Product data sheet
Characteristics

LC1D09M7
TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 9 A - 220 V AC coil

Main

Range of product	TeSys D
Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load Motor control
Utilisation category	AC-4 AC-3 AC-1
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	<= 300 V DC for power circuit <= 690 V AC 25...400 Hz for power circuit
[Ie] rated operational current	25 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit 9 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit
Motor power kW	2.2 kW at 400 V AC 50/60 Hz AC-4 2.2 kW at 220...230 V AC 50/60 Hz AC-3 4 kW at 380...400 V AC 50/60 Hz AC-3 5.5 kW at 500 V AC 50/60 Hz AC-3 5.5 kW at 660...690 V AC 50/60 Hz AC-3 4 kW at 415...440 V AC 50/60 Hz AC-3
Motor power hp	1 hp at 230/240 V AC 50/60 Hz for 1 phase motors
Control circuit type	AC 50/60 Hz
[Uc] control circuit voltage	220 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	25 A at <= 60 °C for power circuit 10 A at <= 60 °C for signalling circuit
Irms rated making capacity	250 A at 440 V for power circuit conforming to IEC 60947

	140 A AC for signalling circuit conforming to IEC 60947-5-1
	250 A DC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	250 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	105 A <= 40 °C 10 s power circuit
	210 A <= 40 °C 1 s power circuit
	30 A <= 40 °C 10 min power circuit
	61 A <= 40 °C 1 min power circuit
	100 A 1 s signalling circuit
	120 A 500 ms signalling circuit
	140 A 100 ms signalling circuit
Associated fuse rating	20 A gG at <= 690 V coordination type 2 for power circuit
	25 A gG at <= 690 V coordination type 1 for power circuit
	10 A gG for signalling circuit conforming to IEC 60947-5-1
Average impedance	2.5 mOhm at 50 Hz - Ith 25 A for power circuit
[Ui] rated insulation voltage	600 V for power circuit certifications CSA
	600 V for power circuit certifications UL
	690 V for power circuit conforming to IEC 60947-4-1
	690 V for signalling circuit conforming to IEC 60947-1
	600 V for signalling circuit certifications CSA
	600 V for signalling circuit certifications UL
Electrical durability	0.6 Mcycles 25 A AC-1 at Ue <= 440 V
	2 Mcycles 9 A AC-3 at Ue <= 440 V
Power dissipation per pole	0.2 W AC-3
	1.56 W AC-1
Protective cover	With
Mounting support	Rail
	Plate
Standards	CSA C22.2 No 14
	EN 60947-4-1
	EN 60947-5-1
	IEC 60947-4-1
	IEC 60947-5-1
	UL 508
Product certifications	CSA
	GL
	LROS (Lloyds register of shipping)
	BV
	RINA
	GOST
	DNV
	CCC
	UL
Connections - terminals	Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end
	Power circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - with cable end
	Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end
	Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end
	Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - with cable end
	Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: solid - without cable end
	Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: solid - without cable end
	Power circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end
	Power circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end
	Power circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end
	Power circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: solid - without cable end
	Power circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: solid - without cable end
Tightening torque	Power circuit : 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm
	Power circuit : 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2
	Control circuit : 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm
	Control circuit : 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2
Operating time	4...19 ms opening
	12...22 ms closing
Safety reliability level	B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1
	B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1
Mechanical durability	15 Mcycles

Operating rate	3600 cyc/h at <= 60 °C

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc drop-out at 60 °C, AC 50/60 Hz 0.8...1.1 Uc operational at 60 °C, AC 50 Hz 0.85...1.1 Uc operational at 60 °C, AC 60 Hz
Inrush power in VA	70 VA at 20 °C (cos φ 0.75) 60 Hz 70 VA at 20 °C (cos φ 0.75) 50 Hz
Hold-in power consumption in VA	7.5 VA at 20 °C (cos φ 0.3) 60 Hz 7 VA at 20 °C (cos φ 0.3) 50 Hz
Heat dissipation	2...3 W at 50/60 Hz
Auxiliary contacts type	Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1 Type mirror contact (1 NC) conforming to IEC 60947-4-1
Signalling circuit frequency	25...400 Hz
Minimum switching current	5 mA for signalling circuit
Minimum switching voltage	17 V for signalling circuit
Non-overlap time	1.5 ms on energisation between NC and NO contact 1.5 ms on de-energisation between NC and NO contact
Insulation resistance	> 10 MOhm for signalling circuit
Power range	1.1...2 kW 200...240 V 3 phases 2.2...3 kW 380...440 V 3 phases 4...6 kW 380...440 V 3 phases 4...6 kW 480...500 V 3 phases
Motor starter type	Direct on-line contactor
Contactor coil voltage	220 V AC standard

Environment

Protective treatment	TH conforming to IEC 60068-2-30
Pollution degree	3
Ambient air temperature for operation	-5...60 °C
Ambient air temperature for storage	-60...80 °C
Permissible ambient air temperature around the device	-40...70 °C at Uc
Operating altitude	3000 m without derating in temperature
Fire resistance	850 °C conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	Vibrations contactor open 2 Gn, 5...300 Hz Vibrations contactor closed 4 Gn, 5...300 Hz Shocks contactor open 10 Gn for 11 ms Shocks contactor closed 15 Gn for 11 ms
Height	77 mm
Width	45 mm
Depth	86 mm
Product weight	0.32 kg

Offer Sustainability

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Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0627 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold Reference not containing SVHC above the threshold
Product environmental profile	Available Product environmental
Product end of life instructions	Available

Contractual warranty

Warranty period	18 months

Dimensions
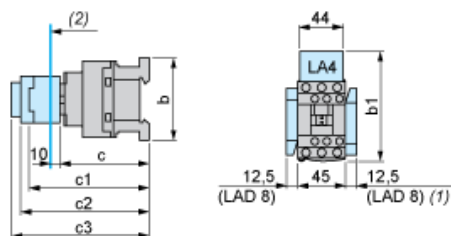
(1)   Including LAD 4BB
(2)   Minimum electrical clearance

LC1		D09…D18	D093…D123	D099…D129
b	without add-on blocks	77	99	80
b1	with LAD 4BB	94	107	95.5
with LA4 D•10[1]		123[1]	111.5[1]	
with LA4 DF, DT[1]		132[1]	120.5[1]	
with LA4 DW, DL[1]		139[1]	127.5[1]	
c	without cover or add-on blocks	84	84	84
with cover, without add-on blocks		86	86	
c1	with LAD N or C (2 or 4 contacts)	117	117	117
c2	with LA6 DK10, LAD 6K10	129	129	129
c3	with LAD T, R, S	137	137	137
with LAD T, R, S and sealing cover		141	141	
(1)	Including LAD 4BB.			

Wiring
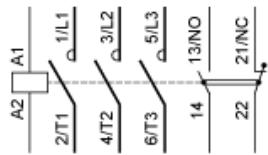
Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power from 0,06 to 4 kW and 415 VAC

Motor power (kW)	ICU (kA)	Breaker	Contactor (*)
0.06	> 100	GV2ME02	LC1D09M7
0.09	> 100	GV2ME03	LC1D09M7
0,12 to 0,18	> 100	GV2ME04	LC1D09M7
0,25 to 0,37	> 100	GV2ME05	LC1D09M7
0.55	> 100	GV2ME06	LC1D09M7
0.75	> 100	GV2ME07	LC1D09M7
1,1 to 1,5	> 100	GV2ME08	LC1D09M7
2.2	> 100	GV2ME10	LC1D09M7
3 to 4	> 100	GV2ME14	LC1D09M7

Non contractual pictures.

Type 1 coordination requires that in a short-circuit condition, the contactor or starter must not present any danger to personnel or installations and must not be able to resume operation without repair or the replacement of parts.