

# LC1D50AGD

IEC contactor, TeSys Deca, nonreversing, 50A,  
40HP at 480VAC, up to 100kA SCCR, 3 phase,  
3 NO, 125VDC coil, open style





## Main

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Range                                       | TeSys<br>TeSys Deca                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Product name                                | TeSys D<br>TeSys Deca                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Product or Component Type                   | Contacteur                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Device short name                           | LC1D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Contacteur application                      | Resistive load<br>Motor control                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Utilisation category                        | AC-4<br>AC-1<br>AC-3<br>AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Poles description                           | 3P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Power pole contact composition              | 3 NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| [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                                                                                                                                                                                                                                                                                                                  |
| 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) |
| Motor power HP (UL / CSA)                   | 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                                                                                                                                                                                                        |
| Control circuit type                        | DC standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| [Uc] control circuit voltage                | 125 V DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Auxiliary contact composition               | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| [Uimp] rated impulse withstand voltage      | 6 kV IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| [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                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| [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                                                                                                                                                                                                                                                                                                                                                        |

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| Average impedance             | 1.5 mOhm - lth 80 A 50 Hz power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| [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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Electrical durability         | 1.45 Mcycles 50 A AC-3 <= 440 V<br>0.5 Mcycles 80 A AC-1 <= 440 V<br>1.45 Mcycles 50 A AC-3e <= 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Power dissipation per pole    | 3.7 W AC-3<br>9.6 W AC-1<br>3.7 W AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Front cover                   | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Mounting Support              | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 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        | RINA<br>GOST<br>BV<br>LROS (Lloyds register of shipping)<br>CCC<br>CSA<br>GL<br>DNV<br>UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Connections - terminals       | Control circuit screw clamp terminals 2 0.00...<br>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...<br>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...<br>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...<br>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...<br>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...<br>0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid without cable end<br>Power circuit EverLink BTR screw connectors 1<br>0.00...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> )flexible without cable end<br>Power circuit EverLink BTR screw connectors 2<br>0.00...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> )flexible without cable end<br>Power circuit EverLink BTR screw connectors 1<br>0.00...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> )flexible with cable end<br>Power circuit EverLink BTR screw connectors 2<br>0.00...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> )flexible with cable end<br>Power circuit EverLink BTR screw connectors 1<br>0.00...0.05 in <sup>2</sup> (1...35 mm <sup>2</sup> )solid without cable end<br>Power circuit EverLink BTR screw connectors 2<br>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) EverLink BTR<br>screw connectors flat Ø 6 mm<br>Control circuit 15.05 lbf.in (1.7 N.m) EverLink BTR<br>screw connectors Philips No 2<br>Power circuit 70.81 lbf.in (8 N.m) EverLink BTR<br>screw connectors 0.04...0.05 in <sup>2</sup> (25...35 mm <sup>2</sup> )<br>hexagonal 0.16 in (4 mm)<br>Power circuit 44.25 lbf.in (5 N.m) EverLink BTR<br>screw connectors 0.00...0.04 in <sup>2</sup> (1...25 mm <sup>2</sup> )<br>hexagonal 0.16 in (4 mm)<br>Control circuit 15.05 lbf.in (1.7 N.m) EverLink BTR<br>screw connectors pozidriv No 2<br>Power circuit 22.13 lbf.in (2.5 N.m) EverLink BTR<br>screw connectors pozidriv No 2<br>EverLink BTR screw connectors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Operating time                | 42.5...57.5 ms closing<br>16...24 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 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    | 10 Mcycles                                                                                                                               |
| Maximum operating rate   | 3600 cyc/h 140 °F (60 °C)                                                                                                                |

## Complementary

|                                |                                                                                                                                                                         |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | Built-in bidirectional peak limiting diode suppressor                                                                                                                   |
| Control circuit voltage limits | 0.1...0.3 Uc -40...158 °F (-40...70 °C) drop-out DC<br>0.75...1.25 Uc -40...140 °F (-40...60 °C) operational DC<br>1...1.25 Uc 140...158 °F (60...70 °C) operational DC |
| Time constant                  | 34 ms                                                                                                                                                                   |
| Inrush power in W              | 19 W 68 °F (20 °C))                                                                                                                                                     |
| Hold-in power consumption in W | 7.4 W 68 °F (20 °C)                                                                                                                                                     |
| 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 current      | 5 mA signalling circuit                                                                                                                                                 |
| Minimum switching voltage      | 17 V 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                                                                 |
| Insulation resistance          | > 10 MOhm signalling circuit                                                                                                                                            |

## Environment

|                                       |                                                                                                                                                                            |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20 front face IEC 60529                                                                                                                                                  |
| Climatic withstand                    | IACS E10<br>IEC 60947-1 Annex Q category D                                                                                                                                 |
| Protective treatment                  | TH IEC 60068-2-30                                                                                                                                                          |
| Pollution degree                      | 3                                                                                                                                                                          |
| Ambient air temperature for operation | -40...140 °F (-40...60 °C)<br>140...158 °F (60...70 °C) with derating                                                                                                      |
| Ambient Air Temperature for Storage   | -76...176 °F (-60...80 °C)                                                                                                                                                 |
| Operating altitude                    | 0...9842.52 ft (0...3000 m)                                                                                                                                                |
| Fire resistance                       | 1562 °F (850 °C) IEC 60695-2-1                                                                                                                                             |
| Mechanical robustness                 | Vibrations contactor open2 Gn, 5...300 Hz<br>Vibrations contactor closed4 Gn, 5...300 Hz<br>Shocks contactor closed15 Gn for 11 ms<br>Shocks contactor open10 Gn for 11 ms |
| Height                                | 4.80 in (122 mm)                                                                                                                                                           |
| Width                                 | 2.17 in (55 mm)                                                                                                                                                            |
| Depth                                 | 4.72 in (120 mm)                                                                                                                                                           |
| Net Weight                            | 2.05 lb(US) (0.93 kg)                                                                                                                                                      |

## Ordering and shipping details

|                       |                                     |
|-----------------------|-------------------------------------|
| Category              | 22358-CTR, TESYS D, OPEN, 40-65A DC |
| Discount Schedule     | I12                                 |
| GTIN                  | 3389119408820                       |
| Nbr. of units in pkg. | 1                                   |
| Package weight(Lbs)   | 35.13 oz (996.0 g)                  |
| Returnability         | No                                  |
| Country of origin     | FR                                  |

## Packing Units

|                              |                          |
|------------------------------|--------------------------|
| Unit Type of Package 1       | PCE                      |
| Package 1 Height             | 2.48 in (6.3 cm)         |
| Package 1 width              | 5.39 in (13.7 cm)        |
| Package 1 Length             | 5.98 in (15.2 cm)        |
| Unit Type of Package 2       | S02                      |
| Number of Units in Package 2 | 10                       |
| Package 2 Weight             | 22.96 lb(US) (10.415 kg) |
| Package 2 Height             | 5.91 in (15 cm)          |
| Package 2 width              | 11.81 in (30 cm)         |
| Package 2 Length             | 15.75 in (40 cm)         |

## 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                                                                                                                                                                                                                                                       |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                       |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</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 |
|----------|-----------|