

# Product datasheet

Specifications



**TeSys D contactor - 4P(4 NO) - AC-1 - <= 440 V 60 A - 220 V AC 50/60 Hz coil**

LC1DT60AM7

## 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   |
| 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 | 60 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                    | 4 NO  |
| Contact compatibility                       | M6  |
| Protective cover                            | With  |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>60 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>800 A at 440 V for power circuit conforming to IEC 60947  |
| Rated breaking capacity                     | 800 A at 440 V for power circuit conforming to IEC 60947  |
| [Icw] rated short-time withstand current    | 320 A 40 °C - 10 s for power circuit<br>720 A 40 °C - 1 s for power circuit<br>72 A 40 °C - 10 min for power circuit<br>165 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>80 A gG at <= 690 V coordination type 1 for power circuit<br>80 A gG at <= 690 V coordination type 2 for power circuit  |
| Average impedance                           | 1.6 mOhm - Ith 60 A 50 Hz for power circuit   |
| Power dissipation per pole                  | 5.8 W AC-1  |

|   |  |
|---|--|
| <b>[Ui] rated insulation voltage</b>                      | 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  |
| <b>Overvoltage category</b>                               | III  |
| <b>Pollution degree</b>                                   | 3  |
| <b>[Ui<sub>imp</sub>] 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 = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1  |
| <b>Mechanical durability</b>                              | 6 Mcycles  |
| <b>Electrical durability</b>                              | 1.4 Mcycles 60 A AC-1 at Ue <= 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 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  |
| <b>Inrush power in VA</b>                                 | 140 VA 60 Hz cos phi 0.75 (at 20 °C)<br>160 VA 50 Hz cos phi 0.75 (at 20 °C)   |
| <b>Hold-in power consumption in VA</b>                    | 13 VA 60 Hz cos phi 0.3 (at 20 °C)<br>15 VA 50 Hz cos phi 0.3 (at 20 °C)   |
| <b>Heat dissipation</b>                                   | 4...5 W at 50/60 Hz  |
| <b>Operating time</b>                                     | 4...19 ms opening<br>12...26 ms closing  |
| <b>Maximum operating rate</b>                             | 3600 cyc/h 60 °C   |
| <b>Connections - terminals</b>                            | Control circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: EverLink BTR screw connectors 1 1...35 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Power circuit: EverLink BTR screw connectors 2 1...25 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Power circuit: EverLink BTR screw connectors 1 1...35 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: EverLink BTR screw connectors 2 1...25 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: EverLink BTR screw connectors 1 1...35 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: EverLink BTR screw connectors 2 1...25 mm <sup>2</sup> - cable stiffness: solid without cable end |
| <b>Tightening torque</b>                                  | 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: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm <sup>2</sup> hexagonal screw head 4 mm<br>Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm <sup>2</sup> hexagonal screw head 4 mm<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   |
| <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 MΩ 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> | CSA C22.2 No 14 |
|------------------|-----------------|

EN 60947-4-1  
 EN 60947-5-1  
 IEC 60947-4-1  
 IEC 60947-5-1  
 UL 508  
 IEC 60335-1

|  |  |
|--|--|
| <b>Product certifications</b>                                | LROS (Lloyds register of shipping)<br>UL<br>GOST<br>BV<br>CCC<br>CSA<br>RINA<br>DNV<br>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 (10 Gn for 11 ms) |
| <b>Height</b>  | 122 mm   |
| <b>Width</b>   | 70 mm  |
| <b>Depth</b>   | 120 mm   |
| <b>Net weight</b>  | 1.09 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>             | 8 cm       |
| <b>Package 1 Width</b>              | 14 cm      |
| <b>Package 1 Length</b>             | 15 cm      |
| <b>Package 1 Weight</b>             | 1.097 kg   |
| <b>Unit Type of Package 2</b>       | S02        |
| <b>Number of Units in Package 2</b> | 7          |
| <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>             | 8.041 kg   |
| <b>Unit Type of Package 3</b>       | P06        |
| <b>Number of Units in Package 3</b> | 112        |
| <b>Package 3 Height</b>             | 77 cm      |
| <b>Package 3 Width</b>              | 80 cm      |
| <b>Package 3 Length</b>             | 60 cm      |
| <b>Package 3 Weight</b>             | 138.644 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 | <a href="#">Yes</a>   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</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   |

## Contractual warranty

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

## Recommended replacement(s)