

Product data sheet

Characteristics

LC1DT20ED

TeSys, Contactor, TeSys Deca, 4P(4 NO),
AC-1, 0 to 440V, 20A, 48VDC standard coil



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 |
| Utilisation category | AC-1 |
| Poles description | 4P |
| [Ue] rated operational voltage | Power circuit: ≤ 690 V AC 25...400 Hz Power circuit: ≤ 300 V DC |
| [Ie] rated operational current | 20 A (at ≤60 °C) at ≤ 440 V AC AC-1 for power circuit |
| [Uc] control circuit voltage | 48 V DC |

Complementary

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|---|---|
| Compatibility code | LC1D |
| Pole contact composition | 4 NO |
| Protective cover | With |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit 20 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 60947-5-1 250 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 | 30 A 40 °C - 10 min for power circuit 61 A 40 °C - 1 min for power circuit 105 A 40 °C - 10 s for power circuit 210 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 25 A gG at ≤ 690 V coordination type 1 for power circuit 20 A gG at ≤ 690 V coordination type 2 for power circuit |
| Average impedance | 2.5 mOhm - Ith 20 A 50 Hz for power circuit |
| Power dissipation per pole | 1.56 W AC-1 |
| [Ui] rated insulation voltage | Power circuit: 600 V CSA certified[RETURN]Power circuit: 600 V UL certified[RETURN]Signalling circuit: 690 V conforming to IEC 60947-1[RETURN]Signalling circuit: 600 V CSA certified[RETURN]Signalling circuit: 600 V UL certified[RETURN]Power circuit: 690 V conforming to IEC 60947-4-1 |
| 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 | 30 Mcycles |

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| Control circuit type | DC standard |
| Coil technology | Built-in bidirectional peak limiting diode suppressor |
| Control circuit voltage limits | 0.1...0.25 U _c (-40...70 °C):drop-out DC 0.7...1.25 U _c (-40...60 °C):operational DC 1...1.25 U _c (60...70 °C):operational DC |
| Inrush power in W | 5.4 W (at 20 °C) |
| Hold-in power consumption in W | 5.4 W at 20 °C |
| Operating time | 20 ±20 % ms opening 63 ±15 % ms closing |
| Time constant | 28 ms |
| 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...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: flexible with 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: screw clamp terminals 1 1...4 mm ² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 1...4 mm ² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 1...4 mm ² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 1...2.5 mm ² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 1...4 mm ² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 1...4 mm ² - cable stiffness: solid without cable end |
| 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: 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 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 Power circuit: 1.7 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 |
| 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 | 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 | GOST[RETURN]RINA[RETURN]CSA[RETURN]DNV[RETURN]JUL[RETURN]BV[RETURN]CCC[RETURN]RINA[RETURN]GL (Lloyds register of shipping)[RETURN]GL |
| 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 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 |

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| 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 (10 Gn for 11 ms) |
| Height | 85 mm |
| Width | 45 mm |
| Depth | 99 mm |
| Net weight | 0.365 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 | 9.3 cm |
| Package 1 Length | 11.8 cm |
| Package 1 Weight | 557 g |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 16 |
| Package 2 Height | 15 cm |
| Package 2 Width | 30 cm |
| Package 2 Length | 40 cm |
| Package 2 Weight | 9.408 kg |

Offer Sustainability

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| Sustainable offer status | Green Premium product |
| REACH Regulation |  REACH Declaration |
| EU RoHS Directive | Compliant with Exemptions |
| Mercury free | Yes |
| China RoHS Regulation |  China RoHS Declaration |
| RoHS exemption information |  Yes |
| Environmental Disclosure |  Product Environmental Profile |
| Circularity Profile |  End Of Life Information |
| PVC free | Yes |

Contractual warranty

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| Warranty | 18 months |
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