

# LC1D50A6F7

IEC contactor, TeSys Deca, nonreversing,  
50A, 40HP at 480VAC, 3 phase, 3 pole, 3 NO,  
110VAC 50/60Hz coil, open style



## Main

|                                |                                                                                                                                                                                                     |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys<br>TeSys Deca                                                                                                                                                                                 |
| Range of Product               | TeSys Deca                                                                                                                                                                                          |
| Product or Component Type      | Contactor                                                                                                                                                                                           |
| Device short name              | LC1D                                                                                                                                                                                                |
| Contactor application          | Resistive load<br>Motor control                                                                                                                                                                     |
| Utilisation category           | AC-4<br>AC-1<br>AC-3<br>AC-3e                                                                                                                                                                       |
| Poles description              | 3P                                                                                                                                                                                                  |
| [Ue] rated operational voltage | Power circuit ≤ 690 V AC 25...400 Hz<br>Power circuit ≤ 300 V DC                                                                                                                                    |
| [Ie] rated operational current | 50 A (at <140 °F (60 °C)) at ≤ 440 V AC AC-3 for power circuit<br>80 A (at <140 °F (60 °C)) at ≤ 440 V AC AC-1 for power circuit<br>50 A (at <140 °F (60 °C)) at ≤ 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage   | 110 V AC 50/60 Hz                                                                                                                                                                                   |

## Complementary

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

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Icw] rated short-time withstand current | 400 A 104 °F (40 °C) - 10 s for power circuit<br>810 A 104 °F (40 °C) - 1 s for power circuit<br>84 A 104 °F (40 °C) - 10 min for power circuit<br>208 A 104 °F (40 °C) - 1 min for power circuit<br>100 A - 1 s for signalling circuit<br>120 A - 500 ms for signalling circuit<br>140 A - 100 ms for signalling circuit                                                                                    |
| Associated fuse rating                   | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>100 A gG at ≤ 690 V coordination type 1 for power circuit<br>100 A gG at ≤ 690 V coordination type 2 for power circuit                                                                                                                                                                                                                         |
| Average impedance                        | 1.5 mOhm - Ith 80 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                                                  |
| Power dissipation per pole               | 3.7 W AC-3<br>9.6 W AC-1<br>3.7 W AC-3e                                                                                                                                                                                                                                                                                                                                                                      |
| [Ui] rated insulation voltage            | Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit 600 V CSA<br>Signalling circuit 600 V UL<br>Power circuit 690 V IEC 60947-4-1                                                                                                                                                                                                                |
| Overvoltage category                     | III                                                                                                                                                                                                                                                                                                                                                                                                          |
| Pollution degree                         | 3                                                                                                                                                                                                                                                                                                                                                                                                            |
| [Uimp] rated impulse withstand voltage   | 6 kV IEC 60947                                                                                                                                                                                                                                                                                                                                                                                               |
| Safety reliability level                 | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1                                                                                                                                                                                                                                                                     |
| Mechanical durability                    | 6 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                    |
| Electrical durability                    | 1.45 Mcycles 50 A AC-3 ≤ 440 V<br>1.1 Mcycles 80 A AC-1 ≤ 440 V<br>1.45 Mcycles 50 A AC-3e ≤ 440 V                                                                                                                                                                                                                                                                                                           |
| Control circuit type                     | AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                  |
| Coil technology                          | Without built-in suppressor module                                                                                                                                                                                                                                                                                                                                                                           |
| Control circuit voltage limits           | 0.3...0.6 Uc -40...158 °F (-40...70 °C) drop-out AC 50/60 Hz<br>0.8...1.1 Uc -40...140 °F (-40...60 °C) operational AC 50 Hz<br>0.85...1.1 Uc -40...140 °F (-40...60 °C) operational AC 60 Hz<br>1...1.1 Uc 140...158 °F (60...70 °C) operational AC 50/60 Hz                                                                                                                                                |
| Inrush power in VA                       | 140 VA 60 Hz cos phi 0.75 (at 68 °F (20 °C))<br>160 VA 50 Hz cos phi 0.75 (at 68 °F (20 °C))                                                                                                                                                                                                                                                                                                                 |
| Hold-in power consumption in VA          | 13 VA 60 Hz cos phi 0.3 (at 68 °F (20 °C))<br>15 VA 50 Hz cos phi 0.3 (at 68 °F (20 °C))                                                                                                                                                                                                                                                                                                                     |
| Heat dissipation                         | 4...5 W at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                          |
| Operating time                           | 4...19 ms opening<br>12...26 ms closing                                                                                                                                                                                                                                                                                                                                                                      |
| Maximum operating rate                   | 3600 cyc/h 140 °F (60 °C)                                                                                                                                                                                                                                                                                                                                                                                    |
| Connections - terminals                  | Control circuit: lugs-ring terminals - external diameter: 0.31 in (8 mm)<br>Power circuit: lugs-ring terminals - external diameter: 0.65 in (16.5 mm)                                                                                                                                                                                                                                                        |
| Tightening torque                        | Control circuit 15.05 lbf.in (1.7 N.m) lugs-ring terminals flat Ø 6 mm M3.5<br>Control circuit 15.05 lbf.in (1.7 N.m) lugs-ring terminals Philips No 2 M3.5<br>Power circuit 53.10 lbf.in (6 N.m) lugs-ring terminals hexagonal 0.39 in (10 mm) M6<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2<br>Power circuit 22.13 lbf.in (2.5 N.m) screw clamp terminals pozidriv No 2 |
| Auxiliary contact composition            | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                  |
| Auxiliary contacts type                  | Mechanically linked 1 NO + 1 NC IEC 60947-5-1<br>Mirror contact 1 NC IEC 60947-4-1                                                                                                                                                                                                                                                                                                                           |
| Signalling circuit frequency             | 25...400 Hz                                                                                                                                                                                                                                                                                                                                                                                                  |
| Minimum switching voltage                | 17 V for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                  |
| Minimum switching current                | 5 mA for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                  |
| Insulation resistance                    | > 10 MOhm for signalling circuit                                                                                                                                                                                                                                                                                                                                                                             |
| Non-overlap time                         | 1.5 Ms on de-energisation between NC and NO contact<br>1.5 ms on energisation between NC and NO contact                                                                                                                                                                                                                                                                                                      |
| Mounting Support                         | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                |

## 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                                | GOST[RETURN]DNV[RETURN]RINA[RETURN]CSA[RETURN]CCC[RETURN]UL[RETURN]L<br>(Lloyds register of shipping)[RETURN]BV[RETURN]GL                                                          |
| IP degree of protection                               | IP20 front face IEC 60529                                                                                                                                                          |
| Protective treatment                                  | THIEC 60068-2-30                                                                                                                                                                   |
| Climatic withstand                                    | IACS E10 exposure to damp heat<br>IEC 60947-1 Annex Q category D exposure to damp heat                                                                                             |
| Permissible ambient air temperature around the device | -40...140 °F (-40...60 °C)<br>140...158 °F (60...70 °C) with derating                                                                                                              |
| Operating altitude                                    | 0...9842.52 ft (0...3000 m)                                                                                                                                                        |
| Fire resistance                                       | 1562 °F (850 °C) IEC 60695-2-1                                                                                                                                                     |
| Flame retardance                                      | V1 conforming to UL 94                                                                                                                                                             |
| Mechanical robustness                                 | Vibrations contactor open 2 Gn, 5...300 Hz)<br>Vibrations contactor closed 4 Gn, 5...300 Hz)<br>Shocks contactor closed 15 Gn for 11 ms)<br>Shocks contactor open 10 Gn for 11 ms) |
| Height                                                | 4.80 in (122 mm)                                                                                                                                                                   |
| Width                                                 | 2.17 in (55 mm)                                                                                                                                                                    |
| Depth                                                 | 4.72 in (120 mm)                                                                                                                                                                   |
| Net Weight                                            | 1.88 lb(US) (0.855 kg)                                                                                                                                                             |

## Ordering and shipping details

|                   |               |
|-------------------|---------------|
| Category          | US10I1222357  |
| Discount Schedule | 0I12          |
| GTIN              | 3389119408912 |
| Returnability     | No            |
| Country of origin | ID            |

## Packing Units

|                              |                    |
|------------------------------|--------------------|
| Unit Type of Package 1       | PCE                |
| Number of Units in Package 1 | 1                  |
| Package 1 Height             | 2.36 in (6.0 cm)   |
| Package 1 Width              | 5.51 in (14.0 cm)  |
| Package 1 Length             | 5.91 in (15.0 cm)  |
| Package 1 Weight             | 29.98 oz (850.0 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>                                                                                                                                                                                                                         |
| REACH free of SVHC         | Yes                                                                                                                                                                                                                                                       |
| EU RoHS Directive          | Compliant <a href="#">EU RoHS Declaration</a>                                                                                                                                                                                                             |
| Toxic heavy metal free     | Yes                                                                                                                                                                                                                                                       |
| Mercury free               | Yes                                                                                                                                                                                                                                                       |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                                                                                                                                                    |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                       |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                             |

|                             |                                                                                                                              |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Circularity Profile         | <a href="#"> End Of Life Information</a>     |
| WEEE                        | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |
| PVC free                    | Yes                                                                                                                          |
| <b>Contractual warranty</b> |                                                                                                                              |
| Warranty                    | 18 months                                                                                                                    |