





## Main

|   |   |
|---|---|
| Range                                       | TeSys<br>TeSys Deca   |
| Product name                                | TeSys D<br>TeSys Deca   |
| Product or component type                   | Contactors  |
| Device short name                           | LC1D  |
| Contactors application                      | Motor control<br>Resistive load   |
| Utilisation category                        | AC-1<br>AC-4<br>AC-3<br>AC-3e   |
| Poles description                           | 3P  |
| Power pole contact composition              | 3 NO  |
| [Ue] rated operational voltage              | Power circuit: 690 V AC 25...400 Hz<br>Power circuit: 300 V DC  |
| [Ie] rated operational current              | 80 A (at <60 °C) at <= 440 V AC-1 for power circuit<br>66 A (at <60 °C) at <= 440 V AC-3 for power circuit<br>66 A (at <60 °C) at <= 440 V AC-3e for power circuit  |
| Motor power kW                              | 18.5 KW at 220...230 V AC 50 Hz (AC-3)<br>37 KW at 380...400 V AC 50 Hz (AC-3)<br>37 KW at 415 V AC 50 Hz (AC-3)<br>37 KW at 440 V AC 50 Hz (AC-3)<br>37 KW at 500 V AC 50 Hz (AC-3)<br>37 kW at 660...690 V AC 50 Hz (AC-3)  |
| Motor power HP (UL / CSA)                   | 5 Hp at 115 V AC 60 Hz for 1 phase motors<br>10 Hp at 230/240 V AC 60 Hz for 1 phase motors<br>20 Hp at 200/208 V AC 60 Hz for 3 phases motors<br>20 Hp at 230/240 V AC 60 Hz for 3 phases motors<br>40 Hp at 460/480 V AC 60 Hz for 3 phases motors<br>50 hp at 575/600 V AC 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   |
| [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>1000 A at 440 V AC for power circuit conforming to IEC 60947  |
| Rated breaking capacity                     | 1000 A at 440 V for power circuit conforming to IEC 60947   |
| [Icw] rated short-time withstand current    | 520 A 40 °C - 10 s for power circuit<br>900 A 40 °C - 1 s for power circuit<br>110 A 40 °C - 10 min for power circuit<br>260 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>125 A gG at <= 690 V coordination type 1 for power circuit<br>125 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 | Signalling circuit: 690 V conforming to IEC 60947-1<br>Power circuit: 690 V conforming to IEC 60947-4-1  |
| Electrical durability         | 0.7 Mcycles 80 A AC-1 at $U_e \leq 440$ V<br>1 Mcycles 66 A AC-3 at $U_e \leq 440$ V<br>1 Mcycles 66 A AC-3e at $U_e \leq 440$ V   |
| Power dissipation per pole    | 9.6 W AC-1<br>6.5 W AC-3<br>6.5 W AC-3e  |
| Front cover                   | With   |
| Mounting support              | Plate<br>Rail  |
| Standards                     | EN/IEC 60947-4-1<br>EN/IEC 60947-5-1<br>UL 60947-4-1<br>CSA C22.2 No 60947-4-1<br>IEC 60335-1  |
| Product certifications        | CCC<br>CSA<br>EAC<br>UL<br>KC<br>DNV-GL<br>LROS (Lloyds register of shipping)  |
| 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 with cable end<br>Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm <sup>2</sup> flexible with cable end<br>Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> solid<br>Control circuit: screw clamp terminals 2 cable(s) 1... 4 mm <sup>2</sup> solid<br>Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm <sup>2</sup> solid<br>Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm <sup>2</sup> solid<br>Control circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> flexible<br>Control circuit: screw clamp terminals 2 cable(s) 1... 4 mm <sup>2</sup> flexible<br>Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm <sup>2</sup> flexible<br>Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm <sup>2</sup> flexible |
| 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<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2<br>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver pozidriv No 2   |
| 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<br>B10d = 20000000 cycles contactor with mechanical 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   |
| 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                            | 0.86 kg  |
| Colour                                | Grey (SE GREY 6)   |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Weight             | 922.0 g   |
| Package 1 Height             | 6.2 cm    |
| Package 1 width              | 13.5 cm   |
| Package 1 Length             | 15.5 cm   |
| Unit Type of Package 2       | S02       |
| Number of Units in Package 2 | 10        |
| Package 2 Weight             | 9.838 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             | 161.78 kg |
| Package 3 Height             | 80 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 <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>  |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</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   |

## Contractual warranty

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