

# Product datasheet

Specifications



## TeSys D contactor - 4P(4 NO) - AC-1 - <= 440 V 40 A - 110 V AC 50/60 Hz coil

LC1DT40F7

### Main

|                                |  |
|--------------------------------|--|
| Range                          | TeSys<br>TeSys Deca  |
| Range of product               | TeSys Deca   |
| Product or component type      | Contactor  |
| Device short name              | LC1D   |
| Contactor application          | Resistive load   |
| Utilisation category           | AC-1<br>AC-3<br>AC-3e<br>AC-4  |
| Poles description              | 4P   |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz<br>Power circuit: <= 300 V DC |
| [Ie] rated operational current | 40 A (at <60 °C) at <= 440 V AC AC-1 for power circuit               |
| [Uc] control circuit voltage   | 110 V AC 50/60 Hz  |

### Complementary

|   |   |
|---|---|
| Compatibility code                          | LC1D  |
| Pole contact composition                    | 4 NO  |
| 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    | 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   |

|  |  |
|--|--|
| Power dissipation per pole             | 3.2 W AC-1   |
| [Ui] rated insulation voltage          | Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified<br>Power circuit: 690 V conforming to IEC 60947-4-1  |
| Overvoltage category                   | III  |
| Pollution degree                       | 3  |
| [Uimp] rated impulse withstand voltage | 6 kV conforming to IEC 60947   |
| Safety reliability level               | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1   |
| Mechanical durability                  | 15 Mcycles   |
| Electrical durability                  | 1.4 Mcycles 40 A AC-1 at Ue ≤ 440 V  |
| Control circuit type                   | AC at 50/60 Hz   |
| 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  |
| Operating time                         | 4...19 ms opening<br>12...22 ms closing  |
| Maximum operating rate                 | 3600 cyc/h 60 °C   |
| Connections - terminals                | Control circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 1 2.5...10 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 2.5...10 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 2.5...10 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 2.5...10 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 2.5...16 mm² - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 2.5...16 mm² - 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>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2<br>Power circuit: 1.8 N.m - on screw clamps terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 1.8 N.m - on screw clamps terminals - with screwdriver Philips No 2<br>Power circuit: 1.8 N.m - on screw clamp terminals - with screwdriver pozidriv No 2   |
| Auxiliary contact composition          | 1 NO + 1 NC  |
| Auxiliary contacts type                | type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1<br>type mirror contact 1 NC conforming to IEC 60947-4-1   |
| Signalling circuit frequency           | 25...400 Hz  |
| Minimum switching voltage              | 17 V for signalling circuit  |
| Minimum switching current              | 5 mA for signalling circuit  |
| Insulation resistance                  | > 10 MOhm for signalling circuit   |
| Non-overlap time                       | 1.5 ms on de-energisation between NC and NO contact<br>1.5 ms on energisation between NC and NO contact  |
| Mounting support                       | Rail<br>Plate  |

## Environment

|           |                 |
|-----------|-----------------|
| Standards | CSA C22.2 No 14 |
|-----------|-----------------|

|   |   |
|---|---|
|   | 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                                | CSA<br>GL<br>BV<br>RINA<br>DNV<br>UL<br>GOST<br>LROS (Lloyds register of shipping)<br>CCC   |
| 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 (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 Height             | 5.500 cm  |
| Package 1 Width              | 9.500 cm  |
| Package 1 Length             | 12.000 cm |
| Package 1 Weight             | 464.000 g |
| Unit Type of Package 2       | S02       |
| Number of Units in Package 2 | 16        |
| Package 2 Height             | 15.000 cm |
| Package 2 Width              | 30.000 cm |
| Package 2 Length             | 40.000 cm |
| Package 2 Weight             | 8.005 kg  |

### Offer Sustainability

|                          |  |
|--------------------------|--|
| Sustainable offer status | Green Premium product                            |
| REACH Regulation         | <a href="#">REACH Declaration</a>                |
| REACH free of SVHC       | Yes  |
| EU RoHS Directive        | Compliant<br><a href="#">EU RoHS Declaration</a> |
| Toxic heavy metal free   | Yes  |

|                             |   |
|-----------------------------|---|
| Mercury free                | Yes   |
| China RoHS Regulation       | <a href="#">China RoHS declaration</a><br>Pro-active China RoHS declaration (out of China RoHS legal scope)                 |
| RoHS exemption information  | Yes   |
| 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   |

Recommended replacement(s)