

# Product datasheet

Specifications



## TeSys D contactor - 4P(2 NO + 2 NC) - AC-1 - <= 440 V 40 A - 220 V AC coil

Local distributor code: 386076554 LC1D258M7

EAN Code : 3389110294378

### Main

|                                |                                                        |
|--------------------------------|--------------------------------------------------------|
| 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                 |
| [Ie] rated operational current | 40 A (at <60 °C) at <= 440 V AC AC-1 for power circuit |
| [Uc] control circuit voltage   | 220 V AC 50/60 Hz                                      |

### Complementary

|                                             |                                                                                                                                                                                                                                                                                       |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compatibility code                          | LC1D                                                                                                                                                                                                                                                                                  |
| Pole contact composition                    | 2 NO + 2 NC                                                                                                                                                                                                                                                                           |
| Contact compatibility                       | M6                                                                                                                                                                                                                                                                                    |
| Protective cover                            | With                                                                                                                                                                                                                                                                                  |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>40 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>450 A at 440 V for power circuit conforming to IEC 60947                                                                                                |
| Rated breaking capacity                     | 450 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                              |
| [Icw] rated short-time withstand current    | 240 A 40 °C - 10 s for power circuit<br>380 A 40 °C - 1 s for power circuit<br>50 A 40 °C - 10 min for power circuit<br>120 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>63 A gG at <= 690 V coordination type 1 for power circuit<br>40 A gG at <= 690 V coordination type 2 for power circuit                                                                                                  |
| Average impedance                           | 2 mOhm - Ith 40 A 50 Hz for power circuit                                                                                                                                                                                                                                             |
| Power dissipation per pole                  | 3.2 W AC-1                                                                                                                                                                                                                                                                            |
| [Ui] rated insulation voltage               | Power circuit: 690 V conforming to IEC 60947-4-1<br>Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Signalling circuit: 690 V conforming to IEC 60947-1                                                                                                    |

Signalling circuit: 600 V CSA certified  
 Signalling circuit: 600 V UL certified

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Overvoltage category</b>                   | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Pollution degree</b>                       | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>[Uimp] rated impulse withstand voltage</b> | 6 kV conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Safety reliability level</b>               | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Mechanical durability</b>                  | 15 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Electrical durability</b>                  | 1.4 Mcycles 40 A AC-1 at $U_e \leq 440$ V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Control circuit type</b>                   | AC at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Coil technology</b>                        | Without built-in suppressor module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Control circuit voltage limits</b>         | 0.3...0.6 $U_c$ (-40...60 °C):drop-out AC 50/60 Hz<br>0.8...1.1 $U_c$ (-40...60 °C):operational AC 50 Hz<br>0.85...1.1 $U_c$ (-40...60 °C):operational AC 60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Inrush power in VA</b>                     | 70 VA 60 Hz cos phi 0.75 (at 20 °C)<br>70 VA 50 Hz cos phi 0.75 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Hold-in power consumption in VA</b>        | 7.5 VA 60 Hz cos phi 0.3 (at 20 °C)<br>7 VA 50 Hz cos phi 0.3 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Heat dissipation</b>                       | 2...3 W at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Operating time</b>                         | 12...22 ms closing<br>4...19 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Maximum operating rate</b>                 | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Connections - terminals</b>                | 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 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: 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: connector 1 2.5...10 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Power circuit: connector 2 2.5...10 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Power circuit: connector 1 2.5...10 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: connector 2 2.5...10 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: connector 1 2.5...16 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: connector 2 2.5...16 mm <sup>2</sup> - cable stiffness: solid without cable end |
| <b>Tightening torque</b>                      | 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: 1.8 N.m - on connector - with screwdriver flat Ø 6 mm<br>Power circuit: 1.8 N.m - on connector - with screwdriver Philips No 2<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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Auxiliary contact composition</b>          | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Auxiliary contacts type</b>                | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Signalling circuit frequency</b>           | 25...400 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Minimum switching voltage</b>              | 17 V for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Minimum switching current</b>              | 5 mA for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Insulation resistance</b>                  | > 10 MOhm for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Non-overlap time</b>                       | 1.5 ms on de-energisation between NC and NO contact<br>1.5 ms on energisation between NC and NO contact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Mounting support</b>                       | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Environment

|                  |                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standards</b> | EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 60947-4-1<br>UL 60947-5-1<br>CSA C22.2 No 60947-4-1<br>CSA C22.2 No 60947-5-1 |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                              |                                                                                                                                                                                       |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product certifications</b>                                | UL<br>CSA<br>CCC<br>EAC<br>UKCA<br>CB<br>EU-RO-MR by DNV-GL                                                                                                                           |
| <b>IP degree of protection</b>                               | IP20 front face conforming to IEC 60529                                                                                                                                               |
| <b>Protective treatment</b>                                  | TH conforming to IEC 60068-2-30                                                                                                                                                       |
| <b>Climatic withstand</b>                                    | conforming to IACS E10 exposure to damp heat<br>conforming to IEC 60947-1 Annex Q category D exposure to damp heat                                                                    |
| <b>Permissible ambient air temperature around the device</b> | -40...60 °C<br>60...70 °C with derating                                                                                                                                               |
| <b>Operating altitude</b>                                    | 0...3000 m                                                                                                                                                                            |
| <b>Fire resistance</b>                                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                                    |
| <b>Flame retardance</b>                                      | V1 conforming to UL 94                                                                                                                                                                |
| <b>Mechanical robustness</b>                                 | 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 (8 Gn for 11 ms) |
| <b>Height</b>                                                | 105 mm                                                                                                                                                                                |
| <b>Width</b>                                                 | 45 mm                                                                                                                                                                                 |
| <b>Depth</b>                                                 | 99 mm                                                                                                                                                                                 |
| <b>Net weight</b>                                            | 0.425 kg                                                                                                                                                                              |

## Packing Units

|                                     |            |
|-------------------------------------|------------|
| <b>Unit Type of Package 1</b>       | PCE        |
| <b>Number of Units in Package 1</b> | 1          |
| <b>Package 1 Height</b>             | 5.5 cm     |
| <b>Package 1 Width</b>              | 9.5 cm     |
| <b>Package 1 Length</b>             | 11.8 cm    |
| <b>Package 1 Weight</b>             | 470 g      |
| <b>Unit Type of Package 2</b>       | S02        |
| <b>Number of Units in Package 2</b> | 16         |
| <b>Package 2 Height</b>             | 15 cm      |
| <b>Package 2 Width</b>              | 30 cm      |
| <b>Package 2 Length</b>             | 40 cm      |
| <b>Package 2 Weight</b>             | 7.978 kg   |
| <b>Unit Type of Package 3</b>       | P06        |
| <b>Number of Units in Package 3</b> | 256        |
| <b>Package 3 Height</b>             | 75 cm      |
| <b>Package 3 Width</b>              | 60 cm      |
| <b>Package 3 Length</b>             | 80 cm      |
| <b>Package 3 Weight</b>             | 135.844 kg |

## Offer Sustainability

|                                 |                                   |
|---------------------------------|-----------------------------------|
| <b>Sustainable offer status</b> | Green Premium product             |
| <b>REACH Regulation</b>         | <a href="#">REACH Declaration</a> |

|                                   |                                                                                                                             |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>REACH free of SVHC</b>         | Yes                                                                                                                         |
| <b>EU RoHS Directive</b>          | Compliant<br><a href="#">EU RoHS Declaration</a>                                                                            |
| <b>Toxic heavy metal free</b>     | Yes                                                                                                                         |
| <b>Mercury free</b>               | Yes                                                                                                                         |
| <b>RoHS exemption information</b> | <a href="#">Yes</a>                                                                                                         |
| <b>China RoHS Regulation</b>      | <a href="#">China RoHS declaration</a><br>Pro-active China RoHS declaration (out of China RoHS legal scope)                 |
| <b>Environmental Disclosure</b>   | <a href="#">Product Environmental Profile</a>                                                                               |
| <b>Circularity Profile</b>        | <a href="#">End of Life Information</a>                                                                                     |
| <b>WEEE</b>                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| <b>PVC free</b>                   | Yes                                                                                                                         |

## Contractual warranty

|                 |           |
|-----------------|-----------|
| <b>Warranty</b> | 18 months |
|-----------------|-----------|

## Recommended replacement(s)