# Product datasheet

Specifications

Discontinued

## CONTACTOR 600VAC 50AMP IEC +OPTIONS

LC1D50BD

End-of-service on: 7 Apr 2021

**EAN Code: 3389110420814**

## Main

| | |
|---|---|
| **Range** | TeSys |
| **Range of product** | TeSys Deca |
| **Product or component type** | Contactor |
| **Device short name** | LC1D |
| **Contactor application** | Resistive load<br>Resistive load |
| **Utilisation category** | AC-2<br>AC-4<br>AC-3<br>AC-3e<br>AC-4 |
| **Poles description** | 3P |
| **[Ue] rated operational voltage** | Power circuit: <= 690 V AC 25...400 Hz |
| **[Ie] rated operational current** | 80 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>50 A (at <60 °C) at <= 440 V AC AC-3e for power circuit<br>50 A (at <60 °C) at <= 440 V AC AC-3 for power circuit |
| **[Uc] control circuit voltage** | 24 V DC |

## Complementary

| | |
|---|---|
| **Motor power kW** | 25 kW at 415 V AC 50 Hz (AC-3)<br>30 kW at 440 V AC 50 Hz (AC-3)<br>30 kW at 500 V AC 50 Hz (AC-3)<br>33 kW at 660...690 V AC 50 Hz (AC-3)<br>15 kW at 220...230 V AC 50 Hz (AC-3)<br>11 kW at 400 V AC 50 Hz (AC-4)<br>30 kW at 1000 V AC 50 Hz (AC-3)<br>22 kW at 380...400 V AC 50 Hz (AC-3e)<br>25 kW at 415 V AC 50 Hz (AC-3e)<br>30 kW at 440 V AC 50 Hz (AC-3e)<br>30 kW at 500 V AC 50 Hz (AC-3e)<br>33 kW at 660...690 V AC 50 Hz (AC-3e)<br>15 kW at 220...230 V AC 50 Hz (AC-3e)<br>30 kW at 1000 V AC 50 Hz (AC-3e)<br>22 kW at 380...400 V AC 50 Hz (AC-3) |
| **Motor power hp** | 7.5 hp at 230/240 V AC 60 Hz for 1 phase motors<br>15 hp at 200/208 V AC 60 Hz for 3 phases motors<br>15 hp at 230/240 V AC 60 Hz for 3 phases motors<br>40 hp at 460/480 V AC 60 Hz for 3 phases motors<br>40 hp at 575/600 V AC 60 Hz for 3 phases motors<br>3 hp at 115 V AC 60 Hz for 1 phase motors |
| **Compatibility code** | LC1D |
| **Pole contact composition** | 3 NO |
| **Protective cover** | With |

| | |
|---|---|
| **[Ith] conventional free air thermal current** | 80 A (at 60 °C) for power circuit<br>10 A (at 60 °C) for control circuit |
| **Irms rated making capacity** | 900 A at 440 V DC for power circuit conforming to IEC 60947<br>900 A at 440 V for power circuit conforming to IEC 60947<br>250 A DC for control circuit conforming to IEC 60947-5-1 |
| **Rated breaking capacity** | 900 A at 440 V for power circuit conforming to IEC 60947 |
| **Associated fuse rating** | 100 A gG at <= 690 V coordination type 1 for power circuit<br>100 A gG at <= 690 V coordination type 2 for power circuit conforming to IEC 60947-5-1<br>10 A gG for control circuit conforming to IEC 60947-5-1 |
| **Power dissipation per pole** | 9.6 W AC-1<br>3.7 W AC-3e<br>3.7 W AC-3 |
| **[Ui] rated insulation voltage** | Control circuit: 600 V UL certified<br>Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified conforming to IEC 60947-1<br>Control circuit: 690 V conforming to IEC 60947-1<br>Power circuit: 690 V conforming to IEC 60947-1<br>Power circuit: 1000 V CSA certified conforming to IEC 60947-4-1<br>Control circuit: 600 V CSA certified |
| **Overvoltage category** | III |
| **[Uimp] rated impulse withstand voltage** | 8 kV conforming to IEC 60947 |
| **Safety reliability level** | B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1<br>B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1 |
| **Mechanical durability** | 10000000 cycles |
| **Control circuit type** | DC wide range |
| **Coil technology** | Built-in bidirectional peak limiting diode suppressor |
| **Control circuit voltage limits** | 0.75...1.25 Uc (-40…60 °C):operational DC<br>1...1.25 Uc (60…70 °C):operational DC<br>0.1...0.3 Uc (-40…70 °C):drop-out DC |
| **Inrush power in W** | 19 W (at 20 °C) |
| **Hold-in power consumption in W** | 7.4 W at 20 °C |
| **Rated operational power in W** | 48 W at 24 V DC-13 - electrical durability: 3000000 cycles - for control circuit<br>96 W at 24 V DC-13 - electrical durability: 1000000 cycles - for control circuit<br>14 W at 24 V DC-13 - electrical durability: 10000000 cycles - for control circuit |
| **Operating time** | 50 ±15 % ms closing<br>20 ±20 % ms opening |
| **Time constant** | 34 ms |
| **Maximum operating rate** | 3600 cyc/h at 60 °C |
| **Connections - terminals** | Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: rigid without cable end<br>Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 1…2.5 mm² - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw terminals 1 2.5…25 mm² - cable stiffness: rigid<br>Power circuit: screw terminals 2 2.5…16 mm² - cable stiffness: rigid without cable end<br>Power circuit: screw terminals 1 2.5…25 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw terminals 2 2.5…16 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw terminals 1 2.5…25 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw terminals 2 2.5…10 mm² - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: rigid<br>Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: rigid |

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|---|---|
| **Tightening torque** | Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver Philips No 2<br>Power circuit: 5 N.m - on screw terminal - with screwdriver flat Ø 6 to Ø 8 mm<br>Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver pozidriv No 2<br>Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver flat Ø 6 mm |
| **Auxiliary contact composition** | 1 NO + 1 NC |
| **Auxiliary contacts type** | type mirror contact 1 NC conforming to IEC 60947-4-1<br>type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 |
| **Minimum switching voltage** | 17 V for control circuit |
| **Minimum switching current** | 5 mA for control circuit |
| **Insulation resistance** | > 10 MOhm for control circuit |
| **Non-overlap time** | 1.5 ms on energisation between NC and NO contacts<br>1.5 ms on de-energisation between NC and NO contacts |
| **Mounting support** | Plate<br>Plate |

## Environment

| | |
|---|---|
| **Standards** | CSA C22.2 No 14<br>IEC 60947-5-1<br>EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1 |
| **Product certifications** | CSA<br>DNV<br>RINA<br>BV<br>CCC<br>UL<br>GOST<br>GL<br>UKCA<br>CCC |
| **IP degree of protection** | IP2X conforming to VDE 0106<br>IP2X conforming to IEC 60529 |
| **Climatic withstand** | conforming to IACS E10 exposure to damp heat |
| **Operating altitude** | 0...3000 m |
| **Fire resistance** | 850 °C conforming to IEC 60695-2-1 |
| **Flame retardance** | V1 conforming to UL 94 |
| **Mechanical robustness** | Shocks contactor closed (15 Gn for 11 ms)<br>Vibrations contactor opened (2 Gn, 5...300 Hz)<br>Vibrations contactor closed (4 Gn, 5...300 Hz)<br>Shocks contactor opened (10 Gn for 11 ms) |
| **Height** | 127 mm |
| **Width** | 85 mm |
| **Depth** | 176 mm |
| **Net weight** | 2.185 kg |

## Packing Units

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|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Height** | 9.0 cm |
| **Package 1 Width** | 14.0 cm |
| **Package 1 Length** | 18.5 cm |

| | |
|---|---|
| **Package 1 Weight** | 2.169 kg |
| **Unit Type of Package 2** | S02 |
| **Number of Units in Package 2** | 2 |
| **Package 2 Height** | 15 cm |
| **Package 2 Width** | 30 cm |
| **Package 2 Length** | 40 cm |
| **Package 2 Weight** | 4.829 kg |

## Contractual warranty

| | |
|---|---|
| **Warranty** | 18 months |

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

### Environmental footprint

| | |
|---|---|
| Carbon footprint (kg.eq.CO2 per CR, Total Life cycle) | 85 |
| Environmental Disclosure | Product Environmental Profile |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | No |
| EU RoHS Directive | Compliant |
| REACh Regulation | REACh Declaration |
| PVC free | Yes |

## Use Again

### Repack and remanufacture

| | |
|---|---|
| Circularity Profile | No need of specific recycling operations |
| Take-back | No |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Offer Marketing Illustration

**Product benefits / Features**

Offer Marketing Illustration

**Product benefits / Features**

Technical Illustration

**Assembly's dimensions**