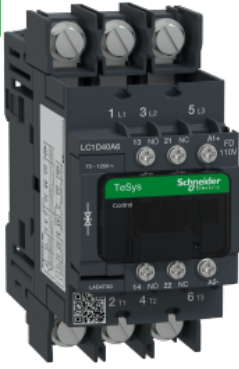


# Product datasheet

Specifications



## TeSys D contactor - 3P(3 NO) - AC-3 - $\leq 440$ V 40 A - 110 V DC standard coil

LC1D40A6FD

### Main

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

### Complementary

|                          |   |
|--------------------------|---|
| Motor power kW           | 18.5 kW at 380...400 V AC 50/60 Hz (AC-3)<br>11 kW at 220...230 V AC 50/60 Hz (AC-3)<br>22 kW at 415...440 V AC 50/60 Hz (AC-3)<br>22 kW at 500 V AC 50/60 Hz (AC-3)<br>30 kW at 660...690 V AC 50/60 Hz (AC-3)<br>9 kW at 400 V AC 50/60 Hz (AC-4)<br>18.5 kW at 380...400 V AC 50/60 Hz (AC-3e)<br>11 kW at 220...230 V AC 50/60 Hz (AC-3e)<br>22 kW at 415...440 V AC 50/60 Hz (AC-3e)<br>22 kW at 500 V AC 50/60 Hz (AC-3e)<br>30 kW at 660...690 V AC 50/60 Hz (AC-3e) |
| Motor power hp           | 5 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>10 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>30 hp at 575/600 V AC 50/60 Hz for 3 phases motors<br>10 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>3 hp at 115 V AC 50/60 Hz for 1 phase motors<br>30 hp at 460/480 V AC 50/60 Hz for 3 phases motors  |
| Compatibility code       | LC1D  |
| Pole contact composition | 3 NO  |
| Contact compatibility    | M4  |
| Protective cover         | With  |

|  |   |
|--|---|
| <b>[Ith] conventional free air thermal current</b> | 10 A (at 60 °C) for signalling circuit<br>60 A (at 60 °C) for power circuit   |
| <b>Irms rated making capacity</b>                  | 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  |
| <b>Rated breaking capacity</b>                     | 800 A at 440 V for power circuit conforming to IEC 60947  |
| <b>[Icw] rated short-time withstand current</b>    | 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   |
| <b>Associated fuse rating</b>                      | 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  |
| <b>Average impedance</b>                           | 1.5 mOhm - Ith 60 A 50 Hz for power circuit   |
| <b>Power dissipation per pole</b>                  | 2.4 W AC-3<br>5.4 W AC-1<br>2.4 W AC-3e   |
| <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>[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>                       | 10 Mcycles  |
| <b>Electrical durability</b>                       | 0.7 Mcycles 60 A AC-1 at Ue <= 440 V<br>1.5 Mcycles 40 A AC-3 at Ue <= 440 V<br>1.5 Mcycles 40 A AC-3e at Ue <= 440 V   |
| <b>Control circuit type</b>                        | DC standard   |
| <b>Coil technology</b>                             | Built-in bidirectional peak limiting diode suppressor   |
| <b>Control circuit voltage limits</b>              | 0.1...0.3 Uc (-40...70 °C):drop-out DC<br>0.75...1.25 Uc (-40...60 °C):operational DC<br>1...1.25 Uc (60...70 °C):operational DC  |
| <b>Inrush power in W</b>                           | 19 W (at 20 °C)   |
| <b>Hold-in power consumption in W</b>              | 7.4 W at 20 °C  |
| <b>Operating time</b>                              | 42.5...57.5 ms closing<br>16...24 ms opening  |
| <b>Time constant</b>                               | 34 ms   |
| <b>Maximum operating rate</b>                      | 3600 cyc/h 60 °C  |
| <b>Connections - terminals</b>                     | Control circuit: lugs-ring terminals - external diameter: 8 mm<br>Power circuit: lugs-ring terminals - external diameter: 16.5 mm   |
| <b>Tightening torque</b>                           | Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm M3.5<br>Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver Phillips No 2 M3.5<br>Power circuit: 6 N.m - on lugs-ring terminals hexagonal screw head 10 mm M6<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>          | Plate<br>Rail   |

## Environment

|  |  |
|--|--|
| <b>Standards</b>   | 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   |
| <b>Product certifications</b>                                | UL<br>CSA<br>CCC<br>GOST   |
| <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>   | 55 mm  |
| <b>Depth</b>   | 120 mm   |
| <b>Net weight</b>  | 0.925 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>             | 6.0 cm  |
| <b>Package 1 Width</b>              | 14.0 cm |
| <b>Package 1 Length</b>             | 15.0 cm |
| <b>Package 1 Weight</b>             | 850.0 g |

## 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>Mercury free</b>             | Yes  |
| <b>China RoHS Regulation</b>    | <a href="#">China RoHS declaration</a>           |

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|                                   |   |
|-----------------------------------|---|
| <b>RoHS exemption information</b> | <a href="#">Yes</a>   |
| <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   |

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### **Contractual warranty**

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

### **Recommended replacement(s)**