Product datasheet





Contactor, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 80A, 380V AC 50/60Hz coil, screw clamp terminals

LC1D80Q7

Main

| Range | TeSys | |
|--------------------------------|--|--|
| 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-3e AC-4 AC-1 | |
| Poles Description | 3P | |
| [Ue] Rated Operational Voltage | Power circuit: <= 300 V DC 25400 Hz Power circuit: <= 690 V AC | |
| [le] 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 | 380 V AC 50/60 Hz | |

Complementary

| Motor Power Kw | 22 kW at 220230 V AC 50/60 Hz (AC-3) 37 kW at 380400 V AC 50/60 Hz (AC-3) 45 kW at 415440 V AC 50/60 Hz (AC-3) 55 kW at 500 V AC 50/60 Hz (AC-3) 45 kW at 660690 V AC 50/60 Hz (AC-3) 15 kW at 400 V AC 50/60 Hz (AC-4) 22 kW at 220230 V AC 50/60 Hz (AC-3e) 37 kW at 380400 V AC 50/60 Hz (AC-3e) 45 kW at 415440 V AC 50/60 Hz (AC-3e) 55 kW at 500 V AC 50/60 Hz (AC-3e) | |
|--|--|--|
| Motor Power Hp | 45 kW at 660690 V AC 50/60 Hz (AC-3e) 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 | |

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| Rated Breaking Capacity | 1100 A at 440 V for power circuit conforming to IEC 60947 |
|---|--|
| [Icw] Rated Short-Time Withstand | 640 A 40 °C - 10 s for power circuit |
| Current | 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 |
| | 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 | 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 | 0.851.1 Uc (-4055 °C):operational AC 60 Hz |
| | 0.30.6 Uc (-4070 °C):drop-out AC 50/60 Hz |
| | 0.81.1 Uc (-4055 °C):operational AC 50 Hz |
| | 11.1 Uc (5570 °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 | 610 W at 50/60 Hz |
| Operating Time | 2035 ms closing |
| | 620 ms opening |
| Maximum Operating Rate | 3600 cyc/h 60 °C |
| | oooo oyoni oo o |

| Connections - Terminals | Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 14 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 14 mm² - cable stiffness: solid without cable end Power circuit: connector 1 450 mm² - cable stiffness: flexible without cable end Power circuit: connector 1 450 mm² - cable stiffness: flexible with cable end Power circuit: connector 2 416 mm² - cable stiffness: flexible with cable end Power circuit: connector 1 450 mm² - cable stiffness: flexible with cable end Power circuit: connector 2 416 mm² - cable stiffness: solid without cable end Power circuit: connector 2 425 mm² - 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 |
| Signalling Circuit Frequency | 25400 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 | |
| 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 | LROS (Lloyds register of shipping) DNV GL UL CSA GOST BV CCC RINA |
| 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 | -4060 °C 6070 °C with derating |
| Operating Altitude | 03000 m |
| Fire Resistance | 850 °C conforming to IEC 60695-2-1 |

V1 conforming to UL 94

Flame Retardance

| Mechanical Robustness | Vibrations contactor open (2 Gn, 5300 Hz) Shocks contactor open (8 Gn for 11 ms) Vibrations contactor closed (3 Gn, 5300 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

| Unit Type Of Package 1 | PCE |
|------------------------------|------------|
| Number Of Units In Package 1 | 1 |
| Package 1 Height | 9.5 cm |
| Package 1 Width | 13.5 cm |
| Package 1 Length | 14.0 cm |
| Package 1 Weight | 1.561 kg |
| Unit Type Of Package 2 | S02 |
| Number Of Units In Package 2 | 5 |
| Package 2 Height | 15.0 cm |
| Package 2 Width | 30.0 cm |
| Package 2 Length | 40.0 cm |
| Package 2 Weight | 8.048 kg |
| Unit Type Of Package 3 | P06 |
| Number Of Units In Package 3 | 80 |
| Package 3 Height | 75.0 cm |
| Package 3 Width | 80.0 cm |
| Package 3 Length | 60.0 cm |
| Package 3 Weight | 136.768 kg |

Contractual warranty

Warranty 18 months



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Transparency RoHS/REACh

Well-being performance

| Ø | Reach Free Of Svhc |
|----------|--------------------------------|
| | Toxic Heavy Metal Free |
| Ø | Mercury Free |
| Ø | Rohs Exemption Information Yes |
| ⊘ | Pvc Free |

Certifications & Standards

| Reach Regulation | REACh Declaration |
|--------------------------|---|
| Eu Rohs Directive | Compliant EU RoHS Declaration |
| China Rohs Regulation | China RoHS declaration Pro-active China RoHS declaration (out of China RoHS legal scope) |
| Environmental Disclosure | Product Environmental Profile |
| Weee | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile | No need of specific recycling operations |