Product data sheet Characteristics

LC1D50AB7 TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 50 A - 24 V AC 50/60 Hz coil





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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-1 AC-3 AC-4	
Poles description	3P	
Pole contact composition	3 NO	
[Ue] rated operational voltage	<= 300 V DC for power circuit <= 690 V AC 25400 Hz for power circuit	
[le] rated operational current	50 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit 80 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit	
Motor power kW	22 kW at 380400 V AC 50/60 Hz AC-3 25 kW at 415 V AC 50/60 Hz AC-3 30 kW at 440 V AC 50/60 Hz AC-3 30 kW at 500 V AC 50/60 Hz AC-3 33 kW at 660690 V AC 50/60 Hz AC-3 15 kW at 220230 V AC 50/60 Hz AC-3 11 kW at 400 V AC 50/60 Hz AC-4	
Motor power hp	3 hp at 115 V AC 50/60 Hz for 1 phase motors 7.5 hp at 230/240 V AC 50/60 Hz for 1 phase motors 15 hp at 200/208 V AC 50/60 Hz for 3 phases motors 15 hp at 230/240 V AC 50/60 Hz for 3 phases motors 40 hp at 460/480 V AC 50/60 Hz for 3 phases motors 40 hp at 575/600 V AC 50/60 Hz for 3 phases motors	
Control circuit type	AC 50/60 Hz	
[Uc] control circuit voltage	24 V AC 50/60 Hz	
Auxiliary contact composition	1 NO + 1 NC	
May 20, 2040		



Overvoltage category		
[Ith] conventional free air thermal current	80 A at <= 60 °C for power circuit 10 A at <= 60 °C for signalling circuit	
Irms rated making capacity	900 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	900 A at 440 V for power circuit conforming to IEC 60947	
[Icw] rated short-time withstand current	100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit 400 A \leq 40 °C 10 s power circuit 810 A \leq 40 °C 1 s power circuit 84 A \leq 40 °C 10 min power circuit 208 A \leq 40 °C 1 min power circuit	
Associated fuse rating	100 A gG at <= 690 V coordination type 1 for power circuit 100 A gG at <= 690 V coordination type 2 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1	
Average impedance	1.5 mOhm at 50 Hz - Ith 80 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	1.45 Mcycles 50 A AC-3 at Ue <= 440 V 1.1 Mcycles 80 A AC-1 at Ue <= 440 V	
Power dissipation per pole	3.7 W AC-3 9.6 W AC-1	
Protective cover	With	
Mounting support	Plate Rail	
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 GOST CCC UL DNV BV LROS (Lloyds register of shipping) GL RINA	
Connections - terminals	Control circuit : screw clamp terminals 2 cable(s) 12.5 mm ² - cable stiffness: flexible - with cable end	
	Control circuit : screw clamp terminals 1 cable(s) 14 mm ² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm ² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm ² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm ² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm ² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm ² - cable stiffness: solid - without cable end Power circuit : screw connection 2 cable(s) 125 mm ² - cable stiffness: solid - without cable end Power circuit : screw connection 2 cable(s) 125 mm ² - cable stiffness: flexible - without cable end Power circuit : screw connection 1 cable(s) 135 mm ² - cable stiffness: solid - without cable end Power circuit : screw connection 1 cable(s) 135 mm ² - cable stiffness: flexible - without cable end Power circuit : screw connection 1 cable(s) 135 mm ² - cable stiffness: flexible - without cable end Power circuit : screw connection 1 cable(s) 135 mm ² - cable stiffness: flexible - without cable end Power circuit : screw connection 1 cable(s) 135 mm ² - cable stiffness: flexible - without cable end Power circuit : screw connection 1 cable(s) 135 mm ² - cable stiffness: flexible - without cable end	
Tightening torque	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 Power circuit : 8 N.m - on EverLink BTR screw connectors - cable 2535 mm ² hexagonal 4 mm Power circuit : 5 N.m - on EverLink BTR screw connectors - cable 125 mm ² hexagonal 4 mm	
Operating time	1226 ms closing 419 ms opening	

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	6 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

Complementary

Without built-in suppressor module	
0.30.6 Uc drop-out at 60 °C, AC 50/60 Hz 0.81.1 Uc operational at 60 °C, AC 50 Hz 0.851.1 Uc operational at 60 °C, AC 60 Hz	
140 VA at 20 °C (cos φ 0.75) 60 Hz 160 VA at 20 °C (cos φ 0.75) 50 Hz	
13 VA at 20 °C (cos φ 0.3) 60 Hz 15 VA at 20 °C (cos φ 0.3) 50 Hz	
45 W at 50/60 Hz	
Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1 Type mirror contact (1 NC) conforming to IEC 60947-4-1	
25400 Hz	
5 mA for signalling circuit	
17 V for signalling circuit	
1.5 ms on de-energisation (between NC and NO contact) 1.5 ms on energisation (between NC and NO contact)	
> 10 MOhm for signalling circuit	
M2	
LC1D	
711 kW 200240 V 3 phases 1525 kW 200240 V 3 phases 1525 kW 380440 V 3 phases 3050 kW 380440 V 3 phases 3050 kW 480500 V 3 phases	
Direct on-line contactor	
24 V AC standard	
	0.30.6 Uc drop-out at 60 °C, AC 50/60 Hz 0.81.1 Uc operational at 60 °C, AC 50 Hz 0.851.1 Uc operational at 60 °C, AC 60 Hz 140 VA at 20 °C ($\cos \phi 0.75$) 60 Hz 160 VA at 20 °C ($\cos \phi 0.75$) 50 Hz 13 VA at 20 °C ($\cos \phi 0.3$) 60 Hz 15 VA at 20 °C ($\cos \phi 0.3$) 50 Hz 45 W at 50/60 Hz Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1 Type mirror contact (1 NC) conforming to IEC 60947-5-1 Type mirror contact (1 NC) conforming to IEC 60947-4-1 25400 Hz 5 mA for signalling circuit 1.5 ms on de-energisation (between NC and NO contact) 1.5 ms on energisation (between NC and NO contact) > 10 MOhm for signalling circuit M2 LC1D 711 kW 200240 V 3 phases 1525 kW 200240 V 3 phases 1525 kW 200240 V 3 phases 3050 kW 380440 V 3 phases 3050 kW 480500 V 3 phases 3050 kW 480500 V 3 phases Direct on-line contactor

Environment

IP degree of protection	IP20 front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Pollution degree	3
Ambient air temperature for operation	-560 °C
Ambient air temperature for storage	-6080 °C
Permissible ambient air temperature around the device	-4070 °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, 5300 Hz Vibrations contactor closed 4 Gn, 5300 Hz Shocks contactor open 10 Gn for 11 ms Shocks contactor closed 15 Gn for 11 ms
Height	122 mm
Width	55 mm
Depth	120 mm
Product weight	0.855 kg

Offer Sustainability	
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0001 - 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
	End of life manual

Contractual warranty

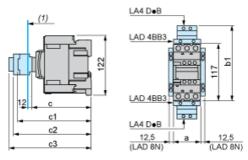
Warranty period

18 months

Product data sheet Dimensions Drawings

LC1D50AB7

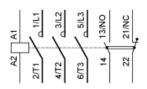
Dimensions



(1) Minimum electrical clearance

LC1		D40AD65A
а		55
b1	with LA4 D•2	-
with LA4 DB3 or LAD 4BB3	136	
with LA4 DF, DT	157	
with LA4 DM, DW, DL	166	
с	without cover or add-on blocks	118
with cover, without add-on blocks	120	
c1	with LAD N (1 contact)	-
with LAD N or C (2 or 4 contacts)	150	
c2	with LA6 DK10, LAD 6DK	163
c3	with LAD T, R, S	171
with LAD T, R, S and sealing cover	175	

Wiring



LC1D50AB7

Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power 22 kW and 415 VAC

Motor power (kW)	ICU (kA)	Breaker	Contactor (*)
22	50	•	
		GV3P50	LC1D50AB7

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.