LC1E1200* LC1E1800*	1	-	
LC1E2500* LC1E3200* LC1E3800* LC1E4000* LC1E5000* LC1E6500* LC1E8000* LC1E9500*	1 or 1		1

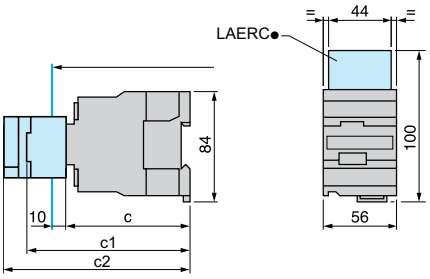
EasyPact TVS 4-pole contactors

LC1E0600*...1800*



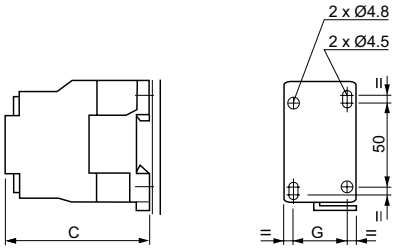
LC1	E0600*...E1800*
c	80
c1 with LAEN	113

LC1E2500*...3800*



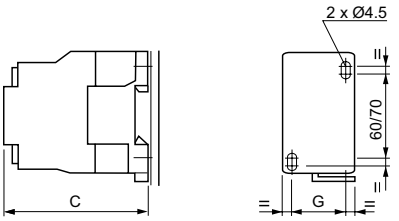
LC1	E2500*...3800*
c	93
c1 with LAEN	125
c2 with LAETSD	147

LC1E0600*...1800*



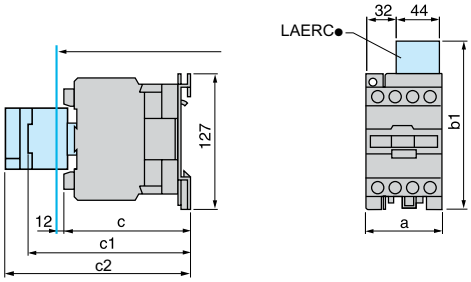
LC1	E0600*	E0900*	E1200*	E1800*
c	80	80	80	80
G	35	35	35	35

LC1E2500*...3800*



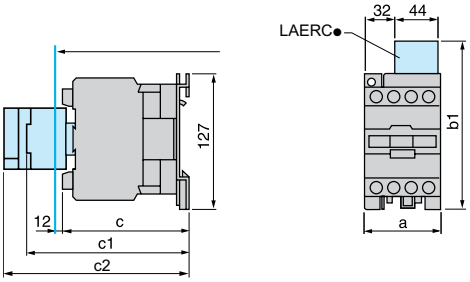
LC1	E2500*...3800*
c	93
G	40

LC1E4000*...E6500*



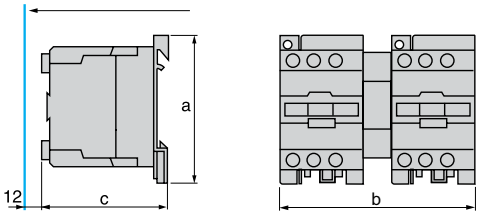
LC1		E4000*...E6500*
a		85
b1	with LAERC●	135
c		110/125
c1	with LAEN●	143
c2	with LAETSD	165

LC1E8000*...9500*



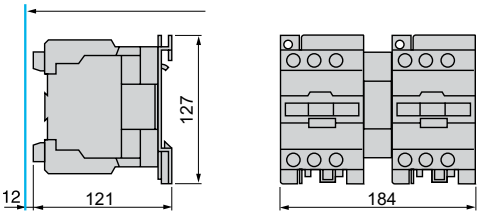
LC1		E8000*...9500*
a		95
b1	with LAERC●	135
c		120/135
c1	with LAEN●	160
c2	with LAETSD	172

2XLC1E0600*…E6500* with LAEM1



LC1	E0600*…1800*	E2500*…3800*	E4000*..6500*
a	74	84	127
b	104	126	184
c	80	93	110/125

2XLC1E8000*...9500* with LAEM4

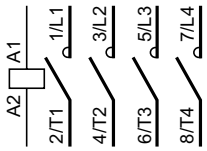


LC1	E8000*…LC1E9500*
a	95
b	204
c	120/155

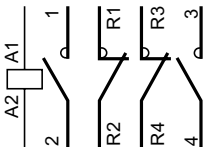
EasyPact TVS contactors
LC1E0600*...9500*

Contactors (4-pole)

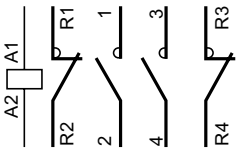
LC1E0600*...9500*



LC1E0600*...3800*

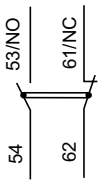


LC1E4000*...9500*

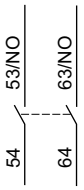


Front mounting add-on contact blocks

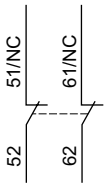
1NO+1NC (LAEN11)



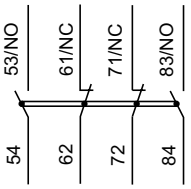
2NO (LAEN20)



2NC (LAEN02)



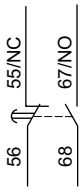
2NO+2NC (LAEN22)



4NO (LAEN40)

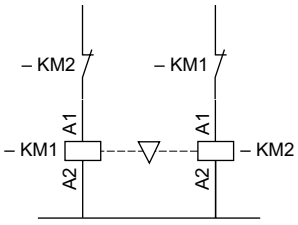
Time delay auxiliary contacts

On delay 1NO+1NC (LAETSD)



Mechanical interlock

LAEM●



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