

# Product datasheet

Specifications



## TeSys D contactor - 4P(4 NO) - AC-1 - <= 440 V 40 A - 48 V AC 50/60 Hz coil

Local distributor code: 386105577    LC1DT40E7

### Main

|                                             |                                                                                                                                                                                                                                                                                       |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys<br>TeSys Deca                                                                                                                                                                                                                                                                   |
| Product name                                | TeSys D<br>TeSys Deca                                                                                                                                                                                                                                                                 |
| Product or component type                   | Contactor                                                                                                                                                                                                                                                                             |
| Device short name                           | LC1D                                                                                                                                                                                                                                                                                  |
| Contactor application                       | Resistive load                                                                                                                                                                                                                                                                        |
| Utilisation category                        | AC-1                                                                                                                                                                                                                                                                                  |
| Poles description                           | 4P                                                                                                                                                                                                                                                                                    |
| Power pole contact composition              | 4 NO                                                                                                                                                                                                                                                                                  |
| [Ue] rated operational voltage              | Power circuit: <= 690 V AC 25...400 Hz<br>Power circuit: <= 300 V DC                                                                                                                                                                                                                  |
| [Ie] rated operational current              | 40 A (at <60 °C) at <= 440 V AC AC-1 for power circuit                                                                                                                                                                                                                                |
| Control circuit type                        | AC at 50/60 Hz                                                                                                                                                                                                                                                                        |
| [Uc] control circuit voltage                | 48 V AC 50/60 Hz                                                                                                                                                                                                                                                                      |
| Auxiliary contact composition               | 1 NO + 1 NC                                                                                                                                                                                                                                                                           |
| [Uimp] rated impulse withstand voltage      | 6 kV conforming to IEC 60947                                                                                                                                                                                                                                                          |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                   |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>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    | 50 A 40 °C - 10 min for power circuit<br>120 A 40 °C - 1 min for power circuit<br>240 A 40 °C - 10 s for power circuit<br>380 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>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                                                                                                                                                                                                                                             |
| [Ui] rated insulation voltage               | Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified                                                                                                                                                                                                               |

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|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified<br>Power circuit: 690 V conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Electrical durability           | 1.4 Mcycles 40 A AC-1 at Ue <= 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Power dissipation per pole      | 3.2 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Front cover                     | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Mounting support                | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Standards                       | CSA C22.2 No 14<br>EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 508<br>IEC 60335-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Product certifications          | GOST<br>GL<br>DNV<br>LROS (Lloyds register of shipping)<br>UL<br>CCC<br>RINA<br>BV<br>CSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Connections - terminals         | Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm²flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²flexible without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²solid without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²solid without cable end<br>Power circuit: connector 1 cable(s) 2.5...10 mm²flexible without cable end<br>Power circuit: connector 2 cable(s) 2.5...10 mm²flexible without cable end<br>Power circuit: connector 1 cable(s) 2.5...10 mm²flexible with cable end<br>Power circuit: connector 2 cable(s) 2.5...10 mm²flexible with cable end<br>Power circuit: connector 1 cable(s) 2.5...16 mm²solid without cable end<br>Power circuit: connector 2 cable(s) 2.5...16 mm²solid without cable end |
| Tightening torque               | Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver Philips No 2<br>Power circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver flat Ø 6 mm<br>Power circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver Philips No 2<br>Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver pozidriv No 2<br>Power circuit: 2.5 N.m - on EverLink BTR screw connectors - with screwdriver pozidriv No 2<br>- on EverLink BTR screw connectors                                                                                                                                                                                                                                                                                                                                                                                           |
| Operating time                  | 4...19 ms opening<br>12...22 ms closing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Safety reliability level        | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Mechanical durability           | 15 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Maximum operating rate          | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Complementary                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Coil technology                 | Without built-in suppressor module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Control circuit voltage limits  | 0.3...0.6 Uc (-40...70 °C):drop-out AC 50/60 Hz<br>0.8...1.1 Uc (-40...60 °C):operational AC 50 Hz<br>0.85...1.1 Uc (-40...60 °C):operational AC 60 Hz<br>1...1.1 Uc (60...70 °C):operational AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Inrush power in VA              | 70 VA 60 Hz cos phi 0.75 (at 20 °C)<br>70 VA 50 Hz cos phi 0.75 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Hold-in power consumption in VA | 7.5 VA 60 Hz cos phi 0.3 (at 20 °C)<br>7 VA 50 Hz cos phi 0.3 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Heat dissipation                | 2...3 W at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Auxiliary contacts type         | type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1<br>type mirror contact 1 NC conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Signalling circuit frequency    | 25...400 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Minimum switching current       | 5 mA for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Minimum switching voltage       | 17 V for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

|                       |                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| Non-overlap time      | 1.5 ms on de-energisation between NC and NO contact<br>1.5 ms on energisation between NC and NO contact |
| Insulation resistance | > 10 MOhm for signalling circuit                                                                        |

## Environment

|                                       |                                                                                                                                                                                   |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20 front face conforming to IEC 60529                                                                                                                                           |
| Climatic withstand                    | conforming to IACS E10<br>conforming to IEC 60947-1 Annex Q category D                                                                                                            |
| Protective treatment                  | TH conforming to IEC 60068-2-30                                                                                                                                                   |
| Pollution degree                      | 3                                                                                                                                                                                 |
| Ambient air temperature for operation | -40...60 °C<br>60...70 °C with derating                                                                                                                                           |
| Ambient air temperature for storage   | -60...80 °C                                                                                                                                                                       |
| Operating altitude                    | 0...3000 m                                                                                                                                                                        |
| Fire resistance                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                                |
| Mechanical robustness                 | Vibrations contactor open: 2 Gn, 5...300 Hz<br>Vibrations contactor closed: 4 Gn, 5...300 Hz<br>Shocks contactor closed: 15 Gn for 11 ms<br>Shocks contactor open: 8 Gn for 11 ms |
| Height                                | 91 mm                                                                                                                                                                             |
| Width                                 | 45 mm                                                                                                                                                                             |
| Depth                                 | 99 mm                                                                                                                                                                             |
| Net weight                            | 0.425 kg                                                                                                                                                                          |

## Packing Units

|                              |            |
|------------------------------|------------|
| Unit Type of Package 1       | PCE        |
| Number of Units in Package 1 | 1          |
| Package 1 Weight             | 474.0 g    |
| Package 1 Height             | 5.2 cm     |
| Package 1 width              | 13.6 cm    |
| Package 1 Length             | 14.2 cm    |
| Unit Type of Package 2       | S02        |
| Number of Units in Package 2 | 16         |
| Package 2 Weight             | 8.007 kg   |
| Package 2 Height             | 15 cm      |
| Package 2 width              | 30 cm      |
| Package 2 Length             | 40 cm      |
| Unit Type of Package 3       | P06        |
| Number of Units in Package 3 | 256        |
| Package 3 Weight             | 136.112 kg |
| Package 3 Height             | 75 cm      |
| Package 3 width              | 60 cm      |
| Package 3 Length             | 80 cm      |

## Offer Sustainability

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|--------------------------|-----------------------|
| Sustainable offer status | Green Premium product |
|--------------------------|-----------------------|

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| REACH Regulation            | <a href="#">REACH Declaration</a>                                                                                           |
| REACH free of SVHC          | Yes                                                                                                                         |
| EU RoHS Directive           | Compliant<br><a href="#">EU RoHS Declaration</a>                                                                            |
| Toxic heavy metal free      | Yes                                                                                                                         |
| Mercury free                | Yes                                                                                                                         |
| RoHS exemption information  | <a href="#">Yes</a>                                                                                                         |
| China RoHS Regulation       | <a href="#">China RoHS declaration</a><br>Pro-active China RoHS declaration (out of China RoHS legal scope)                 |
| Environmental Disclosure    | <a href="#">Product Environmental Profile</a>                                                                               |
| Circularity Profile         | <a href="#">End of Life Information</a>                                                                                     |
| WEEE                        | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free                    | Yes                                                                                                                         |
| <b>Contractual warranty</b> |                                                                                                                             |
| Warranty                    | 18 months                                                                                                                   |