

LC1D80N7

Contacteur, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 80A, 415V AC 50/60Hz coil, screw clamp terminals



Main

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| Range | TeSys |
| Range of product | TeSys Deca |
| Product or component type | Contacteur |
| Device short name | LC1D |
| Contacteur application | Resistive load Motor control |
| Utilisation category | AC-3 AC-3e AC-4 AC-1 |
| Poles description | 3P |
| [Ue] rated operational voltage | Power circuit: <= 300 V DC 25...400 Hz Power circuit: <= 690 V AC |
| [Ie] rated operational current | 125 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage | 415 V AC 50/60 Hz |

Complementary

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| Motor power kW | 22 kW at 220...230 V AC 50/60 Hz (AC-3) 37 kW at 380...400 V AC 50/60 Hz (AC-3) 45 kW at 415...440 V AC 50/60 Hz (AC-3) 55 kW at 500 V AC 50/60 Hz (AC-3) 45 kW at 660...690 V AC 50/60 Hz (AC-3) 15 kW at 400 V AC 50/60 Hz (AC-4) 22 kW at 220...230 V AC 50/60 Hz (AC-3e) 37 kW at 380...400 V AC 50/60 Hz (AC-3e) 45 kW at 415...440 V AC 50/60 Hz (AC-3e) 55 kW at 500 V AC 50/60 Hz (AC-3e) 45 kW at 660...690 V AC 50/60 Hz (AC-3e) |
| Motor power hp | 7.5 Hp at 120 V AC 50/60 Hz for 1 phase motors 15 Hp at 230/240 V AC 50/60 Hz for 1 phase motors 30 Hp at 200/208 V AC 50/60 Hz for 3 phases motors 30 Hp at 230/240 V AC 50/60 Hz for 3 phases motors 60 Hp at 460/480 V AC 50/60 Hz for 3 phases motors 60 hp at 575/600 V AC 50/60 Hz for 3 phases motors |
| Compatibility code | LC1D |
| Pole contact composition | 3 NO |
| Protective cover | With |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit 125 A (at 60 °C) for power circuit |
| Irms rated making capacity | 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1 1100 A at 440 V for power circuit conforming to IEC 60947 |
| Rated breaking capacity | 1100 A at 440 V for power circuit conforming to IEC 60947 |

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| [Icw] rated short-time withstand current | 640 A 40 °C - 10 s for power circuit 990 A 40 °C - 1 s for power circuit 135 A 40 °C - 10 min for power circuit 320 A 40 °C - 1 min for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit |
| Associated fuse rating | 10 A gG for signalling circuit conforming to IEC 60947-5-1 200 A gG at ≤ 690 V coordination type 1 for power circuit 160 A gG at ≤ 690 V coordination type 2 for power circuit |
| Average impedance | 0.8 mOhm - Ith 125 A 50 Hz for power circuit |
| Power dissipation per pole | 5.1 W AC-3 12.5 W AC-1 5.1 W AC-3e |
| [Ui] rated insulation voltage | Power circuit: 600 V CSA certified[RETURN]Power circuit: 600 V UL certified[RETURN]Power circuit: 1000 V conforming to IEC 60947-4-1[RETURN]Signalling circuit: 690 V conforming to IEC 60947-1[RETURN]Signalling circuit: 600 V CSA certified[RETURN]Signalling circuit: 600 V UL certified |
| Overvoltage category | III |
| Pollution degree | 3 |
| [Uimp] rated impulse withstand voltage | 8 kV conforming to IEC 60947 |
| 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 | 4 Mcycles |
| Electrical durability | 0.8 Mcycles 125 A AC-1 at Ue ≤ 440 V 1.5 Mcycles 80 A AC-3 at Ue ≤ 440 V 1.5 Mcycles 80 A AC-3e at Ue ≤ 440 V |
| Control circuit type | AC at 50/60 Hz |
| Coil technology | Without built-in suppressor module |
| Control circuit voltage limits | 0.85...1.1 Uc (-40...55 °C):operational AC 60 Hz 0.3...0.6 Uc (-40...70 °C):drop-out AC 50/60 Hz 0.8...1.1 Uc (-40...55 °C):operational AC 50 Hz 1...1.1 Uc (55...70 °C):operational AC 50/60 Hz |
| Inrush power in VA | 245 VA 60 Hz cos phi 0.75 (at 20 °C) 245 VA 50 Hz cos phi 0.75 (at 20 °C) |
| Hold-in power consumption in VA | 26 VA 60 Hz cos phi 0.3 (at 20 °C) 26 VA 50 Hz cos phi 0.3 (at 20 °C) |
| Heat dissipation | 6...10 W at 50/60 Hz |
| Operating time | 20...35 ms closing 6...20 ms opening |
| Maximum operating rate | 3600 cyc/h 60 °C |
| Connections - terminals | Control circuit: screw clamp terminals 2 1...2.5 mm ² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1...2.5 mm ² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1...4 mm ² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1...4 mm ² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1...4 mm ² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1...4 mm ² - cable stiffness: solid without cable end Power circuit: connector 1 4...50 mm ² - cable stiffness: flexible without cable end Power circuit: connector 2 4...25 mm ² - cable stiffness: flexible without cable end Power circuit: connector 1 4...50 mm ² - cable stiffness: flexible with cable end Power circuit: connector 2 4...16 mm ² - cable stiffness: flexible with cable end Power circuit: connector 1 4...50 mm ² - cable stiffness: solid without cable end Power circuit: connector 2 4...25 mm ² - cable stiffness: solid without 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 - with screwdriver flat Ø 6 to Ø 8 mm Power circuit: 12 N.m - on connector hexagonal screw head 4 mm Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 |
| Auxiliary contact composition | 1 NO + 1 NC |
| 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 |

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| Signalling circuit frequency | 25...400 Hz |
| Minimum switching voltage | 17 V for signalling circuit |
| Minimum switching current | 5 mA for signalling circuit |
| Insulation resistance | > 10 MOhm 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 |
| Mounting support | Rail Plate |




Environment



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|---|---|
| Standards | CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 |
| Product certifications | CSA[RETURN]GOST[RETURN]LROS (Lloyds register of shipping) [RETURN]BV[RETURN]GL[RETURN]DNV[RETURN]CCC[RETURN]RINA[RETURN]UL |
| IP degree of protection | IP20 front face conforming to IEC 60529 |
| Protective treatment | TH conforming to IEC 60068-2-30 |
| Climatic withstand | Conforming to IACS E10 exposure to damp heat |
| Permissible ambient air temperature around the device | -40...60 °C 60...70 °C with derating |
| Operating altitude | 0...3000 m |
| 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) Shocks contactor open (8 Gn for 11 ms) Vibrations contactor closed (3 Gn, 5...300 Hz) Shocks contactor closed (10 Gn for 11 ms) |
| Height | 127 mm |
| Width | 85 mm |
| Depth | 130 mm |
| Net weight | 1.59 kg |

Packing Units

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|------------------------------|-----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 9.398 cm |
| Package 1 Width | 13.462 cm |
| Package 1 Length | 13.970 cm |
| Package 1 Weight | 1.560 kg |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 5 |
| Package 2 Height | 15.000 cm |
| Package 2 Width | 30.000 cm |
| Package 2 Length | 40.000 cm |
| Package 2 Weight | 8.455 kg |

Offer Sustainability

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|--------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation |  REACH Declaration |
| REACH free of SVHC | Yes |
| EU RoHS Directive | Compliant  EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| China RoHS Regulation |  China RoHS Declaration |

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|----------------------------|---|
| RoHS exemption information |  Yes |
| Environmental Disclosure |  Product Environmental Profile |
| Circularity Profile | No need of specific recycling operations |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free | Yes |

Contractual warranty

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| Warranty | 18 months |
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