

# Product data sheet

Specifications



Contactor, TeSys Deca, 4P(4 NO), AC-1, 0 to 440V, 25A, 24VDC low cons coil

LC1DT25BL

## Main

|                                |  |
|--------------------------------|--|
| Range                          | TeSys<br>TeSys Deca  |
| Range of product               | TeSys Deca   |
| Product or component type      | Contactor  |
| Device short name              | LC1D   |
| Contactor application          | Resistive load   |
| Utilisation category           | AC-1<br>AC-3<br>AC-3e<br>AC-4  |
| Poles description              | 4P   |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz<br>Power circuit: <= 300 V DC |
| [Ie] rated operational current | 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit               |
| [Uc] control circuit voltage   | 24 V DC  |

## Complementary

|   |  |
|---|--|
| Compatibility code                          | LC1D   |
| Pole contact composition                    | 4 NO   |
| Contact compatibility                       | M5   |
| Protective cover                            | With   |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>25 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>250 A at 440 V for power circuit conforming to IEC 60947   |
| Rated breaking capacity                     | 250 A at 440 V for power circuit conforming to IEC 60947   |
| [Icw] rated short-time withstand current    | 30 A 40 °C - 10 min for power circuit<br>61 A 40 °C - 1 min for power circuit<br>105 A 40 °C - 10 s for power circuit<br>210 A 40 °C - 1 s 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>40 A gG at <= 690 V coordination type 1 for power circuit<br>25 A gG at <= 690 V coordination type 2 for power circuit   |
| Average impedance                           | 2.5 mOhm - Ith 25 A 50 Hz for power circuit  |

|  |  |
|--|--|
| Power dissipation per pole             | 1.56 W AC-1  |
| [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  |
| Overvoltage category                   | III  |
| Pollution degree                       | 3  |
| [Uimp] rated impulse withstand voltage | 6 kV conforming to IEC 60947   |
| 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                  | 30 Mcycles   |
| Electrical durability                  | 0.8 Mcycles 25 A AC-1 at Ue <= 440 V   |
| Control circuit type                   | DC low consumption   |
| Coil technology                        | Built-in bidirectional peak limiting diode suppressor  |
| Control circuit voltage limits         | 0.1...0.3 Uc (-40...70 °C):drop-out DC<br>0.8...1.25 Uc (-40...60 °C):operational DC<br>1...1.25 Uc (60...70 °C):operational DC  |
| Inrush power in W                      | 2.4 W (at 20 °C)   |
| Hold-in power consumption in W         | 2.4 W at 20 °C   |
| Operating time                         | 65.45...88.55 ms closing<br>20...30 ms opening   |
| Time constant                          | 40 ms  |
| Maximum operating rate                 | 3600 cyc/h 60 °C   |
| Connections - terminals                | Control circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: 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: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2<br>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2   |
| Auxiliary contact composition          | 1 NO + 1 NC  |
| 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 voltage              | 17 V for signalling circuit  |
| Minimum switching current              | 5 mA for signalling circuit  |
| Insulation resistance                  | > 10 MOhm 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  |
| Mounting support                       | Rail<br>Plate  |

## Environment

|           |   |
|-----------|---|
| Standards | CSA C22.2 No 14<br>EN 60947-4-1<br>EN 60947-5-1 |
|-----------|---|

|   |  |
|---|--|
|   | IEC 60947-4-1<br>IEC 60947-5-1<br>UL 508<br>IEC 60335-1  |
| Product certifications                                | CCC<br>GL<br>RINA<br>UL<br>CSA<br>DNV<br>LROS (Lloyds register of shipping)<br>GOST<br>BV  |
| IP degree of protection                               | IP20 front face conforming to IEC 60529  |
| Protective treatment                                  | TH conforming to IEC 60068-2-30  |
| Climatic withstand                                    | conforming to IACS E10 exposure to damp heat<br>conforming to IEC 60947-1 Annex Q category D exposure to damp heat   |
| Permissible ambient air temperature around the device | -40...60 °C<br>60...70 °C with derating  |
| 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  | 85 mm  |
| Width   | 45 mm  |
| Depth   | 99 mm  |
| Net weight  | 0.365 kg   |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 5.5 cm  |
| Package 1 Width              | 9.5 cm  |
| Package 1 Length             | 12.0 cm |
| Package 1 Weight             | 562.0 g |

## 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   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Product out of China RoHS scope. Substance declaration for your information |
| RoHS exemption information | <a href="#">Yes</a>   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End of Life Information</a>   |
| 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 |
|----------|-----------|

Recommended replacement(s)