

# Product data sheet

## Characteristics

# LC1D18G7

IEC contactor, TeSys Deca, nonreversing, 18A, 10HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 120VAC 50/60Hz coil, open



### Main

|                                |  |
|--------------------------------|--|
| Range of Product               | TeSys Deca   |
| Product or Component Type      | Contactor  |
| Device short name              | LC1D   |
| Contactor application          | Resistive load<br>Motor control  |
| Utilisation category           | AC-1<br>AC-4<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 | 18 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit<br>32 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit<br>18 A (at <140 °F (60 °C)) at <= 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage   | 120 V AC 50/60 Hz  |

### Complementary

|   |   |
|---|---|
| Motor power kW                              | 4 kW at 220...230 V AC 50/60 Hz (AC-3)<br>7.5 kW at 380...400 V AC 50/60 Hz (AC-3)<br>9 kW at 415...440 V AC 50/60 Hz (AC-3)<br>10 kW at 500 V AC 50/60 Hz (AC-3)<br>10 kW at 660...690 V AC 50/60 Hz (AC-3)<br>4 kW at 400 V AC 50/60 Hz (AC-4)<br>4 kW at 220...230 V AC 50/60 Hz (AC-3e)<br>7.5 kW at 380...400 V AC 50/60 Hz (AC-3e)<br>9 kW at 415...440 V AC 50/60 Hz (AC-3e)<br>10 kW at 500 V AC 50/60 Hz (AC-3e)<br>10 kW at 660...690 V AC 50/60 Hz (AC-3e) |
| Maximum Horse Power Rating                  | 1 Hp at 115 V AC 50/60 Hz for 1 phase motors<br>3 Hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>5 Hp at 200/208 V AC 50/60 Hz for 3 phase motors<br>5 Hp at 230/240 V AC 50/60 Hz for 3 phase motors<br>10 Hp at 460/480 V AC 50/60 Hz for 3 phase motors<br>15 hp at 575/600 V AC 50/60 Hz for 3 phase motors  |
| Compatibility code                          | LC1D  |
| Pole contact composition                    | 3 NO  |
| Contact compatibility                       | M2  |
| Protective cover                            | With  |
| [Ith] conventional free air thermal current | 10 A (at 140 °F (60 °C)) for signalling circuit<br>32 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>300 A at 440 V for power circuit conforming to IEC 60947  |
| Rated breaking capacity                     | 300 A at 440 V for power circuit conforming to IEC 60947  |

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|  |  |
|--|--|
| [Icw] rated short-time withstand current | 145 A 104 °F (40 °C) - 10 s for power circuit<br>240 A 104 °F (40 °C) - 1 s for power circuit<br>40 A 104 °F (40 °C) - 10 min for power circuit<br>84 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>50 A gG at <= 690 V coordination type 1 for power circuit<br>35 A gG at <= 690 V coordination type 2 for power circuit   |
| Average impedance                        | 2.5 mOhm - Ith 32 A 50 Hz for power circuit  |
| Power dissipation per pole               | 2.5 W AC-1<br>0.8 W AC-3<br>0.8 W AC-3e  |
| [Ui] rated insulation voltage            | Power circuit 690 V IEC 60947-4-1<br>Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit 600 V CSA<br>Signalling circuit 600 V UL  |
| Overvoltage category                     | III  |
| Pollution degree                         | 3  |
| [Uiimp] 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                    | 15 Mcycles   |
| Electrical durability                    | 1.65 Mcycles 18 A AC-3 <= 440 V<br>1 Mcycles 32 A AC-1 <= 440 V<br>1.65 Mcycles 18 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                       | 70 VA 60 Hz cos phi 0.75 (at 68 °F (20 °C))<br>70 VA 50 Hz cos phi 0.75 (at 68 °F (20 °C))   |
| Hold-in power consumption in VA          | 7.5 VA 60 Hz cos phi 0.3 (at 68 °F (20 °C))<br>7 VA 50 Hz cos phi 0.3 (at 68 °F (20 °C))   |
| Heat dissipation                         | 2...3 W at 50/60 Hz  |
| Operating time                           | 12...22 ms closing<br>4...19 ms opening  |
| Maximum operating rate                   | 3600 cyc/h 140 °F (60 °C)  |
| Connections - terminals                  | Control circuit: screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable<br>stiffness: 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> ) - cable<br>stiffness: 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> ) - cable<br>stiffness: 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> ) - cable<br>stiffness: 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> ) - cable<br>stiffness: 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> ) - cable<br>stiffness: solid without cable end<br>Power circuit: screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1.5...6 mm <sup>2</sup> ) - cable<br>stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1.5...6 mm <sup>2</sup> ) - cable<br>stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...6 mm <sup>2</sup> ) - cable<br>stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable<br>stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1.5...6 mm <sup>2</sup> ) - cable<br>stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1.5...6 mm <sup>2</sup> ) - cable<br>stiffness: 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 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              | 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                                | BV[RETURN]GL[RETURN]CCC[RETURN]CSA[RETURN]RINA[RETURN]DNV[RETURN]GOS<br>(Lloyds register of shipping)[RETURN]UL[RETURN]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   | 3.39 in (86 mm)   |
| Net Weight  | 0.73 lb(US) (0.33 kg)   |

## Ordering and shipping details

|                   |                                    |
|-------------------|------------------------------------|
| Category          | 22354-CTR, TESYS D, OPEN, 9-38A AC |
| Discount Schedule | I12                                |
| GTIN              | 3389110349474                      |
| Returnability     | Yes                                |
| Country of origin | ID                                 |

## Packing Units

|                              |                      |
|------------------------------|----------------------|
| Unit Type of Package 1       | PCE                  |
| Number of Units in Package 1 | 1                    |
| Package 1 Height             | 2.17 in (5.500 cm)   |
| Package 1 Width              | 3.74 in (9.500 cm)   |
| Package 1 Length             | 4.72 in (12.000 cm)  |
| Package 1 Weight             | 12.84 oz (364.000 g) |
| Unit Type of Package 2       | S02                  |

|                              |                         |
|------------------------------|-------------------------|
| Number of Units in Package 2 | 16                      |
| Package 2 Height             | 5.91 in (15.000 cm)     |
| Package 2 Width              | 11.81 in (30.000 cm)    |
| Package 2 Length             | 15.75 in (40.000 cm)    |
| Package 2 Weight             | 14.00 lb(US) (6.350 kg) |

### Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           |  <a href="#">REACH Declaration</a>   |
| REACH free of SVHC         | Yes   |
| EU RoHS Directive          | Compliant  <a href="#">EU RoHS Declaration</a>   |
| Toxic heavy metal free     | Yes   |
| Mercury free               | Yes   |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>  |
| RoHS exemption information |  Yes   |
| 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 |
|----------|-----------|