



## Main

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| Range                          | TeSys                                                              |
| Range of product               | TeSys Deca                                                         |
| Product or component type      | Contacteur                                                         |
| Device short name              | LC1D                                                               |
| Contacteur application         | Resistive load                                                     |
| Utilisation category           | AC-1                                                               |
| 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 | 20 A (at <60 °C) at ≤ 440 V AC AC-1 for power circuit              |
| [Uc] control circuit voltage   | 48 V DC                                                            |

## Complementary

|                                             |                                                                                                                                                                                                                                                                                             |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compatibility code                          | LC1D                                                                                                                                                                                                                                                                                        |
| Pole contact composition                    | 4 NO                                                                                                                                                                                                                                                                                        |
| Protective cover                            | With                                                                                                                                                                                                                                                                                        |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>20 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>25 A gG at ≤ 690 V coordination type 1 for power circuit<br>20 A gG at ≤ 690 V coordination type 2 for power circuit                                                                                                          |
| Average impedance                           | 2.5 mOhm - Ith 20 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[RETURN]Power circuit: 600 V UL certified[RETURN]Signalling circuit: 690 V conforming to IEC 60947-1[RETURN]Signalling circuit: 600 V CSA certified[RETURN]Signalling circuit: 600 V UL certified[RETURN]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                                                                                                                                                                                                                                                                                  |
| Control circuit type                        | DC standard                                                                                                                                                                                                                                                                                 |
| Coil technology                             | Built-in bidirectional peak limiting diode suppressor                                                                                                                                                                                                                                       |

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|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control circuit voltage limits | 0.1...0.25 U <sub>c</sub> (-40...70 °C):drop-out DC<br>0.7...1.25 U <sub>c</sub> (-40...60 °C):operational DC<br>1...1.25 U <sub>c</sub> (60...70 °C):operational DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Inrush power in W              | 5.4 W (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Hold-in power consumption in W | 5.4 W at 20 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operating time                 | 20 ±20 % ms opening<br>63 ±15 % ms closing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Time constant                  | 28 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               | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Environment

|                                                       |                                                                                                                          |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 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                                | GOST[RETURN]RINA[RETURN]CSA[RETURN]DNV[RETURN]UL[RETURN]BV[RETURN]CCC[RETURN]<br>(Lloyds register of shipping)[RETURN]GL |
| 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              | 9.3 cm   |
| Package 1 Length             | 11.8 cm  |
| Package 1 Weight             | 557 g    |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 16       |
| Package 2 Height             | 15 cm    |
| Package 2 Width              | 30 cm    |
| Package 2 Length             | 40 cm    |
| Package 2 Weight             | 9.408 kg |

### Offer Sustainability

|                            |                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                             |
| REACH Regulation           |  <a href="#">REACH Declaration</a>             |
| EU RoHS Directive          | Compliant with Exemptions                                                                                                         |
| Mercury free               | Yes                                                                                                                               |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| 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                                                                                                                               |

### Contractual warranty

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