

## LC1DT80AFD

TeSys D contactor - 4P(4 NO) - AC-1 -  $\leq 440$  V 80 A - 110 V DC standard coil



### Main

|   |   |
|---|---|
| Range                                       | TeSys   |
| Product name                                | TeSys D   |
| Product or component type                   | Contacteur  |
| Device short name                           | LC1D  |
| Contacteur application                      | Resistive load  |
| Utilisation category                        | AC-1  |
| Poles description                           | 4P  |
| Pole contact composition                    | 4 NO  |
| [Ue] rated operational voltage              | $\leq 690$ V AC 25...400 Hz for power circuit<br>$\leq 300$ V DC for power circuit  |
| [Ie] rated operational current              | 80 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit  |
| Control circuit type                        | DC standard   |
| [Uc] control circuit voltage                | 110 V DC  |
| Auxiliary contact composition               | 1 NO + 1 NC   |
| [Uimp] rated impulse withstand voltage      | Conforming to IEC 60947   |
| Overvoltage category                        | III   |
| [Ith] conventional free air thermal current | 80 A at $\leq 60$ °C for power circuit<br>10 A at $\leq 60$ °C for signalling circuit   |
| Irms rated making capacity                  | 1000 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                     | 1000 A at 440 V for power circuit conforming to IEC 60947   |
| [Icw] rated short-time withstand current    | 100 A 1 s signalling circuit<br>120 A 500 ms signalling circuit<br>140 A 100 ms signalling circuit<br>520 A $\leq 40$ °C 10 s power circuit<br>900 A $\leq 40$ °C 1 s power circuit<br>110 A $\leq 40$ °C 10 min power circuit<br>260 A $\leq 40$ °C 1 min power circuit                                      |
| Associated fuse rating                      | 125 A gG at $\leq 690$ V coordination type 1 for power circuit<br>125 A gG at $\leq 690$ V coordination type 2 for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947-5-1  |
| Average impedance                           | 1.6 mOhm at 50 Hz - Ith 80 A for power circuit  |
| [Ui] 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 80 A AC-1 at Ue $\leq 440$ V  |
| Power dissipation per pole                  | 10.2 W AC-1   |
| Protective cover                            | With  |
| Mounting support                            | Plate<br>Rail   |

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|                          |  |
|--------------------------|--|
| Standards                | UL 508<br>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  |
| 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)<br>1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit : screw clamp terminals 1 cable(s)<br>1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit : screw clamp terminals 2 cable(s)<br>1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit : screw clamp terminals 1 cable(s)<br>1...4 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit : screw clamp terminals 1 cable(s)<br>1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Control circuit : screw clamp terminals 2 cable(s)<br>1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : screw connection 2 cable(s) 1...25<br>mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : screw connection 2 cable(s) 1...25<br>mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : screw connection 2 cable(s) 1...25<br>mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : screw connection 1 cable(s) 1...35<br>mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : screw connection 1 cable(s) 1...35<br>mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : screw connection 1 cable(s) 1...35<br>mm <sup>2</sup> - cable stiffness: flexible - with 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 : 8 N.m - on screw clamp terminals - cable 25...35 mm <sup>2</sup> hexagonal 4 mm<br>Power circuit : 5 N.m - on screw clamp terminals - cable 1...25 mm <sup>2</sup> hexagonal 4 mm   |
| Operating time           | 16...24 ms opening<br>42.5...57.5 ms closing   |
| 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    | 10 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...0.3 U <sub>c</sub> drop-out at 60 °C, DC<br>0.75...1.25 U <sub>c</sub> operational at 60 °C, DC                        |
| Time constant                  | 34 ms  |
| Inrush power in W              | 19 W at 20 °C  |
| Hold-in power consumption in W | 7.4 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 U <sub>c</sub>  |
| 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 open 10 Gn for 11 ms<br>Shocks contactor closed 15 Gn for 11 ms |
| height  | 122 mm   |
| width   | 70 mm  |
| depth   | 120 mm   |
| product weight  | 1.225 kg   |

## Offer Sustainability

|                                  |   |
|----------------------------------|---|
| Sustainable offer status         | Green Premium product   |
| RoHS (date code: YYWW)           | Compliant - since 0501 - Schneider Electric declaration of conformity |
| REACH                            | Reference not containing SVHC above the threshold                     |
| Product environmental profile    | Available   |
| Product end of life instructions | Need no specific recycling operations                                 |