



ⓘ Discontinued

LC1D18ZL has not been replaced. Please contact your customer care center for more information.

Main

Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-1 AC-3
Poles description	3P
Power 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	18 A (≤ 60 °C) at ≤ 440 V AC AC-3 for power circuit 32 A (≤ 60 °C) at ≤ 440 V AC AC-1 for power circuit
Motor power kW	10 kW at 500 V AC 50/60 Hz 10 kW at 660...690 V AC 50/60 Hz 4 kW at 220...230 V AC 50/60 Hz 7.5 kW at 380...400 V AC 50/60 Hz 9 kW at 415...440 V AC 50/60 Hz
Motor power HP (UL / CSA)	1 hp at 115 V AC 50/60 Hz for 1 phase motors 3 hp at 230/240 V AC 50/60 Hz for 1 phase motors 5 hp at 200/208 V AC 50/60 Hz for 3 phases motors 5 hp at 230/240 V AC 50/60 Hz for 3 phases motors 10 hp at 460/480 V AC 50/60 Hz for 3 phases motors 15 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	DC low consumption
[Uc] control circuit voltage	20 V DC
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overtoltage category	III
[Ith] conventional free air thermal current	32 A at ≤ 60 °C for power circuit 10 A at ≤ 60 °C for signalling circuit
Irms rated making capacity	300 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	300 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	145 A ≤ 40 °C 10 s power circuit

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

	<p>240 A <= 40 °C 1 s power circuit 40 A <= 40 °C 10 min power circuit 84 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</p>
Associated fuse rating	<p>35 A gG at <= 690 V coordination type 2 for power circuit 50 A gG at <= 690 V coordination type 1 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1</p>
Average impedance	2.5 mOhm at 50 Hz - Ith 32 A for power circuit
[Ui] rated insulation voltage	<p>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</p>
Electrical durability	<p>1.65 Mcycles 18 A AC-3 at Ue <= 440 V 1 Mcycles 32 A AC-1 at Ue <= 440 V</p>
Power dissipation per pole	<p>0.8 W AC-3 2.5 W AC-1</p>
Safety cover	With
Mounting support	<p>Plate Rail</p>
Standards	<p>CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508</p>
Product certifications	<p>BV CCC CSA DNV GL GOST LROS (Lloyds register of shipping) RINA UL</p>
Connections - terminals	<p>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...6 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) 1.5...6 mm² - cable stiffness: flexible - without cable end Power circuit : screw clamp terminals 2 cable(s) 1.5...6 mm² - cable stiffness: flexible - without cable end Power circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: flexible - with cable end Power circuit : screw clamp terminals 1 cable(s) 1.5...6 mm² - cable stiffness: solid - without cable end Power circuit : screw clamp terminals 2 cable(s) 1.5...6 mm² - cable stiffness: solid - without cable end</p>
Tightening torque	<p>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</p>
Operating time	<p>65.45...88.55 ms closing 20...30 ms opening</p>
Safety reliability level	<p>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</p>
Mechanical durability	30 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.3 U _c drop-out at 60 °C, DC 0.8...1.25 U _c operational at 60 °C, DC
Time constant	40 ms
Inrush power in W	2.4 W at 20 °C
Hold-in power consumption in W	2.4 W at 20 °C
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

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 U _c
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	95 mm
Product weight	0.49 kg

Contractual warranty

Warranty period	18 months
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