

# LC1D12CD

IEC contactor, TeSys Deca, nonreversing, 12A, 7.5HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 32VDC coil, open style



## Main

|                                |                                                                                                                                                                 |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 | 25 A 140 °F (60 °C)) ≤ 440 V AC AC-1 power circuit<br>12 A 140 °F (60 °C)) ≤ 440 V AC AC-3 power circuit<br>12 A 140 °F (60 °C)) ≤ 440 V AC AC-3e power circuit |
| [Uc] control circuit voltage   | 36 V DC                                                                                                                                                         |

## Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW                              | 3 KW 220...230 V AC 50/60 Hz AC-3)<br>5.5 KW 380...400 V AC 50/60 Hz AC-3)<br>5.5 KW 415...440 V AC 50/60 Hz AC-3)<br>7.5 KW 500 V AC 50/60 Hz AC-3)<br>7.5 KW 660...690 V AC 50/60 Hz AC-3)<br>3.7 KW 400 V AC 50/60 Hz AC-4)<br>3 KW 220...230 V AC 50/60 Hz AC-3e)<br>5.5 KW 380...400 V AC 50/60 Hz AC-3e)<br>5.5 KW 415...440 V AC 50/60 Hz AC-3e)<br>7.5 KW 500 V AC 50/60 Hz AC-3e)<br>7.5 KW 660...690 V AC 50/60 Hz AC-3e) |
| Maximum Horse Power Rating                  | 0.5 Hp 115 V at AC 50/60 Hz for 1 phase<br>2 Hp 230/240 V at AC 50/60 Hz for 1 phase<br>3 Hp 200/208 V at AC 50/60 Hz for 3 phase<br>3 Hp 230/240 V at AC 50/60 Hz for 3 phase<br>7.5 Hp 460/480 V at AC 50/60 Hz for 3 phase<br>10 hp 575/600 V at AC 50/60 Hz for 3 phase                                                                                                                                                         |
| Compatibility code                          | LC1D                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Pole contact composition                    | 3 NO                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Contact compatibility                       | M4                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 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                                                                                                                                                                                                                                                                                                                                                                                                 |

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|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [I <sub>cw</sub> ] 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Associated fuse rating                                | 10 A gG signalling circuit IEC 60947-5-1<br>40 A gG ≤ 690 V type 1 power circuit<br>25 A gG ≤ 690 V type 2 power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Average impedance                                     | 2.5 mOhm - Ith 25 A 50 Hz power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Power dissipation per pole                            | 0.36 W AC-3<br>1.56 W AC-1<br>0.36 W AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| [U <sub>i</sub> ] 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| [U <sub>imp</sub> ] 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                                 | 2 Mcycles 12 A AC-3 ≤ 440 V<br>0.8 Mcycles 25 A AC-1 ≤ 440 V<br>2 Mcycles 12 A AC-3e ≤ 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Control circuit type                                  | DC standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Coil technology                                       | With integral suppression device                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Control circuit voltage limits                        | 0.1...0.25 U <sub>c</sub> -40...158 °F (-40...70 °C) drop-out DC<br>0.7...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                                     | 5.4 W 68 °F (20 °C))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Hold-in power consumption in W                        | 5.4 W 68 °F (20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Operating time                                        | 53.55...72.45 ms closing<br>16...24 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Time constant                                         | 28 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                                | UL<br>DNV<br>LRQS (Lloyds register of shipping)<br>BV<br>CSA<br>GOST<br>RINA<br>CCC<br>GL<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)                                                                                                                                                                    |
| Net Weight                                            | 1.07 lb(US) (0.485 kg)                                                                                                                                                             |

## Ordering and shipping details

|                   |                                    |
|-------------------|------------------------------------|
| Category          | 22355-CTR, TESYS D, OPEN, 9-38A DC |
| Discount Schedule | I12                                |
| GTIN              | 3389110353747                      |
| Returnability     | No                                 |
| Country of origin | FR                                 |

## Packing Units

|                              |                    |
|------------------------------|--------------------|
| Unit Type of Package 1       | PCE                |
| Number of Units in Package 1 | 1                  |
| Package 1 Height             | 1.93 in (4.9 cm)   |
| Package 1 Width              | 4.37 in (11.1 cm)  |
| Package 1 Length             | 3.50 in (8.9 cm)   |
| Package 1 Weight             | 12.77 oz (362.0 g) |

## 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 |
|----------|-----------|