



## Main

|                                |  |
|--------------------------------|--|
| Range                          | TeSys  |
| Product name                   | TeSys D  |
| Product or component type      | Contactors   |
| Device short name              | LC1D   |
| Contactors 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: $\leq 690$ V AC 25...400 Hz<br>Power circuit: $\leq 300$ V DC   |
| [Ie] rated operational current | 50 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit<br>80 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit   |
| Motor power kW                 | 15 kW at 220...230 V AC 50/60 Hz (AC-3)<br>22 kW at 380...400 V AC 50/60 Hz (AC-3)<br>30 kW at 500 V AC 50/60 Hz (AC-3)<br>33 kW at 660...690 V AC 50/60 Hz (AC-3)<br>25 kW at 415 V AC 50/60 Hz (AC-3)<br>30 kW at 440 V AC 50/60 Hz (AC-3)<br>11 kW at 400 V AC 50/60 Hz (AC-4)  |
| Motor power HP (UL / CSA)      | 3 hp at 115 V AC 50/60 Hz for 1 phase motors<br>7.5 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>15 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>15 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>40 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>40 hp at 575/600 V AC 50/60 Hz for 3 phases motors |
| Control circuit type           | AC at 50/60 Hz   |
| [Uc] control circuit voltage   | 24 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      | 6 kV conforming to IEC 60947   |
| Overvoltage category                        | III  |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>80 A (at 60 °C) for power circuit  |
| Irms rated making capacity                  | 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<br>900 A at 440 V for power circuit conforming to IEC 60947   |
| Rated breaking capacity                     | 900 A at 440 V for power circuit conforming to IEC 60947   |
| [Icw] rated short-time withstand current    | 400 A 40 °C - 10 s for power circuit<br>810 A 40 °C - 1 s for power circuit<br>84 A 40 °C - 10 min for power circuit<br>208 A 40 °C - 1 min for 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>100 A gG at <= 690 V coordination type 1 for power circuit<br>100 A gG at <= 690 V coordination type 2 for power circuit   |
| Average impedance                           | 1.5 mOhm - Ith 80 A 50 Hz for power circuit  |
| [Ui] rated insulation voltage               | 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<br>Power circuit: 690 V conforming to IEC 60947-4-1  |
| Electrical durability                       | 1.45 Mcycles 50 A AC-3 at Ue <= 440 V<br>1.1 Mcycles 80 A AC-1 at Ue <= 440 V  |
| Power dissipation per pole                  | 3.7 W AC-3<br>9.6 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                      | DNV<br>LROS (Lloyds register of shipping)<br>CCC<br>GOST<br>BV<br>RINA<br>CSA<br>UL<br>GL  |
| Connections - terminals                     | 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 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 1 cable(s) 1...4 mm <sup>2</sup> solid without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> solid without cable end<br>Power circuit: screw connection 1 cable(s) 1...35 mm <sup>2</sup> flexible without cable end<br>Power circuit: screw connection 2 cable(s) 1...25 mm <sup>2</sup> flexible without cable end<br>Power circuit: screw connection 1 cable(s) 1...35 mm <sup>2</sup> flexible with cable end<br>Power circuit: screw connection 2 cable(s) 1...25 mm <sup>2</sup> flexible with cable end<br>Power circuit: screw connection 1 cable(s) 1...35 mm <sup>2</sup> solid without cable end<br>Power circuit: screw connection 2 cable(s) 1...25 mm <sup>2</sup> 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: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm <sup>2</sup> hexagonal screw head 4 mm<br>Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm <sup>2</sup> hexagonal screw head 4 mm   |
| Operating time                              | 4...19 ms opening<br>12...26 ms closing  |
| Safety reliability level                    | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1   |

|                        |                  |
|------------------------|------------------|
| Mechanical durability  | 6 Mcycles        |
| Maximum operating rate | 3600 cyc/h 60 °C |

## Complementary

|                                 |   |
|---------------------------------|---|
| Coil technology                 | Without built-in suppressor module  |
| Control circuit voltage limits  | 0.3...0.6 Uc (-40...70 °C):drop-out AC 50/60 Hz<br>0.8...1.1 Uc (-40...60 °C):operational AC 50 Hz<br>0.85...1.1 Uc (-40...60 °C):operational AC 60 Hz<br>1...1.1 Uc (60...70 °C):operational AC 50/60 Hz |
| Inrush power in VA              | 140 VA 60 Hz cos phi 0.75 (at 20 °C)<br>160 VA 50 Hz cos phi 0.75 (at 20 °C)  |
| Hold-in power consumption in VA | 13 VA 60 Hz cos phi 0.3 (at 20 °C)<br>15 VA 50 Hz cos phi 0.3 (at 20 °C)  |
| Heat dissipation                | 4...5 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               | 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   | -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 closed: 15 Gn for 11 ms<br>Shocks contactor open: 10 Gn for 11 ms |
| Height                                | 122 mm   |
| Width                                 | 55 mm  |
| Depth                                 | 120 mm   |
| Net weight                            | 0.855 kg   |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 944 g    |
| Package 1 Height             | 6.3 cm   |
| Package 1 width              | 13.5 cm  |
| Package 1 Length             | 15 cm    |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 10       |
| Package 2 Weight             | 9.934 kg |
| Package 2 Height             | 15 cm    |
| Package 2 width              | 30 cm    |

|                              |            |
|------------------------------|------------|
| Package 2 Length             | 40 cm      |
| Unit Type of Package 3       | P06        |
| Number of Units in Package 3 | 160        |
| Package 3 Weight             | 167.444 kg |
| Package 3 Height             | 77 cm      |
| Package 3 width              | 80 cm      |
| Package 3 Length             | 60 cm      |

### Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| REACH free of SVHC         | Yes   |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a>  |
| Toxic heavy metal free     | Yes   |
| Mercury free               | Yes   |
| RoHS exemption information | <a href="#">Yes</a>   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Pro-active China RoHS declaration (out of China RoHS legal scope)   |
| 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   |
| 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> |

### Contractual warranty

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

Dimensions



(1) Minimum electrical clearance

| LC1 |                                    | D40A...D65A |
|-----|------------------------------------|-------------|
| a   |                                    | 55          |
| b1  | with LA4 D•2                       | –           |
|     | with LA4 DB3 or LAD 4BB3           | 136         |
|     | with LA4 DF, DT                    | 157         |
|     | with LA4 DM, DW, DL                | 166         |
| c   | without cover or add-on blocks     | 118         |
|     | with cover, without add-on blocks  | 120         |
| c1  | with LAD N (1 contact)             | –           |
|     | with LAD N or C (2 or 4 contacts)  | 150         |
| c2  | with LA6 DK10, LAD 6DK             | 163         |
| c3  | with LAD T, R, S                   | 171         |
|     | with LAD T, R, S and sealing cover | 175         |

Wiring

