

# Product data sheet

Specifications



IEC contactor, TeSys Deca, nonreversing, 50A, 40HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 24VDC coil, open style

LC1D50ABD

Product availability: Stock - Normally stocked in distribution facility

**Price\*: 306.00 USD**

## Main

|                                |  |
|--------------------------------|--|
| Range                          | TeSys<br>TeSys Deca  |
| Range of Product               | TeSys Deca   |
| Product or Component Type      | Contactor  |
| Device short name              | LC1D   |
| contactor application          | Resistive load<br>Motor control  |
| Utilisation category           | AC-4<br>AC-1<br>AC-3<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 | 50 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit<br>80 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit<br>50 A (at <140 °F (60 °C)) at <= 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage   | 24 V DC  |

## Complementary

|                            |   |
|----------------------------|---|
| Motor power kW             | 15 kW at 220...230 V AC 50/60 Hz (AC-3)<br>22 kW at 380...400 V AC 50/60 Hz (AC-3)<br>30 kW at 500 V AC 50/60 Hz (AC-3)<br>33 kW at 660...690 V AC 50/60 Hz (AC-3)<br>25 kW at 415 V AC 50/60 Hz (AC-3)<br>30 kW at 440 V AC 50/60 Hz (AC-3)<br>11 kW at 400 V AC 50/60 Hz (AC-4)<br>15 kW at 220...230 V AC 50/60 Hz (AC-3e)<br>22 kW at 380...400 V AC 50/60 Hz (AC-3e)<br>30 kW at 500 V AC 50/60 Hz (AC-3e)<br>33 kW at 660...690 V AC 50/60 Hz (AC-3e)<br>25 kW at 415 V AC 50/60 Hz (AC-3e)<br>30 kW at 440 V AC 50/60 Hz (AC-3e) |
| Maximum Horse Power Rating | 3 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 1 phase motors<br>15 hp at 200/208 V AC 50/60 Hz for 3 phase motors<br>15 hp at 230/240 V AC 50/60 Hz for 3 phase motors<br>40 hp at 460/480 V AC 50/60 Hz for 3 phase motors<br>40 hp at 575/600 V AC 50/60 Hz for 3 phase motors  |
| Compatibility code         | LC1D  |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

|  |   |
|--|---|
| <b>Pole contact composition</b>                    | 3 NO  |
| <b>Protective cover</b>                            | With  |
| <b>[Ith] conventional free air thermal current</b> | 10 A (at 140 °F (60 °C)) for signalling circuit<br>80 A (at 140 °F (60 °C)) for power circuit   |
| <b>Irms rated making capacity</b>                  | 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>900 A at 440 V for power circuit conforming to IEC 60947  |
| <b>Rated breaking capacity</b>                     | 900 A at 440 V for power circuit conforming to IEC 60947  |
| <b>[Icw] rated short-time withstand current</b>    | 400 A 104 °F (40 °C) - 10 s for power circuit<br>810 A 104 °F (40 °C) - 1 s for power circuit<br>84 A 104 °F (40 °C) - 10 min for power circuit<br>208 A 104 °F (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 |
| <b>Associated fuse rating</b>                      | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>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  |
| <b>Average impedance</b>                           | 1.5 mOhm - Ith 80 A 50 Hz for power circuit   |
| <b>Power dissipation per pole</b>                  | 3.7 W AC-3<br>9.6 W AC-1<br>3.7 W AC-3e   |
| <b>[Ui] rated insulation voltage</b>               | Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit 600 V CSA<br>Signalling circuit 600 V UL<br>Power circuit 690 V IEC 60947-4-1   |
| <b>Overvoltage category</b>                        | III   |
| <b>Pollution degree</b>                            | 3   |
| <b>[Uimp] rated impulse withstand voltage</b>      | 6 kV IEC 60947  |
| <b>Safety reliability level</b>                    | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1  |
| <b>Mechanical durability</b>                       | 10 Mcycles  |
| <b>Electrical durability</b>                       | 1.45 Mcycles 50 A AC-3 <= 440 V<br>0.5 Mcycles 80 A AC-1 <= 440 V<br>1.45 Mcycles 50 A AC-3e <= 440 V   |
| <b>Control circuit type</b>                        | DC standard   |
| <b>Coil technology</b>                             | Built-in bidirectional peak limiting diode suppressor   |
| <b>Control circuit voltage limits</b>              | 0.1...0.3 Uc -40...158 °F (-40...70 °C) drop-out DC<br>0.75...1.25 Uc -40...140 °F (-40...60 °C) operational DC<br>1...1.25 Uc 140...158 °F (60...70 °C) operational DC   |
| <b>Inrush power in W</b>                           | 19 W 68 °F (20 °C))   |
| <b>Hold-in power consumption in W</b>              | 7.4 W 68 °F (20 °C)   |
| <b>Operating time</b>                              | 50 ±15 % ms closing<br>16...24 ms opening   |
| <b>Time constant</b>                               | 34 ms   |
| <b>Maximum operating rate</b>                      | 3600 cyc/h 140 °F (60 °C)   |
| <b>Maximum operating rate</b>                      | 3600 cyc/h at 60 °C   |

|                                      |  |
|--------------------------------------|--|
| <b>Connections - terminals</b>       | Control circuit: screw clamp terminals 2 0.002...0.004 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid without cable end<br>Power circuit: screw connection 1 0.002...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> ) - cable stiffness: flexible without cable end<br>Power circuit: screw connection 2 0.002...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> ) - cable stiffness: flexible without cable end<br>Power circuit: screw connection 1 0.002...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> ) - cable stiffness: flexible with cable end<br>Power circuit: screw connection 2 0.002...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> ) - cable stiffness: flexible with cable end<br>Power circuit: screw connection 1 0.002...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> ) - cable stiffness: solid without cable end<br>Power circuit: screw connection 2 0.002...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> ) - cable stiffness: solid without cable end |
| <b>Tightening torque</b>             | Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2<br>Power circuit 70.8 lbf.in (8 N.m) EverLink BTR screw connectors 0.04...0.05 in <sup>2</sup> (25...35 mm <sup>2</sup> ) hexagonal 0.2 in (4 mm)<br>Power circuit 44.3 lbf.in (5 N.m) EverLink BTR screw connectors 0.002...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> ) hexagonal 0.2 in (4 mm)<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2<br>Power circuit 22.1 lbf.in (2.5 N.m) screw clamp terminals pozidriv No 2   |
| <b>Auxiliary contact composition</b> | 1 NO + 1 NC  |
| <b>Auxiliary contacts type</b>       | Mechanically linked 1 NO + 1 NC IEC 60947-5-1<br>Mirror contact 1 NC IEC 60947-4-1   |
| <b>Signalling circuit frequency</b>  | 25...400 Hz  |
| <b>Minimum switching voltage</b>     | 17 V for signalling circuit  |
| <b>Minimum switching current</b>     | 5 mA for signalling circuit  |
| <b>Insulation resistance</b>         | > 10 MOhm for signalling circuit   |
| <b>Non-overlap time</b>              | 1.5 ms on de-energisation between NC and NO contact<br>1.5 ms on energisation between NC and NO contact  |
| <b>Mounting Support</b>              | Plate<br>Rail  |

## Environment

|                                |   |
|--------------------------------|---|
| <b>Standards</b>               | EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>CSA C22.2 No 14<br>UL 60947-4-1<br>IEC 60335-2-40:Annex JJ<br>UL 60335-2-40:Annex JJ<br>IEC 60335-1:Clause 30.2 |
| <b>Product Certifications</b>  | CCC<br>UL<br>CB Scheme<br>CSA<br>CE<br>UKCA<br>Marine<br>EAC  |
| <b>IP degree of protection</b> | IP20 front face IEC 60529   |
| <b>Protective treatment</b>    | THIEC 60068-2-30  |

|  |  |
|--|--|
| <b>Climatic withstand</b>                                    | IACS E10 exposure to damp heat<br>IEC 60947-1 Annex Q category D exposure to damp heat   |
| <b>Permissible ambient air temperature around the device</b> | -40...140 °F (-40...60 °C)<br>140...158 °F (60...70 °C) with derating  |
| <b>Operating altitude</b>                                    | 0...9842.52 ft (0...3000 m)  |
| <b>Fire resistance</b>                                       | 1562 °F (850 °C) IEC 60695-2-1   |
| <b>Flame retardance</b>                                      | V1 conforming to UL 94   |
| <b>Mechanical robustness</b>                                 | 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 10 Gn for 11 ms) |
| <b>Height</b>  | 4.8 in (122 mm)  |
| <b>Width</b>   | 2.2 in (55 mm)   |
| <b>Depth</b>   | 4.7 in (120 mm)  |
| <b>Net Weight</b>  | 2.05 lb(US) (0.93 kg)  |

## Ordering and shipping details

|                          |               |
|--------------------------|---------------|
| <b>Category</b>          | US10I1222358  |
| <b>Discount Schedule</b> | 0112          |
| <b>GTIN</b>              | 3389119408783 |
| <b>Returnability</b>     | Yes           |
| <b>Country of origin</b> | FR            |

## Packing Units

|                                     |                           |
|-------------------------------------|---------------------------|
| <b>Unit Type of Package 1</b>       | PCE                       |
| <b>Number of Units in Package 1</b> | 1                         |
| <b>Package 1 Height</b>             | 2.441 in (6.200 cm)       |
| <b>Package 1 Width</b>              | 5.394 in (13.700 cm)      |
| <b>Package 1 Length</b>             | 5.984 in (15.200 cm)      |
| <b>Package 1 Weight</b>             | 35.238 oz (999.000 g)     |
| <b>Unit Type of Package 2</b>       | S02                       |
| <b>Number of Units in Package 2</b> | 10                        |
| <b>Package 2 Height</b>             | 5.906 in (15.000 cm)      |
| <b>Package 2 Width</b>              | 11.811 in (30.000 cm)     |
| <b>Package 2 Length</b>             | 15.748 in (40.000 cm)     |
| <b>Package 2 Weight</b>             | 22.619 lb(US) (10.260 kg) |

## Contractual warranty

|                 |           |
|-----------------|-----------|
| <b>Warranty</b> | 18 months |
|-----------------|-----------|

## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)




Sustainable Packaging Transparency RoHS/REACH


## Resource performance

 Sustainable Packaging

## Well-being performance

 Reach Free Of Svhc

 Mercury Free

 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 [End of Life Information](#)

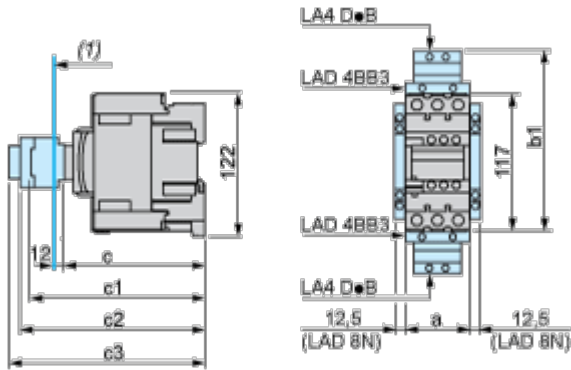
**California Proposition 65**

WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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Dimensions Drawings

Dimensions



(1) Minimum electrical clearance

| LC1 |                                    | D40A...D65A |
|-----|------------------------------------|-------------|
| a   |                                    | 55          |
| b1  | with LAD 4BB3                      | 136         |
|     | with LA4 DF, DT                    | 157         |
| c   | without cover or add-on blocks     | 118         |
|     | with cover, without add-on blocks  | 120         |
| c1  | with LAD N (1 contact)             | –           |
|     | with LAD N or C (2 or 4 contacts)  | 150         |
| c2  | with LA6 DK10                      | 163         |
| c3  | with LAD T, R, S                   | 171         |
|     | with LAD T, R, S and sealing cover | 175         |

Connections and Schema

Wiring

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