

# Product data sheet

## Characteristics

# LC1D12B7

IEC contactor, TeSys D, nonreversing, 12A,  
7.5HP at 480VAC, up to 100kA SCCR, 3 phase, 3  
NO, 24VAC 50/60Hz coil, open

Product availability : Stock - Normally stocked in distribution facility



Price\* : 119.00 USD



## Main

|                                |                                                                                                                                                                                                                                                                             |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys                                                                                                                                                                                                                                                                       |
| Product name                   | TeSys D                                                                                                                                                                                                                                                                     |
| Product or component type      | Contactor                                                                                                                                                                                                                                                                   |
| Device short name              | LC1D                                                                                                                                                                                                                                                                        |
| Contactor application          | Resistive load<br>Motor control                                                                                                                                                                                                                                             |
| Utilisation category           | AC-3<br>AC-1<br>AC-4                                                                                                                                                                                                                                                        |
| 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 | 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                                                                                                                                                                  |
| 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)                                              |
| Motor power HP (UL / CSA)      | 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 |
| Control circuit type           | AC 50/60 Hz                                                                                                                                                                                                                                                                 |

\* Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Jul 30, 2021

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Uc] control circuit voltage                | 24 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 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 | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| [Icw] 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| [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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Electrical durability                       | 2 Mcycles 12 A AC-3 ≤ 440 V<br>0.8 Mcycles 25 A AC-1 ≤ 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Power dissipation per pole                  | 0.36 W AC-3<br>1.56 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Front cover                                 | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Mounting support                            | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product certifications                      | CCC<br>CSA<br>GL<br>GOST<br>BV<br>DNV<br>RINA<br>LROS (Lloyds register of shipping)<br>UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Operating time                              | 12...22 ms closing<br>4...19 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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

## Complementary

|                                 |                                                                                                                                                                                                                                                               |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 0.75 68 °F (20 °C))<br>70 VA 50 Hz 0.75 68 °F (20 °C))                                                                                                                                                                                            |
| Hold-in power consumption in VA | 7.5 VA 60 Hz 0.3 68 °F (20 °C))<br>7 VA 50 Hz 0.3 68 °F (20 °C))                                                                                                                                                                                              |
| Heat dissipation                | 2...3 W 50/60 Hz                                                                                                                                                                                                                                              |
| 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                                                                                                                                                  |
| 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                                                                                                                                             |
| Flame retardance                      | V1 conforming to UL 94                                                                                                                                                     |
| Mechanical robustness                 | Vibrations contactor open2 Gn, 5...300 Hz<br>Vibrations contactor closed4 Gn, 5...300 Hz<br>Shocks contactor open10 Gn for 11 ms<br>Shocks contactor closed15 Gn for 11 ms |
| Height                                | 3.03 in (77 mm)                                                                                                                                                            |
| Width                                 | 1.77 in (45 mm)                                                                                                                                                            |
| Depth                                 | 3.39 in (86 mm)                                                                                                                                                            |
| Net Weight                            | 0.72 lb(US) (0.325 kg)                                                                                                                                                     |

## Ordering and shipping details

|                       |                                      |
|-----------------------|--------------------------------------|
| Category              | 22354 - CTR, TESYS D, OPEN, 9-38A AC |
| Discount Schedule     | I12                                  |
| GTIN                  | 03389110349160                       |
| Nbr. of units in pkg. | 1                                    |
| Package weight(Lbs)   | 12.66 oz (359 g)                     |
| Returnability         | Yes                                  |
| Country of origin     | ID                                   |

## Packing Units

|                        |     |
|------------------------|-----|
| Unit Type of Package 1 | PCE |
|------------------------|-----|

|                              |                           |
|------------------------------|---------------------------|
| Package 1 Height             | 1.97 in (5 cm)            |
| Package 1 width              | 3.54 in (9 cm)            |
| Package 1 Length             | 4.33 in (11 cm)           |
| Unit Type of Package 2       | S02                       |
| Number of Units in Package 2 | 20                        |
| Package 2 Weight             | 16.88 lb(US) (7.655 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)          |
| Unit Type of Package 3       | P06                       |
| Number of Units in Package 3 | 320                       |
| Package 3 Weight             | 288.06 lb(US) (130.66 kg) |
| Package 3 Height             | 31.50 in (80 cm)          |
| Package 3 width              | 31.50 in (80 cm)          |
| Package 3 Length             | 23.62 in (60 cm)          |

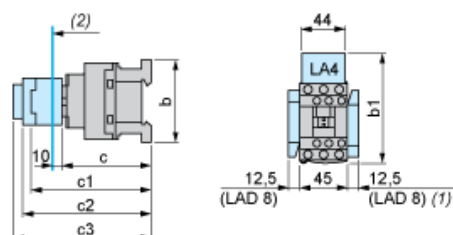
## Offer Sustainability

|                            |                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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>                                                                                                                                                                                                                         |
| REACH free of SVHC         | Yes                                                                                                                                                                                                                                                       |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a>                                                                                                                                                                                                          |
| Toxic heavy metal free     | Yes                                                                                                                                                                                                                                                       |
| Mercury free               | Yes                                                                                                                                                                                                                                                       |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                       |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Pro-active China RoHS declaration (out of China RoHS legal scope)                                                                                                                                               |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                             |
| Circularity Profile        | <a href="#">End of Life Information</a>                                                                                                                                                                                                                   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.                                                                                                                              |
| PVC free                   | Yes                                                                                                                                                                                                                                                       |

## Contractual warranty

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

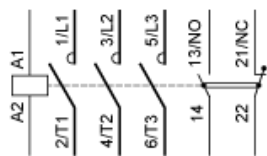
## Dimensions



- (1) Including LAD 4BB  
(2) Minimum electrical clearance

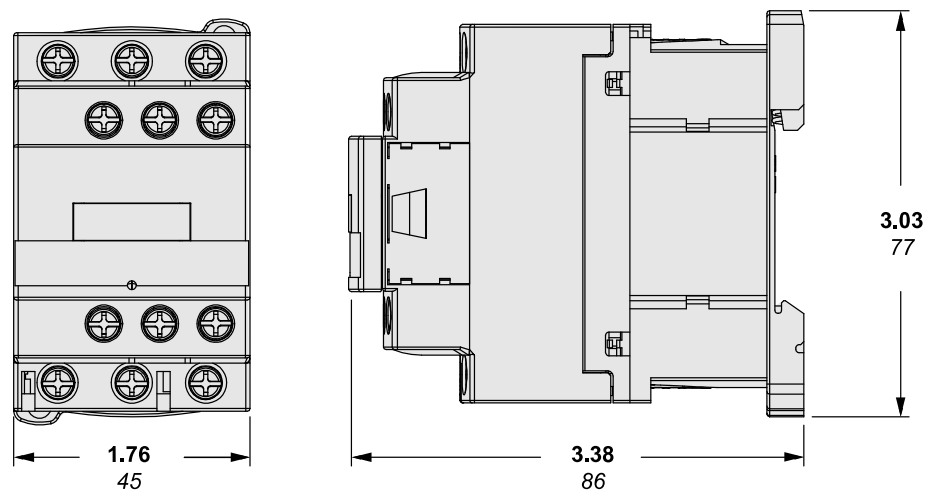
| LC1 |                                    | D09...D18          | D093...D123        | D099...D129          |
|-----|------------------------------------|--------------------|--------------------|----------------------|
| b   | without add-on blocks              | 77                 | 99                 | 80                   |
| b1  | with LAD 4BB                       | 94                 | 107                | 95.5                 |
|     | with LA4 D●2                       | 110 <sup>(1)</sup> | 123 <sup>(1)</sup> | 111.5 <sup>(1)</sup> |
|     | with LA4 DF, DT                    | 119 <sup>(1)</sup> | 132 <sup>(1)</sup> | 120.5 <sup>(1)</sup> |
|     | with LA4 DW, DL                    | 126 <sup>(1)</sup> | 139 <sup>(1)</sup> | 127.5 <sup>(1)</sup> |
| c   | without cover or add-on blocks     | 84                 | 84                 | 84                   |
|     | with cover, without add-on blocks  | 86                 | 86                 | 86                   |
| c1  | with LAD N or C (2 or 4 contacts)  | 117                | 117                | 117                  |
| c2  | with LA6 DK10, LAD 6K10            | 129                | 129                | 129                  |
| c3  | with LAD T, R, S                   | 137                | 137                | 137                  |
|     | with LAD T, R, S and sealing cover | 141                | 141                | 141                  |
| (1) | Including LAD 4BB.                 |                    |                    |                      |

Wiring



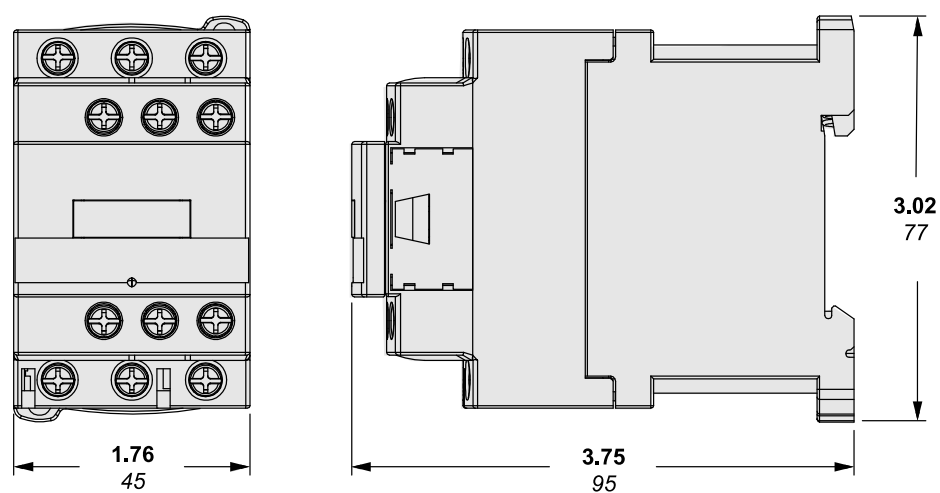
Dimensions

CONTACTOR WITH AC COIL



in.  
mm

CONTACTOR WITH DC COIL



All dimensions are approximate. Also refer to technical drawings and documentation.