

# LC1D50AB7

IEC contactor, TeSys Deca, nonreversing, 50A, 40HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 24VAC 50/60Hz coil, open



## Main

|                                |   |
|--------------------------------|---|
| Range                          | TeSys<br>TeSys Deca   |
| Range of Product               | TeSys Deca  |
| Product or Component Type      | Contactors  |
| 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 140 °F (60 °C) <= 440 V AC AC-3 power circuit<br>80 A 140 °F (60 °C) <= 440 V AC AC-1 power circuit<br>50 A 140 °F (60 °C) <= 440 V AC AC-3e power circuit |
| [Uc] control circuit voltage   | 24 V AC 50/60 Hz  |

## Complementary

|   |   |
|---|---|
| Motor power kW                              | 15 KW 220...230 V AC 50/60 Hz AC-3)<br>22 KW 380...400 V AC 50/60 Hz AC-3)<br>30 KW 500 V AC 50/60 Hz AC-3)<br>33 KW 660...690 V AC 50/60 Hz AC-3)<br>25 KW 415 V AC 50/60 Hz AC-3)<br>30 KW 440 V AC 50/60 Hz AC-3)<br>11 KW 400 V AC 50/60 Hz AC-4)<br>15 KW 220...230 V AC 50/60 Hz AC-3e)<br>22 KW 380...400 V AC 50/60 Hz AC-3e)<br>30 KW 500 V AC 50/60 Hz AC-3e)<br>33 KW 660...690 V AC 50/60 Hz AC-3e)<br>25 KW 415 V AC 50/60 Hz AC-3e)<br>30 KW 440 V AC 50/60 Hz AC-3e) |
| Maximum Horse Power Rating                  | 3 Hp 115 V at AC 50/60 Hz for 1 phase<br>7.5 Hp 230/240 V at AC 50/60 Hz for 1 phase<br>15 Hp 200/208 V at AC 50/60 Hz for 3 phase<br>15 Hp 230/240 V at AC 50/60 Hz for 3 phase<br>40 Hp 460/480 V at AC 50/60 Hz for 3 phase<br>40 hp 575/600 V at AC 50/60 Hz for 3 phase  |
| Compatibility code                          | LC1D  |
| Pole contact composition                    | 3 NO  |
| Contact compatibility                       | M2  |
| Protective cover                            | With  |
| [Ith] conventional free air thermal current | 10 A 140 °F (60 °C) signalling circuit<br>80 A 140 °F (60 °C) power circuit   |
| Irms rated making capacity                  | 140 A AC signalling circuit IEC 60947-5-1<br>250 A DC signalling circuit IEC 60947-5-1<br>900 A 440 V power circuit IEC 60947   |
| Rated breaking capacity                     | 900 A 440 V power circuit IEC 60947   |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

|  |  |
|--|--|
| [Icw] rated short-time withstand current | 400 A 104 °F (40 °C) - 10 s power circuit<br>810 A 104 °F (40 °C) - 1 s power circuit<br>84 A 104 °F (40 °C) - 10 min power circuit<br>208 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  |
| Associated fuse rating                   | 10 A gG signalling circuit IEC 60947-5-1<br>100 A gG ≤ 690 V type 1 power circuit<br>100 A gG ≤ 690 V type 2 power circuit   |
| Average impedance                        | 1.5 mOhm - Ith 80 A 50 Hz power circuit  |
| Power dissipation per pole               | 3.7 W AC-3<br>9.6 W AC-1<br>3.7 W AC-3e  |
| [Ui] rated insulation voltage            | 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  |
| 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                    | 6 Mcycles  |
| Electrical durability                    | 1.45 Mcycles 50 A AC-3 ≤ 440 V<br>1.1 Mcycles 80 A AC-1 ≤ 440 V<br>1.45 Mcycles 50 A AC-3e ≤ 440 V   |
| Control circuit type                     | AC 50/60 Hz standard   |
| Coil technology                          | Without built-in suppressor module   |
| Control circuit voltage limits           | 0.3...0.6 Uc -40...158 °F (-40...70 °C) drop-out AC 50/60 Hz<br>0.8...1.1 Uc -40...140 °F (-40...60 °C) operational AC 50 Hz<br>0.85...1.1 Uc -40...140 °F (-40...60 °C) operational AC 60 Hz<br>1...1.1 Uc 140...158 °F (60...70 °C) operational AC 50/60 Hz  |
| Inrush power in VA                       | 140 VA 60 Hz 0.75 68 °F (20 °C))<br>160 VA 50 Hz 0.75 68 °F (20 °C))   |
| Hold-in power consumption in VA          | 13 VA 60 Hz 0.3 68 °F (20 °C))<br>15 VA 50 Hz 0.3 68 °F (20 °C))   |
| Heat dissipation                         | 4...5 W 50/60 Hz   |
| Operating time                           | 4...19 ms opening<br>12...26 ms closing  |
| Maximum operating rate                   | 3600 cyc/h 140 °F (60 °C)  |
| Connections - terminals                  | 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> ) 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 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<br>Power circuit screw connection 1 0.00...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> ) flexible without cable end<br>Power circuit screw connection 2 0.00...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> ) flexible without cable end<br>Power circuit screw connection 1 0.00...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> ) flexible with cable end<br>Power circuit screw connection 2 0.00...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> ) flexible with cable end<br>Power circuit screw connection 1 0.00...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> ) solid without cable end<br>Power circuit screw connection 2 0.00...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> ) solid without cable end |

|                               |  |
|-------------------------------|--|
| Tightening torque             | 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 70.81 lbf.in (8 N.m) EverLink BTR screw connectors 0.04...0.05 in <sup>2</sup> (25...35 mm <sup>2</sup> ) hexagonal 0.16 in (4 mm)<br>Power circuit 44.25 lbf.in (5 N.m) EverLink BTR screw connectors 0.00...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> ) hexagonal 0.16 in (4 mm)<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2<br>Power circuit 22.13 lbf.in (2.5 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                                | DNV<br>LROS (Lloyds register of shipping)<br>CCC<br>GOST<br>BV<br>RINA<br>CSA<br>UL<br>GL  |
| 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 closed 15 Gn for 11 ms)<br>Shocks contactor open 10 Gn for 11 ms) |
| Height  | 4.80 in (122 mm)   |
| Width   | 2.17 in (55 mm)  |
| Depth   | 4.72 in (120 mm)   |
| Net Weight  | 1.88 lb(US) (0.855 kg)   |

## Ordering and shipping details

|                   |                                     |
|-------------------|-------------------------------------|
| Category          | 22357-CTR, TESYS D, OPEN, 40-65A AC |
| Discount Schedule | I12                                 |
| GTIN              | 3389119408622                       |
| Returnability     | Yes                                 |
| Country of origin | ID                                  |

## Packing Units

|                              |                            |
|------------------------------|----------------------------|
| Unit Type of Package 1       | PCE                        |
| Number of Units in Package 1 | 1                          |
| Package 1 Height             | 2.48 in (6.3 cm)           |
| Package 1 Width              | 5.31 in (13.5 cm)          |
| Package 1 Length             | 5.98 in (15.2 cm)          |
| Package 1 Weight             | 32.45 oz (920.0 g)         |
| Unit Type of Package 2       | S02                        |
| Number of Units in Package 2 | 10                         |
| Package 2 Height             | 5.91 in (15.0 cm)          |
| Package 2 Width              | 11.81 in (30.0 cm)         |
| Package 2 Length             | 15.75 in (40.0 cm)         |
| Package 2 Weight             | 21.90 lb(US) (9.934 kg)    |
| Unit Type of Package 3       | P06                        |
| Number of Units in Package 3 | 160                        |
| Package 3 Height             | 30.31 in (77.0 cm)         |
| Package 3 Width              | 31.50 in (80.0 cm)         |
| Package 3 Length             | 23.62 in (60.0 cm)         |
| Package 3 Weight             | 369.15 lb(US) (167.444 kg) |

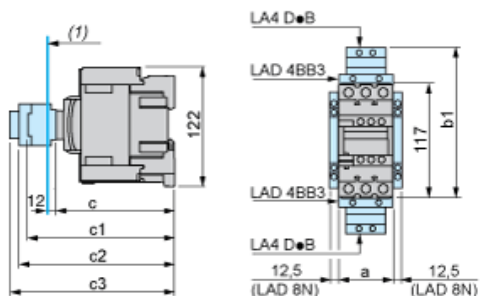
## Offer Sustainability

|                            |   |
|----------------------------|---|
| 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>   |
| REACH free of SVHC         | Yes   |
| EU RoHS Directive          | Compliant <a href="#">EU RoHS Declaration</a>   |
| Toxic heavy metal free     | Yes   |
| 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>   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.  |
| PVC free                   | Yes   |

## Contractual warranty

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

Dimensions



(1) Minimum electrical clearance

| LC1 |                                    | D40A...D65A |
|-----|------------------------------------|-------------|
| a   |                                    | 55          |
| b1  | with LA4 D•2                       | –           |
|     | with LA4 DB3 or LAD 4BB3           | 136         |
|     | with LA4 DF, DT                    | 157         |
|     | with LA4 DM, DW, DL                | 166         |
| 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, LAD 6DK             | 163         |
| c3  | with LAD T, R, S                   | 171         |
|     | with LAD T, R, S and sealing cover | 175         |

## Wiring

