

LC1D150N7

TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 150 A - 415 V AC coil



Main

Commercial Status	Commercialised
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
Power 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	150 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit 200 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	75 kW at 1000 V AC 50/60 Hz 100 kW at 660...690 V AC 50/60 Hz 90 kW at 500 V AC 50/60 Hz 80 kW at 415...440 V AC 50/60 Hz 75 kW at 380...400 V AC 50/60 Hz 40 kW at 220...230 V AC 50/60 Hz
Motor power HP (UL / CSA)	125 hp at 575/600 V AC 50/60 Hz for 3 phases motors 100 hp at 460/480 V AC 50/60 Hz for 3 phases motors 50 hp at 230/240 V AC 50/60 Hz for 3 phases motors 40 hp at 200/208 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	8 kV conforming to IEC 60947
Overvoltage category	III
[I _{th}] conventional free air thermal current	200 A at <= 60 °C for power circuit
I _{rm} s rated making capacity	1660 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	1400 A at 440 V for power circuit conforming to IEC 60947
[I _{cw}] rated short-time withstand current	1400 A <= 40 °C 1 s power circuit 1200 A <= 40 °C 10 s power circuit 580 A <= 40 °C 1 min power circuit 140 A 100 ms signalling circuit 120 A 500 ms signalling circuit 100 A 1 s signalling circuit 250 A <= 40 °C 10 min power circuit

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Associated fuse rating	250 A gG at ≤ 690 V coordination type 2 for power circuit 315 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	0.60 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 signalling circuit certifications UL 600 V for signalling circuit certifications CSA 690 V for signalling circuit conforming to IEC 60947-1 600 V for power circuit certifications UL 600 V for power circuit certifications CSA
Electrical durability	1 Mcycles 200 A AC-1 at Ue ≤ 440 V 0.85 Mcycles 150 A AC-3 at Ue ≤ 440 V
Power dissipation per pole	13.5 W AC-3 24 W AC-1
Safety cover	With
Mounting support	Plate Rail
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 CSA C22.2 No 14
Product certifications	BV CCC CSA DNV GL GOST RINA UL LROS
Connections - terminals	Power circuit: connector 2 cable(s) 10...50 mm ² - cable stiffness: solid - without cable end Power circuit: connector 1 cable(s) 10...120 mm ² - cable stiffness: solid - without cable end Power circuit: connector 2 cable(s) 10...50 mm ² - cable stiffness: flexible - with cable end Power circuit: connector 1 cable(s) 10...120 mm ² - cable stiffness: flexible - with cable end Power circuit: connector 2 cable(s) 10...50 mm ² - cable stiffness: flexible - without cable end Power circuit: connector 1 cable(s) 10...120 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm ² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm ² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm ² - cable stiffness: flexible - with cable end
Tightening torque	Power circuit: 12 N.m - on connector hexagonal 4 mm Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2 Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm
Operating time	40...75 ms opening 20...35 ms closing
Safety reliability level	B10d = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1

Mechanical durability	8 Mcycles
Operating rate	1200 cyc/h at $\leq 60\text{ }^{\circ}\text{C}$

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.8...1.15 U_c at $55\text{ }^{\circ}\text{C}$ operational 50/60 Hz 0.3...0.5 U_c at $55\text{ }^{\circ}\text{C}$ drop-out 50/60 Hz
Inrush power in VA	280...350 VA at $20\text{ }^{\circ}\text{C}$ ($\cos\phi$ 0.9) 50 Hz 280...350 VA at $20\text{ }^{\circ}\text{C}$ ($\cos\phi$ 0.9) 60 Hz
Hold-in power consumption in VA	2...18 VA at $20\text{ }^{\circ}\text{C}$ ($\cos\phi$ 0.9) 50 Hz 2...18 VA at $20\text{ }^{\circ}\text{C}$ ($\cos\phi$ 0.9) 60 Hz
Heat dissipation	3...4.5 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	$> 10\text{ MOhm}$ 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	$-5...60\text{ }^{\circ}\text{C}$
Ambient air temperature for storage	$-60...80\text{ }^{\circ}\text{C}$
Permissible ambient air temperature around the device	$-40...70\text{ }^{\circ}\text{C}$ at U_c
Operating altitude	3000 m without derating in temperature
Fire resistance	$850\text{ }^{\circ}\text{C}$ conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	Shocks contactor open 6 Gn for 11 ms Shocks contactor closed 15 Gn for 11 ms Vibrations contactor closed 4 Gn, 5...300 Hz Vibrations contactor open 2 Gn, 5...300 Hz
Height	158 mm
Width	120 mm
Depth	136 mm
Product weight	2.5 kg

RoHS compliance

RoHS EUR status	Compliant
RoHS EUR conformity date(YYWW)	0927

Contractual warranty

Period	18 months
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