

Product datasheet

Specifications



TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 40 A - 48 V AC 50/60 Hz coil

LC1D40AE7

Main

| | |
|--------------------------------|---|
| Range | TeSys TeSys Deca |
| Range of product | TeSys Deca |
| Product or component type | Contactor |
| Device short name | LC1D |
| Contactor application | Resistive load Motor control |
| Utilisation category | AC-4 AC-1 AC-3 AC-3e |
| Poles description | 3P |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC |
| [Ie] rated operational current | 60 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 40 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 40 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage | 48 V AC 50/60 Hz |

Complementary

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|---|---|
| Motor power kW | 18.5 kW at 380...400 V AC 50/60 Hz (AC-3) 11 kW at 220...230 V AC 50/60 Hz (AC-3) 22 kW at 415...440 V AC 50/60 Hz (AC-3) 22 kW at 500 V AC 50/60 Hz (AC-3) 30 kW at 660...690 V AC 50/60 Hz (AC-3) 9 kW at 400 V AC 50/60 Hz (AC-4) 18.5 kW at 380...400 V AC 50/60 Hz (AC-3e) 11 kW at 220...230 V AC 50/60 Hz (AC-3e) 22 kW at 415...440 V AC 50/60 Hz (AC-3e) 22 kW at 500 V AC 50/60 Hz (AC-3e) 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 10 hp at 230/240 V AC 50/60 Hz for 3 phases motors 30 hp at 575/600 V AC 50/60 Hz for 3 phases motors 10 hp at 200/208 V AC 50/60 Hz for 3 phases motors 3 hp at 115 V AC 50/60 Hz for 1 phase motors 30 hp at 460/480 V AC 50/60 Hz for 3 phases motors |
| Compatibility code | LC1D |
| Pole contact composition | 3 NO |
| Protective cover | With |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit 60 A (at 60 °C) for power circuit |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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|---|---|
| Irms rated making capacity | 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1 800 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 720 A 40 °C - 1 s for power circuit 72 A 40 °C - 10 min for power circuit 165 A 40 °C - 1 min for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit |
| Associated fuse rating | 10 A gG for signalling circuit conforming to IEC 60947-5-1 80 A gG at <= 690 V coordination type 1 for power circuit 80 A gG at <= 690 V coordination type 2 for power circuit |
| Average impedance | 1.5 mOhm - Ith 60 A 50 Hz for power circuit |
| Power dissipation per pole | 2.4 W AC-3 5.4 W AC-1 2.4 W AC-3e |
| [Ui] rated insulation voltage | Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified 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 B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 |
| Mechanical durability | 6 Mcycles |
| Electrical durability | 1.4 Mcycles 60 A AC-1 at Ue <= 440 V 1.5 Mcycles 40 A AC-3 at Ue <= 440 V 1.5 Mcycles 40 A AC-3e at Ue <= 440 V |
| Control circuit type | AC at 50/60 Hz standard |
| 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 0.8...1.1 Uc (-40...60 °C):operational AC 50 Hz 0.85...1.1 Uc (-40...60 °C):operational AC 60 Hz 1...1.1 Uc (60...70 °C):operational AC 50/60 Hz |
| Inrush power in VA | 140 VA 60 Hz cos phi 0.75 (at 20 °C) 160 VA 50 Hz cos phi 0.75 (at 20 °C) |
| Hold-in power consumption in VA | 13 VA 60 Hz cos phi 0.3 (at 20 °C) 15 VA 50 Hz cos phi 0.3 (at 20 °C) |
| Heat dissipation | 4...5 W at 50/60 Hz |
| Operating time | 4...19 ms opening 12...26 ms closing |
| Maximum operating rate | 3600 cyc/h 60 °C |
| Maximum operating rate | 3600 cyc/h at 60 °C |

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|--------------------------------------|---|
| Connections - terminals | <p>Control circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: flexible with cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible without cable end</p> <p>Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: flexible without cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible with cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: solid without cable end</p> <p>Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: solid without cable end</p> <p>Power circuit: screw connection 1 1...35 mm² - cable stiffness: flexible without cable end</p> <p>Power circuit: screw connection 2 1...25 mm² - cable stiffness: flexible without cable end</p> <p>Power circuit: screw connection 1 1...35 mm² - cable stiffness: flexible with cable end</p> <p>Power circuit: screw connection 2 1...25 mm² - cable stiffness: flexible with cable end</p> <p>Power circuit: screw connection 1 1...35 mm² - cable stiffness: solid without cable end</p> <p>Power circuit: screw connection 2 1...25 mm² - cable stiffness: solid without cable end</p> |
| Tightening torque | <p>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm</p> <p>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2</p> <p>Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm² hexagonal screw head 4 mm</p> <p>Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm² hexagonal screw head 4 mm</p> <p>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2</p> <p>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver pozidriv No 2</p> |
| Auxiliary contact composition | 1 NO + 1 NC |
| Auxiliary contacts type | <p>type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1</p> <p>type mirror contact 1 NC conforming to IEC 60947-4-1</p> |
| 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 | <p>1.5 ms on de-energisation between NC and NO contact</p> <p>1.5 ms on energisation between NC and NO contact</p> |
| Mounting support | <p>Rail</p> <p>Plate</p> |

Environment

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|--------------------------------|--|
| Standards | <p>EN 60947-4-1</p> <p>EN 60947-5-1</p> <p>IEC 60947-4-1</p> <p>IEC 60947-5-1</p> <p>CSA C22.2 No 14</p> <p>UL 60947-4-1</p> <p>IEC 60335-2-40:Annex JJ</p> <p>UL 60335-2-40:Annex JJ</p> <p>IEC 60335-1:Clause 30.2</p> |
| Product certifications | <p>CCC</p> <p>UL</p> <p>CB Scheme</p> <p>CSA</p> <p>CE</p> <p>UKCA</p> <p>Marine</p> <p>EAC</p> |
| IP degree of protection | IP20 front face conforming to IEC 60529 |
| Protective treatment | TH conforming to IEC 60068-2-30 |
| Climatic withstand | <p>conforming to IACS E10 exposure to damp heat</p> <p>conforming to IEC 60947-1 Annex Q category D exposure to damp heat</p> |

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| Permissible ambient air temperature around the device | -40...60 °C 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) Vibrations contactor closed (4 Gn, 5...300 Hz) Shocks contactor closed (15 Gn for 11 ms) Shocks contactor open (10 Gn for 11 ms) |
| Height | 122 mm |
| Width | 55 mm |
| Depth | 120 mm |
| Net weight | 0.85 kg |

Packing Units

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|-------------------------------------|-----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 6.2 cm |
| Package 1 Width | 13.5 cm |
| Package 1 Length | 15.2 cm |
| Package 1 Weight | 922.0 g |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 10 |
| Package 2 Height | 15.0 cm |
| Package 2 Width | 30.0 cm |
| Package 2 Length | 40.0 cm |
| Package 2 Weight | 9.975 kg |
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 160 |
| Package 3 Height | 77.0 cm |
| Package 3 Width | 80.0 cm |
| Package 3 Length | 60.0 cm |
| Package 3 Weight | 167.86 kg |

Contractual warranty

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

Sustainability

Green Premium™ label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

Well-being performance

✓ Reach Free Of Svhc

✓ Toxic Heavy Metal Free

✓ Mercury Free

✓ Rohs Exemption Information [Yes](#)

Certifications & Standards

Reach Regulation

[REACH Declaration](#)

Eu Rohs Directive

Compliant

[EU RoHS Declaration](#)

China Rohs Regulation

[China RoHS declaration](#)

Pro-active China RoHS declaration (out of China RoHS legal scope)

Environmental Disclosure

[Product Environmental Profile](#)

Weee

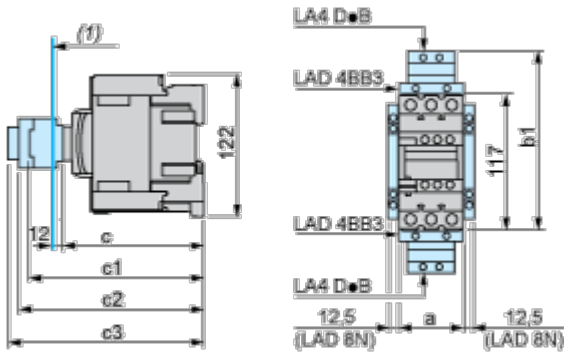
The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Circularity Profile

[End of Life Information](#)

Dimensions Drawings

Dimensions



(1) Minimum electrical clearance

| LC1 | | D40A...D65A |
|-----|------------------------------------|-------------|
| a | | 55 |
| b1 | with LA4 D•2 | – |
| | with LA4 DB3 or LAD 4BB3 | 136 |
| | with LA4 DF, DT | 157 |
| | with LA4 DM, DW, DL | 166 |
| c | without cover or add-on blocks | 118 |
| | with cover, without add-on blocks | 120 |
| c1 | with LAD N (1 contact) | – |
| | with LAD N or C (2 or 4 contacts) | 150 |
| c2 | with LA6 DK10, LAD 6DK | 163 |
| c3 | with LAD T, R, S | 171 |
| | with LAD T, R, S and sealing cover | 175 |

Connections and Schema

Wiring

