

Product data sheet

Specifications



Contact, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 150A, 24V DC standard coil, screw clamp terminals

LC1D150BD

Main

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|--------------------------------|--|
| Range | TeSys |
| Range of product | TeSys D |
| Product or component type | Contact |
| Device short name | LC1D |
| Contact application | Resistive load Motor control |
| Utilisation category | AC-3 AC-4 AC-1 AC-3e |
| Poles description | 3P |
| [Ue] rated operational voltage | Power circuit: <= 1000 V AC 25...400 Hz Power circuit: <= 300 V DC |
| [Ie] rated operational current | 200 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 150 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 150 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage | 24 V DC |

Complementary

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|---|---|
| Motor power kW | 40 kW at 220...230 V AC 50/60 Hz (AC-3) 75 kW at 380...400 V AC 50/60 Hz (AC-3) 80 kW at 415...440 V AC 50/60 Hz (AC-3) 90 kW at 500 V AC 50/60 Hz (AC-3) 100 kW at 660...690 V AC 50/60 Hz (AC-3) 75 kW at 1000 V AC 50/60 Hz (AC-3) 22 kW at 400 V AC 50/60 Hz (AC-4) 40 kW at 220...230 V AC 50/60 Hz (AC-3e) 75 kW at 380...400 V AC 50/60 Hz (AC-3e) 80 kW at 415...440 V AC 50/60 Hz (AC-3e) 90 kW at 500 V AC 50/60 Hz (AC-3e) 100 kW at 660...690 V AC 50/60 Hz (AC-3e) 75 kW at 1000 V AC 50/60 Hz (AC-3e) |
| 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 |
| Compatibility code | LC1D |
| Pole contact composition | 3 NO |
| Contact compatibility | M10 |
| Protective cover | With |
| [Ith] conventional free air thermal current | 200 A (at 60 °C) for power circuit |

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| 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 1660 A at 440 V for power circuit conforming to IEC 60947 |
| Rated breaking capacity | 1400 A at 440 V for power circuit conforming to IEC 60947 |
| [Icw] rated short-time withstand current | 250 A 40 °C - 10 min for power circuit 580 A 40 °C - 1 min for power circuit 1200 A 40 °C - 10 s for power circuit 1400 A 40 °C - 1 s 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 60947-5-1 315 A gG at ≤ 690 V coordination type 1 for power circuit 250 A gG at ≤ 690 V coordination type 2 for power circuit |
| Average impedance | 0.6 mOhm - lth 200 A 50 Hz for power circuit |
| Power dissipation per pole | 24 W AC-1 13.5 W AC-3 13.5 W AC-3e |
| [Ui] rated insulation voltage | Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Power circuit: 1000 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified 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 | 8 Mcycles |
| Electrical durability | 0.85 Mcycles 150 A AC-3 at Ue ≤ 440 V 1 Mcycles 200 A AC-1 at Ue ≤ 440 V 0.85 Mcycles 150 A AC-3e at Ue ≤ 440 V |
| Control circuit type | DC standard |
| Coil technology | With integral suppression device |
| Control circuit voltage limits | 0.75...1.2 Uc (-40...55 °C):operational DC 0.15...0.4 Uc (-40...70 °C):drop-out DC 1...1.2 Uc (55...70 °C):operational DC |
| Inrush power in W | 270...365 W (at 20 °C) |
| Hold-in power consumption in W | 2.4...5.1 W at 20 °C |
| Operating time | 20...35 ms closing 40...75 ms opening |
| Time constant | 25 ms |
| Maximum operating rate | 1200 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...2.5 mm ² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1...2.5 mm ² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1...2.5 mm ² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1...2.5 mm ² - cable stiffness: solid without cable end Power circuit: connector 1 10...120 mm ² - cable stiffness: flexible without cable end Power circuit: connector 2 10...50 mm ² - cable stiffness: flexible without cable end Power circuit: connector 1 10...120 mm ² - cable stiffness: flexible with cable end Power circuit: connector 2 10...50 mm ² - cable stiffness: flexible with cable end Power circuit: connector 1 10...120 mm ² - cable stiffness: solid without cable end Power circuit: connector 2 10...50 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 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 | UL BV GL GOST CSA CCC LROS (Lloyds register of shipping) RINA DNV UKCA CE |
| 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) 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 |

Packing Units

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| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 17.5 cm |
| Package 1 Width | 19 cm |
| Package 1 Length | 21.5 cm |
| Package 1 Weight | 2.474 kg |
| Unit Type of Package 2 | S06 |
| Number of Units in Package 2 | 27 |
| Package 2 Height | 75 cm |
| Package 2 Width | 60 cm |

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| Package 2 Length | 80 cm |
| Package 2 Weight | 79.798 kg |

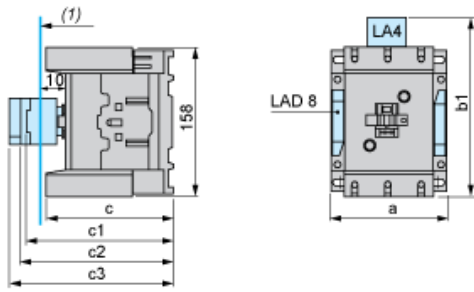
Offer Sustainability

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|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS declaration Product out of China RoHS scope. Substance declaration for your information |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free | Yes |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov |

Contractual warranty

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| Warranty | 18 months |
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Dimensions



(1) Minimum electrical clearance

| LC1 | | D115 and D150 (3-pole) |
|-----------|------------------------------------|------------------------|
| a | | 120 |
| b1 | with LA4 DA2 | 174 |
| | with LA4 DF, DT | 185 |
| | with LA4 DM, DL | 188 |
| | with LA4 DW | 188 |
| c | without cover or add-on blocks | 132 |
| | with cover, without add-on blocks | 136 |
| c1 | with LAD N or C (2 or 4 contacts) | 150 |
| c2 | with LA6 DK20 | 155 |
| c3 | with LAD T, R, S | 168 |
| | with LAD T, R, S and sealing cover | 172 |

Wiring



Recommended replacement(s)