

# LC1D80U7

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  V  
80 A - 240 V AC 50/60 Hz coil



## Main

|                                |   |
|--------------------------------|---|
| Range of product               | TeSys D   |
| 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-4<br>AC-1<br>AC-3  |
| Poles description              | 3P  |
| Pole contact composition       | 3 NO  |
| [Ue] rated operational voltage | $\leq 690$ V AC for power circuit<br>$\leq 300$ V DC 25...400 Hz for power circuit  |
| [Ie] rated operational current | 125 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit<br>80 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit   |
| Motor power kW                 | 22 kW at 220...230 V AC 50/60 Hz AC-3<br>37 kW at 380...400 V AC 50/60 Hz AC-3<br>45 kW at 660...690 V AC 50/60 Hz AC-3<br>45 kW at 415...440 V AC 50/60 Hz AC-3<br>55 kW at 500 V AC 50/60 Hz AC-3<br>45 kW at 1000 V AC 50/60 Hz AC-3<br>15 kW at 400 V AC 50/60 Hz AC-4  |
| Motor power hp                 | 20 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>7.5 hp at 115 V AC 50/60 Hz for 1 phase motors<br>15 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>25 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>60 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>60 hp at 575/600 V AC 50/60 Hz for 3 phases motors |
| Control circuit type           | AC 50/60 Hz   |
| Control circuit voltage        | 240 V AC 50/60 Hz   |
| Auxiliary contact composition  | 1 NO + 1 NC   |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|   |  |
|---|--|
| [Uimp] rated impulse withstand voltage      | Conforming to IEC 60947  |
| Overvoltage category                        | III  |
| [Ith] conventional free air thermal current | 125 A at ≤ 60 °C for power circuit<br>10 A at ≤ 60 °C for signalling circuit   |
| Irms rated making capacity                  | 1100 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                     | 1100 A at 440 V for power circuit conforming to IEC 60947  |
| [Icw] rated short-time withstand current    | 135 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<br>640 A ≤ 40 °C 10 s power circuit<br>990 A ≤ 40 °C 1 s power circuit<br>320 A ≤ 40 °C 1 min power circuit   |
| Associated fuse rating                      | 160 A gG at ≤ 690 V coordination type 2 for power circuit<br>200 A gG at ≤ 690 V coordination type 1 for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947-5-1   |
| Average impedance                           | 0.8 mOhm at 50 Hz - Ith 125 A for power circuit  |
| [Ui] rated insulation voltage               | 1000 V for power circuit conforming to IEC 60947-4-1<br>600 V for power circuit certifications CSA<br>600 V for power circuit certifications UL<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                       | 0.8 Mcycles 125 A AC-1 at Ue ≤ 440 V<br>1.5 Mcycles 80 A AC-3 at Ue ≤ 440 V  |
| Power dissipation per pole                  | 5.1 W AC-3<br>12.5 W AC-1  |
| Protective 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>UL<br>GL<br>RINA<br>CCC<br>GOST<br>CSA<br>LROS<br>DNV  |
| Connections - terminals                     | Control circuit : screw clamp terminals 2 cable(s) 1...2.5 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: 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: 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>Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : connector 2 cable(s) 4...25 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 2 cable(s) 4...16 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : connector 2 cable(s) 4...25 mm <sup>2</sup> - cable stiffness: solid - without cable end |
| Tightening torque                           | Power circuit : 9 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm<br>Power circuit : 9 N.m - on connector hexagonal 4 mm<br>Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2   |
| Operating time                              | 20...35 ms closing   |

|                          |  |
|--------------------------|--|
|                          | 6...20 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    | 4 Mcycles  |
| Operating rate           | 3600 cyc/h at ≤ 60 °C  |

### Complementary

|                                 |  |
|---------------------------------|--|
| Coil technology                 | Without built-in suppressor module   |
| Control circuit voltage limits  | 0.85...1.1 Uc operational at 55 °C, AC 60 Hz<br>0.3...0.6 Uc drop-out at 55 °C, AC 50/60 Hz<br>0.8...1.1 Uc operational at 55 °C, AC 50 Hz |
| Inrush power in VA              | 245 VA at 20 °C (cos φ 0.75) 60 Hz<br>245 VA at 20 °C (cos φ 0.75) 50 Hz   |
| Hold-in power consumption in VA | 26 VA at 20 °C (cos φ 0.3) 60 Hz<br>26 VA at 20 °C (cos φ 0.3) 50 Hz   |
| Heat dissipation                | 6...10 W at 50/60 Hz   |
| 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                               | IP2x 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>Shocks contactor open 8 Gn for 11 ms<br>Vibrations contactor closed 3 Gn, 5...300 Hz<br>Shocks contactor closed 10 Gn for 11 ms |
| Height  | 127 mm  |
| Width   | 85 mm   |
| Depth   | 130 mm  |
| Product weight  | 1.59 kg   |

### Offer Sustainability

|                                  |   |
|----------------------------------|---|
| Sustainable offer status         | Green Premium product   |
| RoHS (date code: YYWW)           | Compliant - since 0701 - 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 | Need no specific recycling operations   |

Contractual warranty

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