

# LC1D09BL

IEC contactor, TeSys Deca, nonreversing, 9A, 5HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, low consumption 24VDC coil



## Main

|                                |   |
|--------------------------------|---|
| Range of Product               | TeSys Deca  |
| Product or Component Type      | Contacteur  |
| Device short name              | LC1D  |
| Contacteur 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 140 °F (60 °C) <= 440 V AC AC-3 power circuit<br>25 A 140 °F (60 °C) <= 440 V AC AC-1 power circuit<br>9 A 140 °F (60 °C) <= 440 V AC AC-3e power circuit |
| [Uc] control circuit voltage   | 24 V DC   |

## Complementary

|   |   |
|---|---|
| Motor power kW                              | 2.2 kW 220...230 V AC 50/60 Hz AC-3)<br>4 kW 380...400 V AC 50/60 Hz AC-3)<br>4 kW 415...440 V AC 50/60 Hz AC-3)<br>5.5 kW 500 V AC 50/60 Hz AC-3)<br>5.5 kW 660...690 V AC 50/60 Hz AC-3)<br>2.2 kW 400 V AC 50/60 Hz AC-4)<br>2.2 kW 220...230 V AC 50/60 Hz AC-3e)<br>4 kW 380...400 V AC 50/60 Hz AC-3e)<br>4 kW 415...440 V AC 50/60 Hz AC-3e)<br>5.5 kW 500 V AC 50/60 Hz AC-3e)<br>5.5 kW 660...690 V AC 50/60 Hz AC-3e) |
| Maximum Horse Power Rating                  | 1 Hp 230/240 V at AC 50/60 Hz for 1 phase<br>2 Hp 200/208 V at AC 50/60 Hz for 3 phase<br>2 Hp 230/240 V at AC 50/60 Hz for 3 phase<br>5 Hp 460/480 V at AC 50/60 Hz for 3 phase<br>7.5 Hp 575/600 V at AC 50/60 Hz for 3 phase<br>0.33 hp 115 V at AC 50/60 Hz for 1 phase   |
| Compatibility code                          | LC1D  |
| Pole contact composition                    | 3 NO  |
| Contact compatibility                       | M5  |
| Protective cover                            | With  |
| [Ith] conventional free air thermal current | 25 A 140 °F (60 °C) power circuit<br>10 A 140 °F (60 °C) signalling circuit   |
| Irms rated making capacity                  | 250 A 440 V power circuit IEC 60947<br>140 A AC signalling circuit IEC 60947-5-1<br>250 A DC signalling circuit IEC 60947-5-1   |
| Rated breaking capacity                     | 250 A 440 V power circuit IEC 60947   |
| [Icw] rated short-time withstand current    | 105 A 104 °F (40 °C) - 10 s power circuit<br>210 A 104 °F (40 °C) - 1 s power circuit<br>30 A 104 °F (40 °C) - 10 min power circuit<br>61 A 104 °F (40 °C) - 1 min power circuit<br>100 A - 1 s signalling circuit<br>120 A - 500 ms signalling circuit<br>140 A - 100 ms signalling circuit  |

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|  |  |
|--|--|
| Associated fuse rating                 | 10 A gG signalling circuit IEC 60947-5-1<br>25 A gG ≤ 690 V type 1 power circuit<br>20 A gG ≤ 690 V type 2 power circuit   |
| Average impedance                      | 2.5 mOhm - Ith 25 A 50 Hz power circuit  |
| Power dissipation per pole             | 1.56 W AC-1<br>0.2 W AC-3<br>0.2 W AC-3e   |
| [Ui] rated insulation voltage          | Power circuit 690 V IEC 60947-4-1<br>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  |
| Overvoltage category                   | III  |
| Pollution degree                       | 3  |
| [Uimp] rated impulse withstand voltage | 6 kV IEC 60947   |
| Safety reliability level               | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1   |
| Mechanical durability                  | 30 Mcycles   |
| Electrical durability                  | 0.6 Mcycles 25 A AC-1 ≤ 440 V<br>2 Mcycles 9 A AC-3 ≤ 440 V<br>2 Mcycles 9 A AC-3e ≤ 440 V   |
| Control circuit type                   | DC low consumption   |
| Coil technology                        | Built-in bidirectional peak limiting diode suppressor  |
| Control circuit voltage limits         | 0.1...0.3 U <sub>c</sub> -40...158 °F (-40...70 °C) drop-out DC<br>0.8...1.25 U <sub>c</sub> -40...140 °F (-40...60 °C) operational DC<br>1...1.25 U <sub>c</sub> 140...158 °F (60...70 °C) operational DC   |
| Inrush power in W                      | 2.4 W 68 °F (20 °C))   |
| Hold-in power consumption in W         | 2.4 W 68 °F (20 °C)  |
| Operating time                         | 65.45...88.55 ms closing<br>20...30 ms opening   |
| Time constant                          | 40 ms  |
| Maximum operating rate                 | 3600 cyc/h 140 °F (60 °C)  |
| Connections - terminals                | Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end<br>Power circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end<br>Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible with cable end<br>Power circuit screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) flexible with cable end<br>Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end<br>Power circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end<br>Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end<br>Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end<br>Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible with cable end<br>Control circuit screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) flexible with cable end<br>Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end<br>Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end |
| Tightening torque                      | Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm<br>Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2<br>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>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2<br>Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2   |
| Auxiliary contact composition          | 1 NO + 1 NC  |
| Auxiliary contacts type                | Mechanically linked 1 NO + 1 NC IEC 60947-5-1<br>Mirror contact 1 NC IEC 60947-4-1   |
| Signalling circuit frequency           | 25...400 Hz  |
| Minimum switching voltage              | 17 V signalling circuit  |
| Minimum switching current              | 5 mA signalling circuit  |

|                       |   |
|-----------------------|---|
| Insulation resistance | > 10 MOhm 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 IEC 60529  |
| Protective treatment                                  | THIEC 60068-2-30   |
| Climatic withstand                                    | IACS E10 exposure to damp heat<br>IEC 60947-1 Annex Q category D exposure to damp heat   |
| Permissible ambient air temperature around the device | -40...140 °F (-40...60 °C)<br>140...158 °F (60...70 °C) with derating  |
| Operating altitude                                    | 0...9842.52 ft (0...3000 m)  |
| Fire resistance                                       | 1562 °F (850 °C) 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 open 10 Gn for 11 ms)<br>Shocks contactor closed 15 Gn for 11 ms) |
| Height  | 3.03 in (77 mm)  |
| Width   | 1.77 in (45 mm)  |
| Depth   | 3.74 in (95 mm)  |
| Product Weight  | 1.06 lb(US) (0.48 kg)  |

## Ordering and shipping details

|                   |                                    |
|-------------------|------------------------------------|
| Category          | 22354-CTR, TESYS D, OPEN, 9-38A AC |
| Discount Schedule | I12                                |
| GTIN              | 3389110361070                      |
| Returnability     | Yes                                |
| Country of origin | ID                                 |

## Packing Units

|                              |                         |
|------------------------------|-------------------------|
| Unit Type of Package 1       | PCE                     |
| Number of Units in Package 1 | 1                       |
| Package 1 Height             | 1.97 in (5.000 cm)      |
| Package 1 Width              | 3.62 in (9.200 cm)      |
| Package 1 Length             | 4.41 in (11.200 cm)     |
| Package 1 Weight             | 18.62 oz (528.000 g)    |
| Unit Type of Package 2       | S02                     |
| Number of Units in Package 2 | 15                      |
| Package 2 Height             | 5.91 in (15.000 cm)     |
| Package 2 Width              | 11.81 in (30.000 cm)    |
| Package 2 Length             | 15.75 in (40.000 cm)    |
| Package 2 Weight             | 18.04 lb(US) (8.182 kg) |

|                              |                            |
|------------------------------|----------------------------|
| Unit Type of Package 3       | P06                        |
| Number of Units in Package 3 | 240                        |
| Package 3 Height             | 29.53 in (75.000 cm)       |
| Package 3 Width              | 23.62 in (60.000 cm)       |
| Package 3 Length             | 31.50 in (80.000 cm)       |
| Package 3 Weight             | 304.24 lb(US) (138.000 kg) |

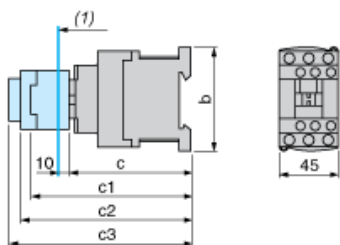
### Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| 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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| EU RoHS Directive          | Compliant <a href="#">EU RoHS Declaration</a>   |
| Mercury free               | Yes   |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>  |
| RoHS exemption information | <a href="#">Yes</a>   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End Of Life Information</a>   |
| PVC free                   | Yes   |

### Contractual warranty

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

Dimensions



(1) Minimum electrical clearance

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

Wiring

