

# Product datasheet

Specifications



Contactor, TeSys Deca, 3P(3 NO),  
AC-3/AC-3e, <=400V, 50A, 12V  
DC standard coil, spring terminals

LC1D50A3JD

## Main

|                                |                                                                                                                                                                             |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys<br>TeSys Deca                                                                                                                                                         |
| 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-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 <60 °C) at <= 440 V AC AC-3 for power circuit<br>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 |
| [Uc] Control Circuit Voltage   | 12 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) |
| Motor Power Hp                              | 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 phases motors<br>15 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>40 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>40 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<br>80 A (at 60 °C) for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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 40 °C - 10 s for power circuit<br>810 A 40 °C - 1 s for power circuit<br>84 A 40 °C - 10 min for power circuit<br>208 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <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 - lth 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 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<br>Power circuit: 690 V conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Overvoltage Category</b>                     | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Pollution Degree</b>                         | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>[Uimp] Rated Impulse Withstand Voltage</b>   | 6 kV conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Safety Reliability Level</b>                 | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Mechanical Durability</b>                    | 10 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Electrical Durability</b>                    | 1.45 Mcycles 50 A AC-3 at Ue <= 440 V<br>0.5 Mcycles 80 A AC-1 at Ue <= 440 V<br>1.45 Mcycles 50 A AC-3e at Ue <= 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...70 °C):drop-out DC<br>0.75...1.25 Uc (-40...60 °C):operational DC<br>1...1.25 Uc (60...70 °C):operational DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Inrush Power In W</b>                        | 19 W (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Hold-In Power Consumption In W</b>           | 7.4 W at 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 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Connections - Terminals</b>                  | Power circuit: EverLink BTR screw connectors 1 1...35 mm² - cable stiffness: flexible without cable end<br>Power circuit: EverLink BTR screw connectors 2 1...25 mm² - cable stiffness: flexible without cable end<br>Power circuit: EverLink BTR screw connectors 1 1...35 mm² - cable stiffness: flexible with cable end<br>Power circuit: EverLink BTR screw connectors 2 1...25 mm² - cable stiffness: flexible with cable end<br>Power circuit: EverLink BTR screw connectors 1 1...35 mm² - cable stiffness: solid without cable end<br>Power circuit: EverLink BTR screw connectors 2 1...25 mm² - cable stiffness: solid without cable end<br>Control circuit: spring terminals 1 2.5 mm² - cable stiffness: flexible without cable end<br>Control circuit: spring terminals 2 2.5 mm² - cable stiffness: flexible without cable end |

|                               |                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tightening Torque             | Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm²<br>hexagonal screw head 4 mm<br>Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm²<br>hexagonal screw head 4 mm<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

|                                                       |                                                                                                                                                                                        |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 508<br>IEC 60335-1                                                                             |
| Product Certifications                                | GL<br>LROS (Lloyds register of shipping)<br>CCC<br>RINA<br>BV<br>UL<br>CSA<br>DNV<br>GOST                                                                                              |
| 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                                                                     |
| 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 (10 Gn for 11 ms) |
| Height                                                | 122 mm                                                                                                                                                                                 |
| Width                                                 | 55 mm                                                                                                                                                                                  |
| Depth                                                 | 120 mm                                                                                                                                                                                 |
| Net Weight                                            | 0.93 kg                                                                                                                                                                                |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type Of Package 1       | PCE     |
| Number Of Units In Package 1 | 1       |
| Package 1 Height             | 6.0 cm  |
| Package 1 Width              | 14.0 cm |
| Package 1 Length             | 15.0 cm |
| Package 1 Weight             | 850.0 g |

## Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 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 >](#)



Transparency   RoHS/REACH

## Well-being performance

|              |                            |     |
|--------------|----------------------------|-----|
| <div>✓</div> | Reach Free Of Svhc         |     |
| <div>✓</div> | Mercury Free               |     |
| <div>✓</div> | Rohs Exemption Information | Yes |
| <div>✓</div> | Pvc Free                   |     |

## Certifications & Standards

|                          |                                                                                                                             |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Reach Regulation         | <a href="#">REACH Declaration</a>                                                                                           |
| Eu Rohs Directive        | Compliant<br><a href="#">EU RoHS Declaration</a>                                                                            |
| China Rohs Regulation    | <a href="#">China RoHS declaration</a><br>Pro-active China RoHS declaration (out of China RoHS legal scope)                 |
| Environmental Disclosure | <a href="#">Product Environmental Profile</a>                                                                               |
| Weee                     | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile      | <a href="#">End of Life Information</a>                                                                                     |