

# LC1D38N7

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  V  
38 A - 415 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
Device short name	LC1D38
Contactor application	Resistive load Motor control
Utilisation category	AC-1 AC-3
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	$\leq 690$ V AC 25...400 Hz for power circuit $\leq 300$ V DC for power circuit
[Ie] rated operational current	38 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit 50 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit
Motor power kW	9 kW at 220...230 V AC 50/60 Hz 18.5 kW at 415...440 V AC 50/60 Hz 18.5 kW at 500 V AC 50/60 Hz 18.5 kW at 660...690 V AC 50/60 Hz 18.5 kW at 380...400 V AC 50/60 Hz
Motor power hp	5 hp at 240 V AC 50/60 Hz for 1 phase motors 10 hp at 230/240 V AC 50/60 Hz for 3 phases motors 25 hp at 600 V AC 50/60 Hz for 3 phases motors 10 hp at 200/208 V AC 50/60 Hz for 3 phases motors 20 hp at 480 V AC 50/60 Hz for 3 phases motors
Control circuit type	AC 50/60 Hz
Control circuit voltage	415 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	Conforming to IEC 60947
Overvoltage category	III

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

[I <sub>th</sub> ] conventional free air thermal current	10 A at ≤ 60 °C for signalling circuit 50 A at ≤ 60 °C for power circuit
I <sub>rms</sub> rated making capacity	550 A at 440 V for power circuit conforming to IEC 60947 250 A DC for signalling circuit conforming to IEC 60947-5-1 140 A AC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	550 A at 440 V for power circuit conforming to IEC 60947
[I <sub>cw</sub> ] rated short-time withstand current	60 A ≤ 40 °C 10 min power circuit 150 A ≤ 40 °C 1 min power circuit 310 A ≤ 40 °C 10 s power circuit 430 A ≤ 40 °C 1 s power circuit 140 A 100 ms signalling circuit 120 A 500 ms signalling circuit 100 A 1 s signalling circuit
Associated fuse rating	63 A gG at ≤ 690 V coordination type 2 for power circuit 63 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 mΩ at 50 Hz - I <sub>th</sub> 50 A for power circuit
[U <sub>i</sub> ] rated insulation voltage	600 V for signalling circuit certifications CSA 690 V for power circuit conforming to IEC 60947-4-1 600 V for power circuit certifications CSA 600 V for signalling circuit certifications UL 690 V for signalling circuit conforming to IEC 60947-1 600 V for power circuit certifications UL
Electrical durability	1.4 Mcycles 50 A AC-1 at U <sub>e</sub> ≤ 440 V 1.4 Mcycles 38 A AC-3 at U <sub>e</sub> ≤ 440 V
Power dissipation per pole	3 W AC-3 5 W AC-1
Protective cover	With
Mounting support	Rail Plate
Standards	IEC 60947-5-1 CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 UL 508
Product certifications	CSA BV DNV GL RINA GOST UL CCC LROS
Connections - terminals	Power circuit : screw clamp terminals 2 cable(s) 1.5...6 mm <sup>2</sup> - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit : screw clamp terminals 2 cable(s) 2.5...10 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit : screw clamp terminals 1 cable(s) 1...10 mm <sup>2</sup> - cable stiffness: flexible - with cable end Power circuit : screw clamp terminals 1 cable(s) 2.5...10 mm <sup>2</sup> - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit : screw clamp terminals 1 cable(s) 1.5...10 mm <sup>2</sup> - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end Power circuit : screw clamp terminals 2 cable(s) 2.5...10 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...4 mm <sup>2</sup> - cable stiffness: solid - without cable end
Tightening torque	Control circuit : 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit : 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit : 2.5 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
Operating time	12...22 ms closing

	4...19 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	15 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

## Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.85...1.1 Uc operational at 60 °C, AC 60 Hz 0.8...1.1 Uc operational at 60 °C, AC 50 Hz 0.3...0.6 Uc drop-out at 60 °C, AC 50/60 Hz
Inrush power in VA	70 VA at 20 °C (cos $\phi$ 0.75) 60 Hz 70 VA at 20 °C (cos $\phi$ 0.75) 50 Hz
Hold-in power consumption in VA	7 VA at 20 °C (cos $\phi$ 0.3) 50 Hz 7.5 VA at 20 °C (cos $\phi$ 0.3) 60 Hz
Heat dissipation	2...3 W at 50/60 Hz
Auxiliary contacts type	Type mirror contact (1 NC) conforming to IEC 60947-4-1 Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1
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
Contact compatibility	M2
Compatibility code	LC1D

## 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	-20...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	Shocks contactor open 8 Gn for 11 ms Vibrations contactor open 2 Gn, 5...300 Hz Shocks contactor closed 15 Gn for 11 ms Vibrations contactor closed 4 Gn, 5...300 Hz
Height	85 mm
Width	45 mm
Depth	92 mm
Product weight	0.38 kg

## Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0627 - Schneider Electric declaration of conformity <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold <a href="#">Reference not containing SVHC above the threshold</a>
Product environmental profile	Available <a href="#">Product environmental</a>

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Product end of life instructions	Available <a href="#">End of life manual</a>
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**Contractual warranty**

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Warranty period	18 months
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