



# Product datasheet

Specifications



## TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 9 A - 24 V DC coil

LC1D09BL

### Main

|                                |                                                                                                                                                                           |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range Of Product               | TeSys Deca                                                                                                                                                                |
| Product Or Component Type      | Contactor                                                                                                                                                                 |
| Device Short Name              | LC1D                                                                                                                                                                      |
| Contactor Application          | Resistive load<br>Motor control                                                                                                                                           |
| Utilisation Category           | AC-3<br>AC-1<br>AC-4<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 | 9 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>9 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| [Uc] Control Circuit Voltage   | 24 V DC                                                                                                                                                                   |

### Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor Power Kw                              | 2.2 kW at 220...230 V AC 50/60 Hz (AC-3)<br>4 kW at 380...400 V AC 50/60 Hz (AC-3)<br>4 kW at 415...440 V AC 50/60 Hz (AC-3)<br>5.5 kW at 500 V AC 50/60 Hz (AC-3)<br>5.5 kW at 660...690 V AC 50/60 Hz (AC-3)<br>2.2 kW at 400 V AC 50/60 Hz (AC-4)<br>2.2 kW at 220...230 V AC 50/60 Hz (AC-3e)<br>4 kW at 380...400 V AC 50/60 Hz (AC-3e)<br>4 kW at 415...440 V AC 50/60 Hz (AC-3e)<br>5.5 kW at 500 V AC 50/60 Hz (AC-3e)<br>5.5 kW at 660...690 V AC 50/60 Hz (AC-3e) |
| Motor Power Hp                              | 1 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>2 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>2 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>5 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>7.5 hp at 575/600 V AC 50/60 Hz for 3 phases motors<br>0.33 hp at 115 V AC 50/60 Hz for 1 phase motors                                                                                                                                                   |
| Compatibility Code                          | LC1D                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Pole Contact Composition                    | 3 NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Protective Cover                            | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| [Ith] Conventional Free Air Thermal Current | 25 A (at 60 °C) for power circuit<br>10 A (at 60 °C) for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                 |
| Irms Rated Making Capacity                  | 250 A at 440 V for power circuit conforming to IEC 60947<br>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                                                                                                                                                                                                                                                                                      |
| Rated Breaking Capacity                     | 250 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                    |

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>[Icw] Rated Short-Time Withstand Current</b> | 105 A 40 °C - 10 s for power circuit<br>210 A 40 °C - 1 s for power circuit<br>30 A 40 °C - 10 min for power circuit<br>61 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>25 A gG at <= 690 V coordination type 1 for power circuit<br>20 A gG at <= 690 V coordination type 2 for power circuit                                                                                                 |
| <b>Average Impedance</b>                        | 2.5 mOhm - lth 25 A 50 Hz for power circuit                                                                                                                                                                                                                                          |
| <b>Power Dissipation Per Pole</b>               | 1.56 W AC-1<br>0.2 W AC-3<br>0.2 W AC-3e                                                                                                                                                                                                                                             |
| <b>[Ui] Rated Insulation Voltage</b>            | 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              |
| <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>                    | 30 Mcycles                                                                                                                                                                                                                                                                           |
| <b>Electrical Durability</b>                    | 0.6 Mcycles 25 A AC-1 at Ue <= 440 V<br>2 Mcycles 9 A AC-3 at Ue <= 440 V<br>2 Mcycles 9 A AC-3e at Ue <= 440 V                                                                                                                                                                      |
| <b>Control Circuit Type</b>                     | DC low consumption                                                                                                                                                                                                                                                                   |
| <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>0.8...1.25 Uc (-40...60 °C):operational DC<br>1...1.25 Uc (60...70 °C):operational DC                                                                                                                                                      |
| <b>Inrush Power In W</b>                        | 2.4 W (at 20 °C)                                                                                                                                                                                                                                                                     |
| <b>Hold-In Power Consumption In W</b>           | 2.4 W at 20 °C                                                                                                                                                                                                                                                                       |
| <b>Operating Time</b>                           | 77 ±15 % ms closing<br>25 ±20 % ms opening                                                                                                                                                                                                                                           |
| <b>Time Constant</b>                            | 40 ms                                                                                                                                                                                                                                                                                |
| <b>Maximum Operating Rate</b>                   | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                     |

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connections - Terminals       | Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                               | Power circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                               | Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               | Power circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                               | Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               | Power circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               | Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               | Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               | Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                               | Control circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               | Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                               | Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Tightening Torque             | Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>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>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2<br>Power circuit: 1.7 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>UL<br>LROS (Lloyds register of shipping)<br>CCC<br>RINA<br>BV<br>GOST<br>DNV<br>CSA<br>UKCA                  |
| 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 |

|                                                              |                                                                                                                                                                                        |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Permissible Ambient Air Temperature Around The Device</b> | -40...60 °C<br>60...70 °C with derating                                                                                                                                                |
| <b>Operating Altitude</b>                                    | 0...3000 m                                                                                                                                                                             |
| <b>Fire Resistance</b>                                       | 850 °C conforming to 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 open (10 Gn for 11 ms)<br>Shocks contactor closed (15 Gn for 11 ms) |
| <b>Height</b>                                                | 77 mm                                                                                                                                                                                  |
| <b>Width</b>                                                 | 45 mm                                                                                                                                                                                  |
| <b>Depth</b>                                                 | 95 mm                                                                                                                                                                                  |
| <b>Net Weight</b>                                            | 0.48 kg                                                                                                                                                                                |

## Packing Units

|                                     |            |
|-------------------------------------|------------|
| <b>Unit Type Of Package 1</b>       | PCE        |
| <b>Number Of Units In Package 1</b> | 1          |
| <b>Package 1 Height</b>             | 5.000 cm   |
| <b>Package 1 Width</b>              | 9.200 cm   |
| <b>Package 1 Length</b>             | 11.200 cm  |
| <b>Package 1 Weight</b>             | 528.000 g  |
| <b>Unit Type Of Package 2</b>       | S02        |
| <b>Number Of Units In Package 2</b> | 15         |
| <b>Package 2 Height</b>             | 15.000 cm  |
| <b>Package 2 Width</b>              | 30.000 cm  |
| <b>Package 2 Length</b>             | 40.000 cm  |
| <b>Package 2 Weight</b>             | 8.182 kg   |
| <b>Unit Type Of Package 3</b>       | P06        |
| <b>Number Of Units In Package 3</b> | 240        |
| <b>Package 3 Height</b>             | 75.000 cm  |
| <b>Package 3 Width</b>              | 60.000 cm  |
| <b>Package 3 Length</b>             | 80.000 cm  |
| <b>Package 3 Weight</b>             | 138.000 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.

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



Transparency   RoHS/REACH

## Well-being performance

 Mercury Free

 Rohs Exemption Information   [Yes](#)

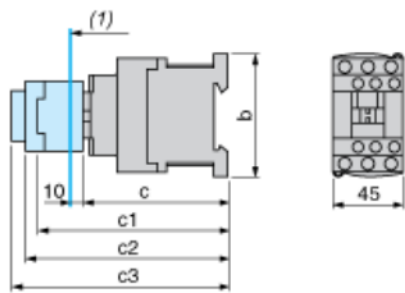
 Pvc Free

## Certifications & Standards

|                          |                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Reach Regulation         | <a href="#">REACH Declaration</a>                                                                                     |
| Eu Rohs Directive        | Compliant with Exemptions                                                                                             |
| China Rohs Regulation    | <a href="#">China RoHS declaration</a><br>Product out of China RoHS scope. Substance declaration for your information |
| Environmental Disclosure | <a href="#">Product Environmental Profile</a>                                                                         |
| Circularity Profile      | <a href="#">End of Life Information</a>                                                                               |

Dimensions Drawings

Dimensions



(1) Minimum electrical clearance

| LC1       |                                    | D09...D18 | D093...D123 | D099...D129 |
|-----------|------------------------------------|-----------|-------------|-------------|
| <b>b</b>  |                                    | 77        | 99          | 80          |
| <b>c</b>  | without cover or add-on blocks     | 93        | 93          | 93          |
|           | with cover, without add-on blocks  | 95        | 95          | 95          |
| <b>c1</b> | with LAD N or C (2 or 4 contacts)  | 126       | 126         | 126         |
| <b>c2</b> | with LA6 DK10                      | 138       | 138         | 138         |
| <b>c3</b> | with LAD T, R, S                   | 146       | 146         | 146         |
|           | with LAD T, R, S and sealing cover | 150       | 150         | 150         |

Connections and Schema

Wiring

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