

## LC1D150M7

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  V  
150 A - 220 V AC coil



### Main

Range of product	TeSys D
Product or component type	Contacteur
Device short name	LC1D
Contacteur application	Motor control Resistive load
Utilisation category	AC-1 AC-3
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	$\leq 1000$ V AC 25...400 Hz for power circuit $\leq 690$ V DC for power circuit
[Ie] rated operational current	200 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit 150 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit
Motor power kW	80 kW at 415...440 V AC 50/60 Hz 100 kW at 660...690 V AC 50/60 Hz 40 kW at 220...230 V AC 50/60 Hz 75 kW at 1000 V AC 50/60 Hz 75 kW at 380...400 V AC 50/60 Hz 90 kW at 500 V AC 50/60 Hz
Motor power hp	40 hp at 200/208 V AC 50/60 Hz for 3 phases motors 50 hp at 230/240 V AC 50/60 Hz for 3 phases motors 100 hp at 460/480 V AC 50/60 Hz for 3 phases motors 125 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	AC 50/60 Hz
Control circuit voltage	220 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	8 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	200 A at $\leq 60$ °C for power circuit
Irms rated making capacity	1660 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	1400 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 250 A $\leq 40$ °C 10 min power circuit 580 A $\leq 40$ °C 1 min power circuit 1200 A $\leq 40$ °C 10 s power circuit 1400 A $\leq 40$ °C 1 s power circuit
Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 250 A gG at $\leq 690$ V coordination type 2 for power circuit 315 A gG at $\leq 690$ V coordination type 1 for power circuit
Average impedance	0.6 mOhm at 50 Hz - Ith 200 A for power circuit

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[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	0.85 Mcycles 150 A AC-3 at Ue ≤ 440 V 1 Mcycles 200 A AC-1 at Ue ≤ 440 V
Power dissipation per pole	24 W AC-1 13.5 W AC-3
Protective cover	With
Mounting support	Plate Rail
Standards	CSA C22.2 n°14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508
Product certifications	LROS BV CCC CSA DNV GL GOST RINA UL
Connections - terminals	Power circuit: connector 1 cable(s) 10...120 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit: connector 2 cable(s) 10...50 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit: connector 1 cable(s) 10...120 mm <sup>2</sup> - cable stiffness: flexible - with cable end Power circuit: connector 2 cable(s) 10...50 mm <sup>2</sup> - cable stiffness: flexible - with cable end Power circuit: connector 1 cable(s) 10...120 mm <sup>2</sup> - cable stiffness: solid - without cable end Power circuit: connector 2 cable(s) 10...50 mm <sup>2</sup> - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with 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	20...35 ms closing 40...75 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	8 Mcycles
Operating rate	1200 cyc/h at ≤ 60 °C

## Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.5 U <sub>c</sub> at 55 °C drop-out 50/60 Hz 0.8...1.15 U <sub>c</sub> at 55 °C operational 50/60 Hz
Inrush power in VA	280...350 VA at 20 °C (cos $\phi$ 0.9) 60 Hz 280...350 VA at 20 °C (cos $\phi$ 0.9) 50 Hz
Hold-in power consumption in VA	2...18 VA at 20 °C (cos $\phi$ 0.9) 60 Hz 2...18 VA at 20 °C (cos $\phi$ 0.9) 50 Hz
Heat dissipation	3...4.5 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

## Environment

IP degree of protection	IP2x 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 <sub>c</sub>
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