

## LC1DT80A3BD

TeSys D contactor - 4P(4 NO) - AC-1 -  $\leq 440$  V 80 A - 24 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                | 24 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 : spring terminals 1 cable(s) 2.5 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit : spring terminals 2 cable(s) 2.5 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : spring clamp terminal 1 cable(s) 1...35 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : spring clamp terminal 1 cable(s) 1...35 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : spring clamp terminal 2 cable(s) 1...25 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : spring clamp terminal 1 cable(s) 1...35 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : spring clamp terminal 2 cable(s) 1...25 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : spring clamp terminal 2 cable(s) 1...25 mm <sup>2</sup> - cable stiffness: flexible - with cable end |
| Tightening torque        | 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 2.5...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 = 2000000 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 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 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                                 |