# Product datasheet

Specifications


## TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 25 A - 24 V DC coil

LC1D25BD

## Main

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|---|---|
| **Range of product** | TeSys Deca |
| **Product or component type** | Contactor |
| **Device short name** | LC1D |
| **Contactor application** | Motor control<br>Resistive load |
| **Utilisation category** | AC-4<br>AC-3<br>AC-1<br>AC-3e |
| **Poles description** | 3P |
| **[Ue] rated operational voltage** | Power circuit: <= 690 V AC 25...400 Hz<br>Power circuit: <= 300 V DC |
| **[Ie] rated operational current** | 25 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>40 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>25 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** | 5.5 kW at 220...230 V AC 50/60 Hz (AC-3)<br>11 kW at 380...400 V AC 50/60 Hz (AC-3)<br>11 kW at 415...440 V AC 50/60 Hz (AC-3)<br>15 kW at 500 V AC 50/60 Hz (AC-3)<br>15 kW at 660...690 V AC 50/60 Hz (AC-3)<br>5.5 kW at 400 V AC 50/60 Hz (AC-4)<br>5.5 kW at 220...230 V AC 50/60 Hz (AC-3e)<br>11 kW at 380...400 V AC 50/60 Hz (AC-3e)<br>11 kW at 415...440 V AC 50/60 Hz (AC-3e)<br>15 kW at 500 V AC 50/60 Hz (AC-3e)<br>15 kW at 660...690 V AC 50/60 Hz (AC-3e) |
| **Motor power hp** | 3 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>2 hp at 115 V AC 50/60 Hz for 1 phase motors<br>7.5 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>15 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>20 hp at 575/600 V AC 50/60 Hz for 3 phases motors<br>7.5 hp at 200/208 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<br>40 A (at 60 °C) for power circuit |
| **Irms rated making capacity** | 140 A AC for signalling circuit conforming to IEC 60947-5-1<br>250 A DC for signalling circuit conforming to IEC 60947-5-1<br>450 A at 440 V for power circuit conforming to IEC 60947 |
| **Rated breaking capacity** | 450 A at 440 V for power circuit conforming to IEC 60947 |

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| **[Icw] rated short-time withstand current** | 240 A 40 °C - 10 s for power circuit<br>380 A 40 °C - 1 s for power circuit<br>50 A 40 °C - 10 min for power circuit<br>120 A 40 °C - 1 min for power circuit<br>100 A - 1 s for signalling circuit<br>120 A - 500 ms for signalling circuit<br>140 A - 100 ms for signalling circuit |
| **Associated fuse rating** | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>63 A gG at <= 690 V coordination type 1 for power circuit<br>40 A gG at <= 690 V coordination type 2 for power circuit |
| **Average impedance** | 2 mOhm - Ith 40 A 50 Hz for power circuit |
| **Power dissipation per pole** | 3.2 W AC-1<br>1.25 W AC-3<br>1.25 W AC-3e |
| **[Ui] rated insulation voltage** | Power circuit: 690 V conforming to IEC 60947-4-1<br>Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified |
| **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<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 |
| **Mechanical durability** | 30 Mcycles |
| **Electrical durability** | 1.65 Mcycles 25 A AC-3 at Ue <= 440 V<br>1.4 Mcycles 40 A AC-1 at Ue <= 440 V<br>1.65 Mcycles 25 A AC-3e at Ue <= 440 V |
| **Control circuit type** | DC standard |
| **Coil technology** | Built-in bidirectional peak limiting diode suppressor |
| **Control circuit voltage limits** | 0.1...0.25 Uc (-40…70 °C):drop-out DC<br>0.7...1.25 Uc (-40…60 °C):operational DC<br>1...1.25 Uc (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** | 63 ±15 % ms closing<br>20 ±20 % ms opening |
| **Time constant** | 28 ms |
| **Maximum operating rate** | 3600 cyc/h at 60 °C |

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|---|---|
| **Connections - terminals** | 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…4 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>Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 1 2.5…10 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 2.5…10 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 1…10 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 1.5…6 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 1.5…10 mm² - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 2.5…10 mm² - cable stiffness: solid without cable end |
| **Tightening torque** | Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2<br>Power circuit: 2.5 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<br>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<br>1.5 ms on energisation between NC and NO contact |
| **Mounting support** | Plate<br>Rail |

# Environment

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|---|---|
| **Standards** | CSA C22.2 No 14<br>EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 60947-4-1<br>IEC 60335-1:Clause 30.2<br>IEC 60335-2-40:Annex JJ<br>UL 60335-2-40:Annex JJ<br>CSA C22.2 No 60947-4-1 |
| **Product certifications** | UL<br>CCC<br>CSA<br>Marine<br>UKCA<br>EAC<br>CB Scheme |
| **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<br>conforming to IEC 60947-1 Annex Q category D exposure to damp heat |

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| **Permissible ambient air temperature around the device** | -40…60 °C<br>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)<br>Vibrations contactor closed (4 Gn, 5...300 Hz)<br>Shocks contactor closed (15 Gn for 11 ms)<br>Shocks contactor open (8 Gn for 11 ms) |
| **Height** | 85 mm |
| **Width** | 45 mm |
| **Depth** | 101 mm |
| **Net weight** | 0.53 kg |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Height** | 5.000 cm |
| **Package 1 Width** | 9.300 cm |
| **Package 1 Length** | 11.300 cm |
| **Package 1 Weight** | 586.000 g |
| **Unit Type of Package 2** | S02 |
| **Number of Units in Package 2** | 15 |
| **Package 2 Height** | 15.000 cm |
| **Package 2 Width** | 30.000 cm |
| **Package 2 Length** | 40.000 cm |
| **Package 2 Weight** | 9.034 kg |
| **Unit Type of Package 3** | P06 |
| **Number of Units in Package 3** | 240 |
| **Package 3 Height** | 75.000 cm |
| **Package 3 Width** | 60.000 cm |
| **Package 3 Length** | 80.000 cm |
| **Package 3 Weight** | 152.000 kg |

## Contractual warranty

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|---|---|
| **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) | 42 |
| Environmental Disclosure | Product Environmental Profile |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| EU RoHS Directive | Compliant with Exemptions |
| SCIP Number | 50ae7612-fd2e-41e4-a369-50d0dea6e592 |
| REACh Regulation | REACh Declaration |
| PVC free | Yes |

## Use Again

### Repack and remanufacture

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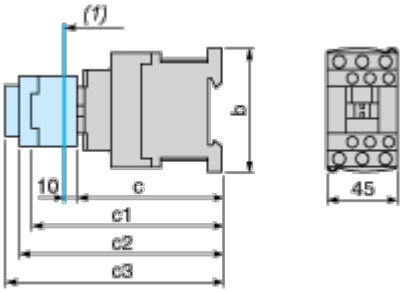
|---|---|
| Circularity Profile | End of Life Information |
| Take-back | No |

## Dimensions Drawings

### Dimensions




(1) Minimum electrical clearance

| LC1 | | D25…D38 | D183…D323 |
|---|---|---|---|
| **b** | | 85 | 99 |
| **c** | without cover or add-on blocks | 99 | 99 |
| | with cover, without add-on blocks | 101 | 101 |
| **c1** | with LAD N or C (2 or 4 contacts) | 132 | 132 |
| **c2** | with LA6 DK10 | 144 | 144 |
| **c3** | with LAD T, R, S | 152 | 152 |
| | with LAD T, R, S and sealing cover | 156 | 156 |

Connections and Schema

**Wiring**

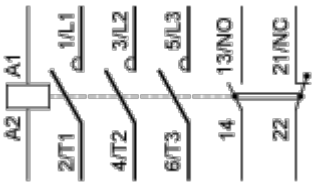
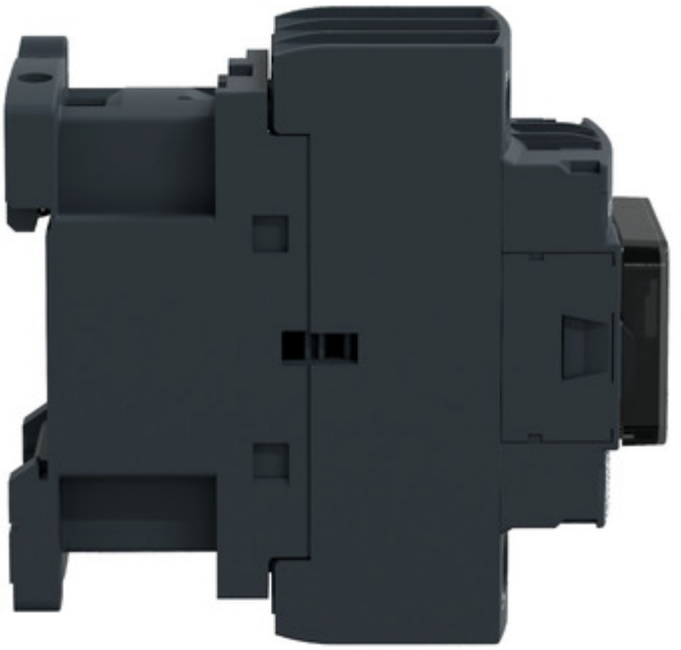


Image of product / Alternate images

**Alternative**



Technical Illustration

**Assembly's dimensions**