

# LC1D38BD

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  V  
38 A - 24 V DC standard coil



## Main

|                                        |                                                                                                                                                                                                                                                              |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                  | TeSys                                                                                                                                                                                                                                                        |
| Product name                           | TeSys D                                                                                                                                                                                                                                                      |
| Product or component type              | Contactor                                                                                                                                                                                                                                                    |
| Device short name                      | LC1D                                                                                                                                                                                                                                                         |
| Contactor application                  | Motor control<br>Resistive load                                                                                                                                                                                                                              |
| Utilisation category                   | AC-1<br>AC-3<br>AC-4                                                                                                                                                                                                                                         |
| Poles description                      | 3P                                                                                                                                                                                                                                                           |
| Power pole contact composition         | 3 NO                                                                                                                                                                                                                                                         |
| [Ue] rated operational voltage         | $\leq 300$ V DC for power circuit<br>$\leq 690$ V AC 25...400 Hz for power circuit                                                                                                                                                                           |
| [Ie] rated operational current         | 38 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit<br>50 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit                                                                                                                             |
| Motor power kW                         | 18.5 kW at 500 V AC 50/60 Hz AC-3<br>18.5 kW at 660...690 V AC 50/60 Hz AC-3<br>7.5 kW at 400 V AC 50/60 Hz AC-4<br>18.5 kW at 380...400 V AC 50/60 Hz AC-3<br>18.5 kW at 415...440 V AC 50/60 Hz AC-3<br>9 kW at 220...230 V AC 50/60 Hz AC-3               |
| Motor power HP (UL / CSA)              | 10 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>10 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>5 hp at 240 V AC 50/60 Hz for 1 phase motors<br>20 hp at 480 V AC 50/60 Hz for 3 phases motors<br>25 hp at 600 V AC 50/60 Hz for 3 phases motors |
| Control circuit type                   | DC standard                                                                                                                                                                                                                                                  |
| [Uc] control circuit voltage           | 24 V DC                                                                                                                                                                                                                                                      |
| Auxiliary contact composition          | 1 NO + 1 NC                                                                                                                                                                                                                                                  |
| [Uimp] rated impulse withstand voltage | Conforming to IEC 60947                                                                                                                                                                                                                                      |
| Overvoltage category                   | III                                                                                                                                                                                                                                                          |

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| [I <sub>th</sub> ] conventional free air thermal current | 50 A at ≤ 60 °C for power circuit<br>10 A at ≤ 60 °C for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| I <sub>rms</sub> rated making capacity                   | 550 A at 440 V for power circuit conforming to 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                                  | 550 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| [I <sub>cw</sub> ] rated short-time withstand current    | 150 A ≤ 40 °C 1 min power circuit<br>310 A ≤ 40 °C 10 s power circuit<br>430 A ≤ 40 °C 1 s power circuit<br>60 A ≤ 40 °C 10 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                                   | 63 A gG at ≤ 690 V coordination type 1 for power circuit<br>63 A gG at ≤ 690 V coordination type 2 for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Average impedance                                        | 2 mOhm at 50 Hz - I <sub>th</sub> 50 A for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| [U <sub>i</sub> ] rated insulation voltage               | 600 V for power circuit certifications CSA<br>600 V for power circuit certifications UL<br>690 V for power circuit conforming to IEC 60947-4-1<br>690 V for signalling circuit conforming to IEC 60947-1<br>600 V for signalling circuit certifications CSA<br>600 V for signalling circuit certifications UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Electrical durability                                    | 1.4 Mcycles 50 A AC-1 at U <sub>e</sub> ≤ 440 V<br>1.4 Mcycles 38 A AC-3 at U <sub>e</sub> ≤ 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Power dissipation per pole                               | 3 W AC-3<br>5 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Safety 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>CCC<br>CSA<br>DNV<br>GL<br>GOST<br>LROS (Lloyds register of shipping)<br>RINA<br>UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Connections - terminals                                  | Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : screw clamp terminals 1 cable(s) 1.5...10 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit : screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Control circuit : screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : screw clamp terminals 1 cable(s) 2.5...10 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : screw clamp terminals 2 cable(s) 2.5...10 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : screw clamp terminals 1 cable(s) 1...10 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : screw clamp terminals 2 cable(s) 1.5...6 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : screw clamp terminals 2 cable(s) 2.5...10 mm <sup>2</sup> - cable stiffness: solid - without cable end |
| Tightening torque                                        | 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<br>Power circuit : 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit : 2.5 N.m - on screw clamp terminals - with screwdriver Philips No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Operating time                                           | 53.55...72.45 ms closing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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                                                                                                                                                           |
| Operating rate           | 3600 cyc/h at ≤ 60 °C                                                                                                                                                |

## Complementary

|                                |                                                                                                                              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | Built-in bidirectional peak limiting diode suppressor                                                                        |
| Control circuit voltage limits | 0.1...0.25 Uc drop-out at 60 °C, DC<br>0.7...1.25 Uc operational at 60 °C, 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                                                                                             |

## 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                 | -5...60 °C                                                                                                                                                                    |
| Ambient air temperature for storage                   | -60...80 °C                                                                                                                                                                   |
| Permissible ambient air temperature around the device | -40...70 °C at Uc                                                                                                                                                             |
| Operating altitude                                    | 3000 m without derating in temperature                                                                                                                                        |
| 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 closed 15 Gn for 11 ms<br>Shocks contactor open 8 Gn for 11 ms |
| Height                                                | 85 mm                                                                                                                                                                         |
| Width                                                 | 45 mm                                                                                                                                                                         |
| Depth                                                 | 101 mm                                                                                                                                                                        |
| Product weight                                        | 0.54 kg                                                                                                                                                                       |

## Offer Sustainability

|                                  |                                                                                                                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                                                                                                                                                                     |
| RoHS (date code: YYWW)           | Compliant - since 0627 - Schneider Electric declaration of conformity<br><a href="#"> Schneider Electric declaration of conformity</a> |
| REACH                            | Reference not containing SVHC above the threshold<br><a href="#">Reference not containing SVHC above the threshold</a>                                                                                                    |
| Product environmental profile    | Available<br><a href="#"> Product environmental</a>                                                                                    |
| Product end of life instructions | Available<br><a href="#"> End of life manual</a>                                                                                       |

Contractual warranty

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