Product data sheet
Characteristics

LC1D115B7
TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 115 A - 24 V AC 50/60 Hz 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-3 AC-4 AC-1
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	<= 300 V DC for power circuit <= 1000 V AC 25...400 Hz for power circuit
[Ie] rated operational current	200 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit 115 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit
Motor power kW	55 kW at 380...400 V AC 50/60 Hz AC-3 75 kW at 500 V AC 50/60 Hz AC-3 80 kW at 660...690 V AC 50/60 Hz AC-3 30 kW at 220...230 V AC 50/60 Hz AC-3 59 kW at 415...440 V AC 50/60 Hz AC-3 65 kW at 1000 V AC 50/60 Hz AC-3 18.5 kW at 400 V AC 50/60 Hz AC-4
Motor power hp	30 hp at 200/208 V AC 50/60 Hz for 3 phases motors 40 hp at 230/240 V AC 50/60 Hz for 3 phases motors 75 hp at 460/480 V AC 50/60 Hz for 3 phases motors 100 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
[Uimp] rated impulse withstand voltage	Conforming to IEC 60947
Overvoltage category	III

[Ith] conventional free air thermal current	200 A at <= 60 °C for power circuit
Irms rated making capacity	1260 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	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	1100 A <= 40 °C 1 s power circuit 100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit 250 A <= 40 °C 10 min power circuit 550 A <= 40 °C 1 min power circuit 950 A <= 40 °C 10 s power circuit
Associated fuse rating	200 A gG at <= 690 V coordination type 2 for power circuit 250 A gG at <= 690 V coordination type 1 for power circuit 10 A gG for signalling circuit
Average impedance	0.6 mOhm at 50 Hz - Ith 200 A for power circuit
[Ui] rated insulation voltage	1000 V for power circuit conforming to IEC 60947-4-1 600 V for power circuit certifications CSA 600 V for power circuit certifications UL 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	0.8 Mcycles 200 A AC-1 at Ue <= 440 V 0.95 Mcycles 115 A AC-3 at Ue <= 440 V
Power dissipation per pole	24 W AC-1 7.9 W AC-3
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	GL LROS (Lloyds register of shipping) GOST BV RINA UL CSA CCC DNV
Connections - terminals	Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm² - cable stiffness: solid - without cable end Power circuit : connector 1 cable(s) 10...120 mm² - cable stiffness: flexible - without cable end Power circuit : connector 2 cable(s) 10...50 mm² - cable stiffness: flexible - without cable end Power circuit : connector 1 cable(s) 10...120 mm² - cable stiffness: flexible - with cable end Power circuit : connector 2 cable(s) 10...50 mm² - cable stiffness: flexible - with cable end Power circuit : connector 1 cable(s) 10...120 mm² - cable stiffness: solid - without cable end Power circuit : connector 2 cable(s) 10...50 mm² - cable stiffness: solid - without cable end
Tightening torque	Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit : 12 N.m - on connector hexagonal 4 mm
Operating time	6...20 ms opening 20...50 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	8 Mcycles
Operating rate	2400 cyc/h at <= 60 °C

Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.3...0.5 Uc drop-out at 55 °C, AC 50/60 Hz 0.8...1.15 Uc operational at 55 °C, AC 50/60 Hz
Inrush power in VA	280...350 VA at 20 °C (cos ϕ 0.8) 60 Hz 280...350 VA at 20 °C (cos ϕ 0.8) 50 Hz
Hold-in power consumption in VA	2...18 VA at 20 °C (cos ϕ 0.3) 60 Hz 2...18 VA at 20 °C (cos ϕ 0.3) 50 Hz
Heat dissipation	3...8 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 de-energisation (between NC and NO contact) 1.5 ms on energisation (between NC and NO contact)
Insulation resistance	> 10 MOhm for signalling circuit
Power range	30...50 kW 200...240 V 3 phases 55...100 kW 380...440 V 3 phases 55...100 kW 480...500 V 3 phases
Motor starter type	Direct on-line contactor
Contactor coil voltage	24 V AC standard

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	-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 closed 15 Gn for 11 ms Shocks contactor open 6 Gn for 11 ms
Height	158 mm
Width	120 mm
Depth	136 mm
Product weight	2.5 kg

Offer Sustainability

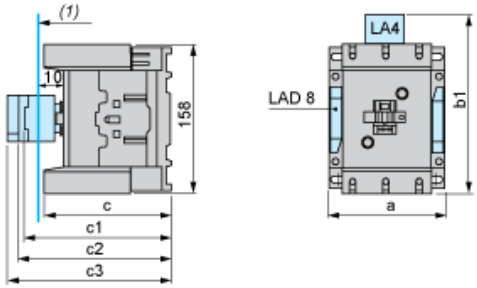
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0742 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold Reference not containing SVHC above the threshold
Product environmental profile	Available Product environmental

Product end of life instructions	Available End of life manual

Contractual warranty

Warranty period	18 months

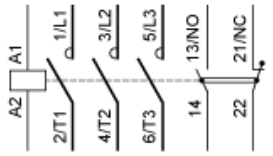
Dimensions



(1) Minimum electrical clearance

LC1		D115 and D150 (3-pole)
a		120
b1	with LA4 DA2	174
with LA4 DF, DT	185	
with LA4 DM, DL	188	
with LA4 DW	188	
c	without cover or add-on blocks	132
with cover, without add-on blocks	136	
c1	with LAD N or C (2 or 4 contacts)	150
c2	with LA6 DK20	155
c3	with LAD T, R, S	168
with LAD T, R, S and 2	172 sealing cover	

Wiring



Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power 55 kW and 415 VAC

Motor power (kW)	ICU (kA)	Breaker	Contactor (*)
55	35	 GV7RE150	 LC1D115B7

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.