

# LC1D12BD

TeSys D IEC contactor, 12 A, 3 P, 7.5 HP at  
480 VAC, nonreversing, 24 VDC coil





## 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-1<br>AC-4<br>AC-3                                                                                                                                                                                                                                                                                     |
| 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 AC 50/60 Hz 1 phase<br>2 Hp 230/240 V AC 50/60 Hz 1 phase<br>3 Hp 200/208 V AC 50/60 Hz 3 phase<br>3 Hp 230/240 V AC 50/60 Hz 3 phase<br>7.5 Hp 460/480 V AC 50/60 Hz 3 phase<br>10 hp 575/600 V AC 50/60 Hz 3 phase                                                                        |
| Control circuit type                        | DC standard                                                                                                                                                                                                                                                                                              |
| [Uc] control circuit voltage                | 24 V DC                                                                                                                                                                                                                                                                                                  |
| Auxiliary contact composition               | 1 NO + 1 NC                                                                                                                                                                                                                                                                                              |
| [Uimp] rated impulse withstand voltage      | 6 kV conforming to IEC 60947                                                                                                                                                                                                                                                                             |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                      |
| [Ith] conventional free air thermal current | 25 A 140 °F (60 °C) power circuit<br>10 A (at 60 °C) for signalling circuit                                                                                                                                                                                                                              |
| Irms rated making capacity                  | 250 A 440 V power circuit IEC 60947<br>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                                                                                                                                        |
| 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 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>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 conforming to IEC 60947-4-1<br>Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified                                  |

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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           | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Standards                  | CSA C22.2 No 14<br>EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product certifications     | BV<br>CSA<br>DNV<br>RINA<br>GL<br>GOST<br>LROS (Lloyds register of shipping)<br>CCC<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 cable(s) 1...4 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 2 cable(s) 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: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Operating time             | 53.55...72.45 ms closing<br>16...24 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Safety reliability level   | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Mechanical durability      | 30 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Maximum operating rate     | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Complementary

|                                |                                                                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | With integral suppression device                                                                                                              |
| Control circuit voltage limits | 0.1...0.25 Uc (-40...70 °C):drop-out DC<br>0.7...1.25 Uc (-40...60 °C):operational DC<br>1...1.25 Uc 140...158 °F (60...70 °C) operational DC |
| Time constant                  | 28 ms                                                                                                                                         |
| Inrush power in W              | 5.4 W (at 20 °C)                                                                                                                              |
| Hold-in power consumption in W | 5.4 W at 20 °C                                                                                                                                |

|                              |                                                                                                                          |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Auxiliary contacts type      | Type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1<br>Type mirror contact 1 NC conforming to IEC 60947-4-1 |
| Signalling circuit frequency | 25...400 Hz                                                                                                              |
| Minimum switching current    | 5 mA for signalling circuit                                                                                              |
| Minimum switching voltage    | 17 V 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                  |
| Insulation resistance        | > 10 MOhm for signalling circuit                                                                                         |
| Contact compatibility        | M4                                                                                                                       |
| Compatibility code           | LC1D                                                                                                                     |
| Motor power range            | 4...6 KW 380...440 V 3 phase<br>4...6 KW 480...500 V 3 phase<br>2.2...3 kW 200...240 V 3 phase                           |
| Motor starter type           | Direct on-line contactor                                                                                                 |
| Contactor coil voltage       | 24 V DC standard                                                                                                         |

## Environment

|                                       |                                                                                                                                                                                   |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20 front face conforming to IEC 60529                                                                                                                                           |
| Protective treatment                  | TH conforming to IEC 60068-2-30                                                                                                                                                   |
| Pollution degree                      | 3                                                                                                                                                                                 |
| Ambient air temperature for operation | -40...60 °C<br>60...70 °C with derating                                                                                                                                           |
| Ambient air temperature for storage   | -76...176 °F (-60...80 °C)                                                                                                                                                        |
| Operating altitude                    | 0...3000 m                                                                                                                                                                        |
| Fire resistance                       | 850 °C conforming to 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)                                                                                                                                                                   |
| Maximum Width                         | 1.77 in (45 mm)                                                                                                                                                                   |
| Depth                                 | 3.74 in (95 mm)                                                                                                                                                                   |
| Net Weight                            | 1.07 lb(US) (0.485 kg)                                                                                                                                                            |

## Ordering and shipping details

|                       |                                      |
|-----------------------|--------------------------------------|
| Category              | 22355 - CTR, TESYS D, OPEN, 9-38A DC |
| Discount Schedule     | I12                                  |
| GTIN                  | 00785901207245                       |
| Nbr. of units in pkg. | 1                                    |
| Package weight(Lbs)   | 1.18 lb(US) (0.54 kg)                |
| Returnability         | Yes                                  |
| Country of origin     | ID                                   |

## Packing Units

|                  |          |
|------------------|----------|
| Package 1 Height | 0.500 dm |
| Package 1 width  | 0.920 dm |
| Package 1 Length | 1.120 dm |

## Offer Sustainability

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

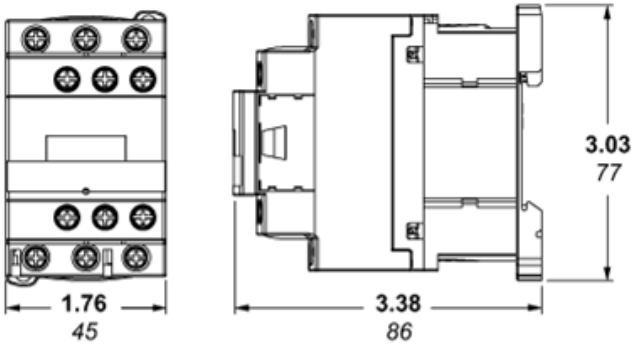
|                            |                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| RoHS exemption information |  <a href="#">Yes</a>                            |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| Environmental Disclosure   |  <a href="#">Product Environmental Profile</a> |
| Circularity Profile        |  <a href="#">End Of Life Information</a>       |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.    |
| PVC free                   | Yes                                                                                                                             |

### Contractual warranty

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

Approximate Dimensions

CONTACTOR WITH AC COIL



CONTACTOR WITH DC COIL

