# Product data sheet

Specifications

## IEC contactor, TeSys Deca, nonreversing, 80A, 60HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 24VDC coil, open style

LC1D80BD

**Product availability: Stock - Normally stocked in distribution facility**

**Price*: 447.00 USD**

## Main

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|---|---|
| **Range** | TeSys |
| **Range of Product** | TeSys Deca |
| **Product or Component Type** | Contactor |
| **Device short name** | LC1D |
| **contactor application** | Motor control<br>Resistive load |
| **Utilisation category** | AC-3<br>AC-3e<br>AC-4<br>AC-1 |
| **poles description** | 3P |
| **[Ue] rated operational voltage** | Power circuit <= 300 V DC 25...400 Hz<br>Power circuit <= 690 V AC |
| **[Ie] rated operational current** | 125 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit<br>80 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit<br>80 A (at <140 °F (60 °C)) at <= 440 V AC-3e for power circuit |
| **[Uc] control circuit voltage** | 24 V DC |

## Complementary

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| **Motor power kW** | 22 kW at 220...230 V AC 50 Hz (AC-3)<br>37 kW at 380...400 V AC 50 Hz (AC-3)<br>45 kW at 415...440 V AC 50 Hz (AC-3)<br>55 kW at 500 V AC 50 Hz (AC-3)<br>45 kW at 660...690 V AC 50 Hz (AC-3)<br>15 kW at 400 V AC 50 Hz (AC-4)<br>22 kW at 220...230 V AC 50 Hz (AC-3e)<br>37 kW at 380...400 V AC 50 Hz (AC-3e)<br>45 kW at 415...440 V AC 50 Hz (AC-3e)<br>55 kW at 500 V AC 50 Hz (AC-3e)<br>45 kW at 660...690 V AC 50 Hz (AC-3e) |
| **Maximum Horse Power Rating** | 7.5 hp at 120 V AC 50/60 Hz for 1 phase motors<br>15 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>30 hp at 200/208 V AC 50/60 Hz for 3 phase motors<br>30 hp at 230/240 V AC 50/60 Hz for 3 phase motors<br>60 hp at 460/480 V AC 50/60 Hz for 3 phase motors<br>60 hp at 575/600 V AC 50/60 Hz for 3 phase motors |
| **Compatibility code** | LC1D |
| **Pole contact composition** | 3 NO |
| **Protective cover** | With |

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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| **[Ith] conventional free air thermal current** | 10 A (at 140 °F (60 °C)) for signalling circuit<br>125 A (at 140 °F (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>1100 A at 440 V for power circuit conforming to IEC 60947 |
| **Rated breaking capacity** | 1100 A at 440 V for power circuit conforming to IEC 60947 |
| **[Icw] rated short-time withstand current** | 640 A 104 °F (40 °C) - 10 s for power circuit<br>990 A 104 °F (40 °C) - 1 s for power circuit<br>135 A 104 °F (40 °C) - 10 min for power circuit<br>320 A 104 °F (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>200 A gG at <= 690 V coordination type 1 for power circuit<br>160 A gG at <= 690 V coordination type 2 for power circuit |
| **Average impedance** | 0.8 mOhm - Ith 125 A 50 Hz for power circuit |
| **Power dissipation per pole** | 5.1 W AC-3<br>12.5 W AC-1<br>5.1 W AC-3e |
| **[Ui] rated insulation voltage** | Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Power circuit 1000 V IEC 60947-4-1<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit 600 V CSA<br>Signalling circuit 600 V UL |
| **Overvoltage category** | III |
| **Pollution degree** | 3 |
| **[Uimp] rated impulse withstand voltage** | 8 kV IEC 60947 |
| **Safety reliability level** | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1 |
| **Mechanical durability** | 4 Mcycles |
| **Electrical durability** | 0.8 Mcycles 125 A AC-1 <= 440 V<br>1.5 Mcycles 80 A AC-3 <= 440 V<br>1.5 Mcycles 80 A AC-3e <= 440 V |
| **Control circuit type** | DC standard |
| **Coil technology** | Without built-in suppressor module |
| **Control circuit voltage limits** | 0.1...0.3 Uc -40…158 °F (-40…70 °C) drop-out DC<br>0.85...1.1 Uc -40…131 °F (-40…55 °C) operational DC<br>1...1.1 Uc 131…158 °F (55…70 °C) operational DC |
| **Inrush power in W** | 22 W 68 °F (20 °C)) |
| **Hold-in power consumption in W** | 22 W 68 °F (20 °C) |
| **Operating time** | 95...130 ms closing<br>20...35 ms opening |
| **Time constant** | 75 ms |
| **Maximum operating rate** | 3600 cyc/h 140 °F (60 °C) |
| **Maximum operating rate** | 3600 cyc/h at 60 °C |

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|---|---|
| **Connections - terminals** | Control circuit: screw clamp terminals 2 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 0.002…0.006 in² (1…4 mm²) - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 0.002…0.006 in² (1…4 mm²) - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 0.002…0.006 in² (1…4 mm²) - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 0.002…0.006 in² (1…4 mm²) - cable stiffness: solid without cable end<br>Power circuit: connector 1 0.006…0.08 in² (4…50 mm²) - cable stiffness: flexible without cable end<br>Power circuit: connector 2 0.006…0.04 in² (4…25 mm²) - cable stiffness: flexible without cable end<br>Power circuit: connector 1 0.006…0.08 in² (4…50 mm²) - cable stiffness: flexible with cable end<br>Power circuit: connector 2 0.006…0.02 in² (4…16 mm²) - cable stiffness: flexible with cable end<br>Power circuit: connector 1 0.006…0.08 in² (4…50 mm²) - cable stiffness: solid without cable end<br>Power circuit: connector 2 0.006…0.04 in² (4…25 mm²) - cable stiffness: solid without cable end |
| **Tightening torque** | Control circuit 10.6 lbf.in (1.2 N.m) screw clamp terminals flat Ø 6 mm<br>Control circuit 10.6 lbf.in (1.2 N.m) screw clamp terminals Philips No 2<br>Power circuit 106.2 lbf.in (12 N.m) connector flat Ø 6 to Ø 8 mm<br>Power circuit 106.2 lbf.in (12 N.m) connector hexagonal 0.2 in (4 mm)<br>Control circuit 10.6 lbf.in (1.2 N.m) screw clamp terminals pozidriv No 2 |
| **Auxiliary contact composition** | 1 NO + 1 NC |
| **Auxiliary contacts type** | Mechanically linked 1 NO + 1 NC IEC 60947-5-1<br>Mirror contact 1 NC 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** | Plate<br>Rail |

# Environment

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|---|---|
| **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 |
| **Product Certifications** | CCC<br>UL<br>CB Scheme<br>CSA<br>CE<br>UKCA<br>Marine<br>EAC |
| **IP degree of protection** | IP20 front face IEC 60529 |
| **Protective treatment** | THIEC 60068-2-30 |
| **Climatic withstand** | IACS E10 exposure to damp heat |
| **Permissible ambient air temperature around the device** | -40…140 °F (-40…60 °C)<br>140…158 °F (60…70 °C) with derating |
| **Operating altitude** | 0...9842.52 ft (0...3000 m) |

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| **Fire resistance** | 1562 °F (850 °C) IEC 60695-2-1 |
| **Flame retardance** | V1 conforming to UL 94 |
| **Mechanical robustness** | Vibrations contactor open 2 Gn, 5...300 Hz)<br>Shocks contactor open 8 Gn for 11 ms)<br>Vibrations contactor closed 3 Gn, 5...300 Hz)<br>Shocks contactor closed 10 Gn for 11 ms) |
| **Height** | 5.0000000000 in (127 mm) |
| **Width** | 3.3 in (85 mm) |
| **Depth** | 7.3 in (186 mm) |
| **Net Weight** | 5.71 lb(US) (2.59 kg) |

## Ordering and shipping details

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|---|---|
| **Category** | US10I1222359 |
| **Discount Schedule** | 0I12 |
| **GTIN** | 3389110439977 |
| **Returnability** | Yes |
| **Country of origin** | CZ |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Height** | 4.331 in (11.000 cm) |
| **Package 1 Width** | 6.378 in (16.200 cm) |
| **Package 1 Length** | 8.543 in (21.700 cm) |
| **Package 1 Weight** | 5.686 lb(US) (2.579 kg) |
| **Unit Type of Package 2** | S02 |
| **Number of Units in Package 2** | 2 |
| **Package 2 Height** | 5.906 in (15.000 cm) |
| **Package 2 Width** | 11.811 in (30.000 cm) |
| **Package 2 Length** | 15.748 in (40.000 cm) |
| **Package 2 Weight** | 12.050 lb(US) (5.466 kg) |
| **Unit Type of Package 3** | P06 |
| **Number of Units in Package 3** | 32 |
| **Package 3 Height** | 29.528 in (75.000 cm) |
| **Package 3 Width** | 23.622 in (60.000 cm) |
| **Package 3 Length** | 31.496 in (80.000 cm) |
| **Package 3 Weight** | 215.392 lb(US) (97.700 kg) |

## Contractual warranty

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

## Sustainability

**Green Premium$^{TM}$ 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-$CO_2$ 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 >


Sustainable Packaging


Transparency


RoHS/REACh

## Resource performance

- Sustainable Packaging

## Well-being performance

- Reach Free Of Svhc
- Toxic Heavy Metal Free
- Mercury Free
- Rohs Exemption Information — Yes
- Pvc Free

## Certifications & Standards

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|---|---|
| **Reach Regulation** | REACh Declaration |
| **Eu Rohs Directive** | Compliant<br>EU RoHS Declaration |
| **China Rohs Regulation** | China RoHS declaration<br>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** | No need of specific recycling operations |

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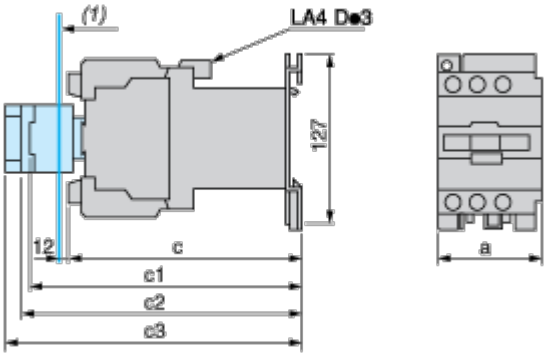
| **California Proposition 65** | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov |

## Dimensions Drawings

### Dimensions

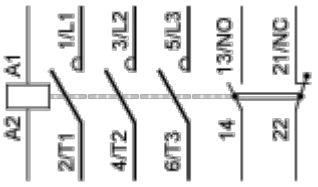



(1) Minimum electrical clearance

| LC1 | | D80 and D95 |
|---|---|---|
| **a** | | 85 |
| **b1** | with LAD 4BB3 | – |
| | with LA4 DF, DT | – |
| **c** | without cover or add-on blocks | 181 |
| | with cover, without add-on blocks | 186 |
| **c1** | with LAD N (1 contact) | 204 |
| | with LAD N or C (2 or 4 contacts) | 210 |
| **c2** | with LA6 DK10 | 221 |
| **c3** | with LAD T, R, S | 229 |
| | with LAD T, R, S and sealing cover | 233 |

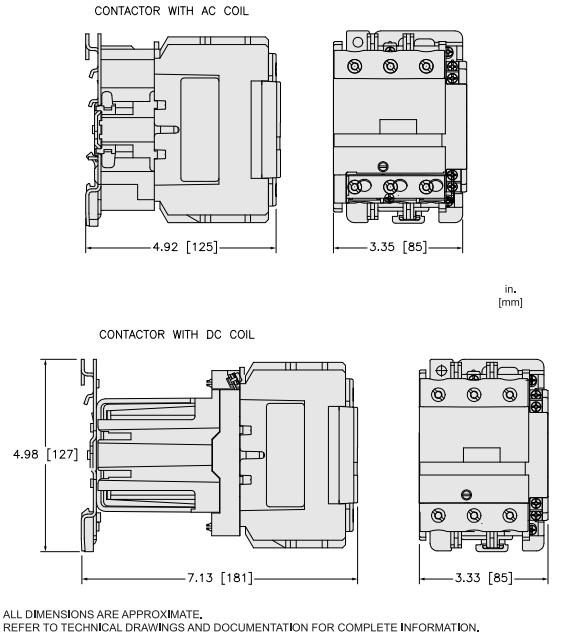
Connections and Schema

**Wiring**



Technical Illustration

## Dimensions




ALL DIMENSIONS ARE APPROXIMATE.
REFER TO TECHNICAL DRAWINGS AND DOCUMENTATION FOR COMPLETE INFORMATION.