

Product data sheet

Specifications



Contactor, TeSys Deca, 3P(3 NO), AC-3/AC-3e, 0 to 440V, 38A, 48 to 130VAC/DC coil

LC1D38EHE

Main

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| Range | TeSys TeSys Deca |
| Range of product | TeSys Deca |
| Product or component type | Contactor |
| Device short name | LC1D |
| Contactor application | Resistive load Motor control |
| Utilisation category | AC-3 AC-1 AC-3e |
| Poles description | 3P |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz |
| [Ie] rated operational current | 50 A (at <60 °C) at <= 440 V AC-1 for power circuit 38 A (at <60 °C) at <= 440 V AC-3 for power circuit 38 A (at <60 °C) at <= 440 V AC-3e for power circuit |
| [Uc] control circuit voltage | 48...130 V AC 50/60 Hz 48...130 V DC |

Complementary

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| Motor power kW | 9 kW at 220...230 V AC 50 Hz (AC-3) 18.5 kW at 380...400 V AC 50 Hz (AC-3) 18.5 kW at 415 V AC 50 Hz (AC-3) 18.5 kW at 440 V AC 50 Hz (AC-3) 18.5 kW at 500 V AC 50 Hz (AC-3) 18.5 kW at 660...690 V AC 50 Hz (AC-3) 9 kW at 220...230 V AC 50 Hz (AC-3e) 18.5 kW at 380...400 V AC 50 Hz (AC-3e) 18.5 kW at 415 V AC 50 Hz (AC-3e) 18.5 kW at 440 V AC 50 Hz (AC-3e) 18.5 kW at 500 V AC 50 Hz (AC-3e) 18.5 kW at 660...690 V AC 50 Hz (AC-3e) |
| Motor power hp | 2 hp at 115 V AC 60 Hz for 1 phase motors 5 hp at 230/240 V AC 60 Hz for 1 phase motors 10 hp at 200/208 V AC 60 Hz for 3 phases motors 10 hp at 230/240 V AC 60 Hz for 3 phases motors 20 hp at 460/480 V AC 60 Hz for 3 phases motors 25 hp at 575/600 V AC 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 50 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 60947-5-1 550 A at 440 V for power circuit conforming to IEC 60947 |
| Rated breaking capacity | 550 A at 440 V for power circuit conforming to IEC 60947 |
| [Icw] rated short-time withstand current | 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit 60 A 40 °C - 10 min for power circuit 150 A 40 °C - 1 min for power circuit 310 A 40 °C - 10 s for power circuit 430 A 40 °C - 1 s for power circuit |
| Associated fuse rating | 10 A gG for signalling circuit conforming to IEC 60947-5-1 63 A gG at <= 690 V coordination type 1 for power circuit 63 A gG at <= 690 V coordination type 2 for power circuit |
| Average impedance | 2 mOhm - Ith 50 A 50 Hz for power circuit |
| Power dissipation per pole | 5 W AC-1 3 W AC-3 3 W AC-3e |
| [Ui] rated insulation voltage | Power circuit: 690 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1 |
| Overvoltage category | III |
| Pollution degree | 3 |
| [Uimp] rated impulse withstand voltage | 6 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 | 15 Mcycles |
| Electrical durability | 1.8 Mcycles 35 A AC-3 at Ue <= 440 V 0.9 Mcycles 50 A AC-1 at Ue <= 440 V 1.8 Mcycles 35 A AC-3e at Ue <= 440 V |
| Control circuit type | AC/DC at 50/60 Hz AC/DC electronic |
| Coil technology | Built-in bidirectional peak limiting |
| Control circuit voltage limits | <= 0.1 Uc (-40...70 °C):drop-out AC/DC 0.85...1.1 Uc (-40...60 °C):operational AC/DC 1...1.1 Uc (60...70 °C):operational AC/DC |
| Inrush power in VA | 25 VA 50/60 Hz (at 20 °C) |
| Inrush power in W | 24 W (at 20 °C) |
| Hold-in power consumption in VA | 1.3 VA 50/60 Hz (at 20 °C) |
| Hold-in power consumption in W | 0.8 W at 20 °C |
| Heat dissipation | 0.8 W at 50/60 Hz |
| Operating time | 45...55 ms closing 20...90 ms opening |
| Maximum operating rate | 3600 cyc/h 60 °C |
| Connections - terminals | Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: solid Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: solid Power circuit: screw clamp terminals 1 2.5...10 mm² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 2.5...10 mm² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 1...10 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 1.5...6 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 1.5...10 mm² - cable stiffness: solid Power circuit: screw clamp terminals 2 2.5...10 mm² - cable stiffness: solid |
| Tightening torque | Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm 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 Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 M4 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 M3.5 |

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| 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 |
| 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 | Plate Rail |

Environment

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|---|---|
| Standards | EN/IEC 60947-4-1 EN/IEC 60947-5-1 UL 60947-4-1 CSA C22.2 No 60947-4-1 IEC 60335-1 |
| Product certifications | CCC CSA EAC UL KC DNV-GL LROS (Lloyds register of shipping) UKCA |
| IP degree of protection | IP20 front face conforming to IEC 60529 |
| Climatic withstand | conforming to IACS E10 exposure to damp heat conforming to IEC 60947-1 Annex Q category D 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 (8 Gn for 11 ms) |
| Height | 85 mm |
| Width | 45 mm |
| Depth | 92 mm |
| Net weight | 0.442 kg |

Packing Units

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| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 5.5 cm |
| Package 1 Width | 9.5 cm |
| Package 1 Length | 11.8 cm |
| Package 1 Weight | 460.0 g |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 15 |
| Package 2 Height | 15.0 cm |
| Package 2 Width | 30.0 cm |

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|-----------------------------|---|
| Package 2 Length | 40.0 cm |
| Package 2 Weight | 7.25 kg |
| Offer Sustainability | |
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS declaration Product out of China RoHS scope. Substance declaration for your information |
| RoHS exemption information | Yes |
| 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 |
| Halogen content performance | Halogen free plastic parts & cables product |

Contractual warranty

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| Warranty | 18 months |
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Recommended replacement(s)