

LC1D12B7

TeSys D contactor - 3P(3 NO) - AC-3 - \leq 440 V 12 A - 24 V AC coil



Main

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|---|---|
| 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 | \leq 300 V DC for power circuit \leq 690 V AC 25...400 Hz for power circuit |
| [Ie] rated operational current | 25 A (\leq 60 °C) at \leq 440 V AC AC-1 for power circuit 12 A (\leq 60 °C) at \leq 440 V AC AC-3 for power circuit |
| Motor power kW | 7.5 kW at 660...690 V AC 50/60 Hz 7.5 kW at 500 V AC 50/60 Hz 5.5 kW at 415...440 V AC 50/60 Hz 5.5 kW at 380...400 V AC 50/60 Hz 3 kW at 220...230 V AC 50/60 Hz |
| Motor power HP (UL / CSA) | 10 hp at 575/600 V AC 50/60 Hz for 3 phases motors 7.5 hp at 460/480 V AC 50/60 Hz for 3 phases motors 3 hp at 230/240 V AC 50/60 Hz for 3 phases motors 3 hp at 200/208 V AC 50/60 Hz for 3 phases motors 2 hp at 230/240 V AC 50/60 Hz for 1 phase motors 1 hp at 115 V AC 50/60 Hz for 1 phase motors |
| Control circuit type | AC 50/60 Hz |
| Control circuit voltage | 24 V AC 50/60 Hz |
| Auxiliary contact composition | 1 NO + 1 NC |
| [Uimp] rated impulse withstand voltage | 6 kV conforming to IEC 60947 |
| Overvoltage category | III |
| [Ith] conventional free air thermal current | 10 A at \leq 60 °C for signalling circuit 25 A at \leq 60 °C for power circuit |
| Irms rated making capacity | 250 A DC for signalling circuit conforming to IEC 60947-5-1 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A at 440 V for power circuit conforming to IEC 60947 |
| Rated breaking capacity | 250 A at 440 V for power circuit conforming to IEC 60947 |
| [Icw] rated short-time withstand current | 61 A \leq 40 °C 1 min power circuit 30 A \leq 40 °C 10 min power circuit 140 A 100 ms signalling circuit 120 A 500 ms signalling circuit 100 A 1 s signalling circuit 210 A \leq 40 °C 1 s power circuit 105 A \leq 40 °C 10 s power circuit |

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| Associated fuse rating | 10 A gG for signalling circuit conforming to IEC 60947-5-1 25 A gG at <= 690 V coordination type 2 for power circuit 40 A gG at <= 690 V coordination type 1 for power circuit |
| Average impedance | 2.5 mOhm at 50 Hz - lth 25 A for power circuit |
| [Ui] rated insulation voltage | 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 690 V for power circuit conforming to IEC 60947-4-1 |
| Electrical durability | 0.8 Mcycles 25 A AC-1 at Ue <= 440 V 2 Mcycles 12 A AC-3 at Ue <= 440 V |
| Power dissipation per pole | 1.56 W AC-1 0.36 W AC-3 |
| 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 | Control circuit: screw clamp terminals 2 cable(s) 1...4 mm ² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: flexible - without cable end Power circuit: screw clamp terminals 2 cable(s) 1...4 mm ² - cable stiffness: solid - without cable end Power circuit: screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: solid - without cable end Power circuit: screw clamp terminals 2 cable(s) 1...2.5 mm ² - cable stiffness: flexible - with cable end Power circuit: screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: flexible - with cable end Power circuit: screw clamp terminals 2 cable(s) 1...4 mm ² - cable stiffness: flexible - without cable end Power circuit: screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: flexible - without cable end |
| Tightening torque | Control 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 Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm |
| Operating time | 4...19 ms opening 12...22 ms closing |

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| 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 | 15 Mcycles |
| Operating rate | 3600 cyc/h at $\leq 60\text{ }^{\circ}\text{C}$ |

Complementary

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| Coil technology | Without built-in suppressor module |
| Control circuit voltage limits | 0.85...1.1 U_c at $60\text{ }^{\circ}\text{C}$ operational 60 Hz 0.8...1.1 U_c at $60\text{ }^{\circ}\text{C}$ operational 50 Hz 0.3...0.6 U_c at $60\text{ }^{\circ}\text{C}$ drop-out 50/60 Hz |
| Inrush power in VA | 70 VA at $20\text{ }^{\circ}\text{C}$ ($\cos \phi 0.75$) 50 Hz 70 VA at $20\text{ }^{\circ}\text{C}$ ($\cos \phi 0.75$) 60 Hz |
| Hold-in power consumption in VA | 7 VA at $20\text{ }^{\circ}\text{C}$ ($\cos \phi 0.3$) 50 Hz 7.5 VA at $20\text{ }^{\circ}\text{C}$ ($\cos \phi 0.3$) 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 |

Environment

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| 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 closed 15 Gn for 11 ms Shocks contactor open 10 Gn for 11 ms Vibrations contactor closed 4 Gn, 5...300 Hz Vibrations contactor open 2 Gn, 5...300 Hz |
| Height | 77 mm |
| Width | 45 mm |
| Depth | 86 mm |
| Product weight | 0.325 kg |