# Product datasheet

Specifications


## TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 12 A - 220 V AC coil

LC1D12M7

## Main

| | |
|---|---|
| **Range of product** | TeSys Deca |
| **Product or component type** | Contactor |
| **Device short name** | LC1D |
| **contactor application** | Resistive load<br>Motor control |
| **Utilisation category** | AC-4<br>AC-1<br>AC-3<br>AC-3e |
| **poles description** | 3P |
| **[Ue] rated operational voltage** | Power circuit: <= 690 V AC 25...400 Hz<br>Power circuit: <= 300 V DC |
| **[Ie] rated operational current** | 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>12 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>12 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| **[Uc] control circuit voltage** | 220 V AC 50/60 Hz |

## Complementary

| | |
|---|---|
| **Motor power kW** | 3 kW at 220...230 V AC 50/60 Hz (AC-3)<br>5.5 kW at 380...400 V AC 50/60 Hz (AC-3)<br>5.5 kW at 415...440 V AC 50/60 Hz (AC-3)<br>7.5 kW at 500 V AC 50/60 Hz (AC-3)<br>7.5 kW at 660...690 V AC 50/60 Hz (AC-3)<br>3.7 kW at 400 V AC 50/60 Hz (AC-4)<br>3 kW at 220...230 V AC 50/60 Hz (AC-3e)<br>5.5 kW at 380...400 V AC 50/60 Hz (AC-3e)<br>5.5 kW at 415...440 V AC 50/60 Hz (AC-3e)<br>7.5 kW at 500 V AC 50/60 Hz (AC-3e)<br>7.5 kW at 660...690 V AC 50/60 Hz (AC-3e) |
| **Motor power hp** | 0.5 hp at 115 V AC 50/60 Hz for 1 phase motors<br>2 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>3 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>3 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>7.5 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>10 hp at 575/600 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** | 25 A (at 60 °C) for power circuit<br>10 A (at 60 °C) for signalling circuit |
| **Irms rated making capacity** | 250 A at 440 V for power circuit conforming to IEC 60947<br>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 |
| **Rated breaking capacity** | 250 A at 440 V for power circuit conforming to IEC 60947 |

Excluding VAT, FCA Jabal Ali & are subject to change – check with your local distributor.

| | |
|---|---|
| **[Icw] rated short-time withstand current** | 105 A 40 °C - 10 s for power circuit<br>210 A 40 °C - 1 s for power circuit<br>30 A 40 °C - 10 min for power circuit<br>61 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>40 A gG at <= 690 V coordination type 1 for power circuit<br>25 A gG at <= 690 V coordination type 2 for power circuit |
| **Average impedance** | 2.5 mOhm - Ith 25 A 50 Hz for power circuit |
| **Power dissipation per pole** | 0.36 W AC-3<br>1.56 W AC-1<br>0.36 W AC-3e |
| **[Ui] rated insulation voltage** | Power circuit: 690 V conforming to IEC 60947-4-1<br>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 |
| **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** | 2 Mcycles 12 A AC-3 at Ue <= 440 V<br>0.8 Mcycles 25 A AC-1 at Ue <= 440 V<br>2 Mcycles 12 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<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** | 12...22 ms closing<br>4...19 ms opening |
| **Maximum operating rate** | 3600 cyc/h 60 °C |

| | |
|---|---|
| **Connections - terminals** | Power circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without 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 2 1…2.5 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 |
| **Tightening torque** | Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power 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 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: 1.7 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<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 |
| **Product certifications** | GL<br>BV<br>DNV<br>LROS (Lloyds register of shipping)<br>RINA<br>UL<br>CCC<br>CSA<br>GOST<br>UKCA<br>CB |
| **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 open (10 Gn for 11 ms)<br>Shocks contactor closed (15 Gn for 11 ms) |
| **Height** | 77 mm |
| **Width** | 45 mm |
| **Depth** | 86 mm |
| **Net weight** | 0.325 kg |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Height** | 5.000 cm |
| **Package 1 Width** | 9.000 cm |
| **Package 1 Length** | 11.000 cm |
| **Package 1 Weight** | 350.000 g |
| **Unit Type of Package 2** | S02 |
| **Number of Units in Package 2** | 20 |
| **Package 2 Height** | 15.000 cm |
| **Package 2 Width** | 30.000 cm |
| **Package 2 Length** | 40.000 cm |
| **Package 2 Weight** | 7.243 kg |
| **Unit Type of Package 3** | P06 |
| **Number of Units in Package 3** | 320 |
| **Package 3 Height** | 75.000 cm |
| **Package 3 Width** | 80.000 cm |
| **Package 3 Length** | 60.000 cm |
| **Package 3 Weight** | 123.888 kg |

## Contractual warranty

| | |
|---|---|
| **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 >

Transparency

RoHS/REACh

## Well-being performance

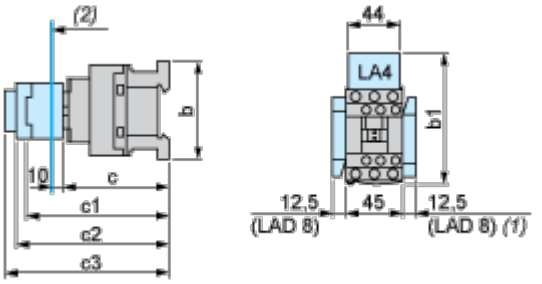
| | |
|---|---|
| Toxic Heavy Metal Free | |
| Mercury Free | |
| Rohs Exemption Information | Yes |
| Pvc Free | |

## Certifications & Standards

| | |
|---|---|
| **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** | End of Life Information |

## Dimensions Drawings

### Dimensions



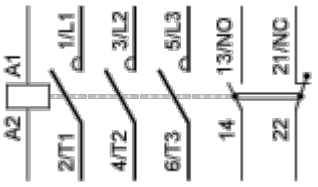

(1) Including LAD 4BB

(2) Minimum electrical clearance

| LC1 | | D09…D18 | D093…D123 | D099…D129 |
|---|---|---|---|---|
| **b** | without add-on blocks | 77 | 99 | 80 |
| **b1** | with LAD 4BB | 94 | 107 | 95.5 |
| | with LA4 D•2 | 110(1) | 123(1) | 111.5(1) |
| | with LA4 DF, DT | 119(1) | 132(1) | 120.5(1) |
| | with LA4 DW, DL | 126(1) | 139(1) | 127.5(1) |
| **c** | without cover or add-on blocks | 84 | 84 | 84 |
| | with cover, without add-on blocks | 86 | 86 | 86 |
| **c1** | with LAD N or C (2 or 4 contacts) | 117 | 117 | 117 |
| **c2** | with LA6 DK10, LAD 6K10 | 129 | 129 | 129 |
| **c3** | with LAD T, R, S | 137 | 137 | 137 |
| | with LAD T, R, S and sealing cover | 141 | 141 | 141 |
| **(1)** | Including LAD 4BB. | | | |

Connections and Schema

**Wiring**



## ⚠⚠ DANGER / 危险

**HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**
Disconnect all power before servicing equipment.
**Failure to follow these instructions will result in death or serious injury.**

**电击、爆炸或弧闪的危险**
在此电力设备 上进行工作时, 请先切断所有电源。
**不遵循上述规定将可能导致人员伤亡。**

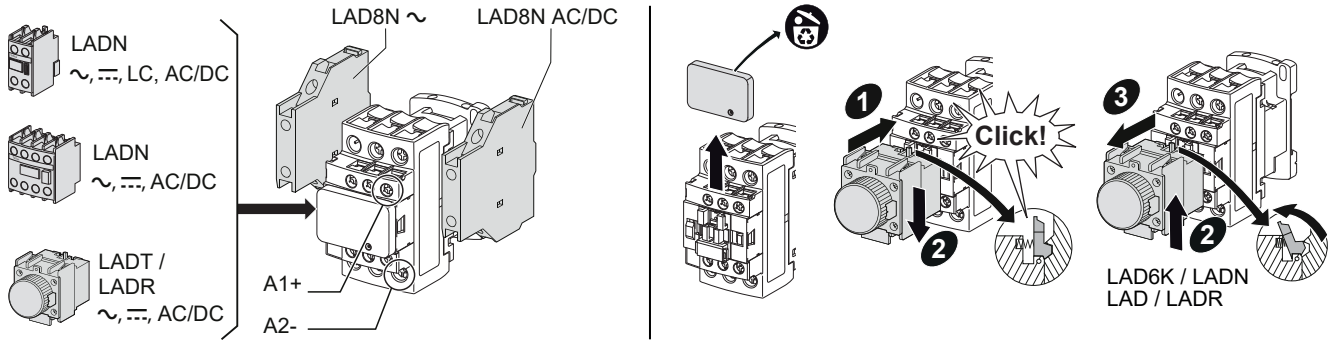
## ⚠⚠ WARNING / 警告

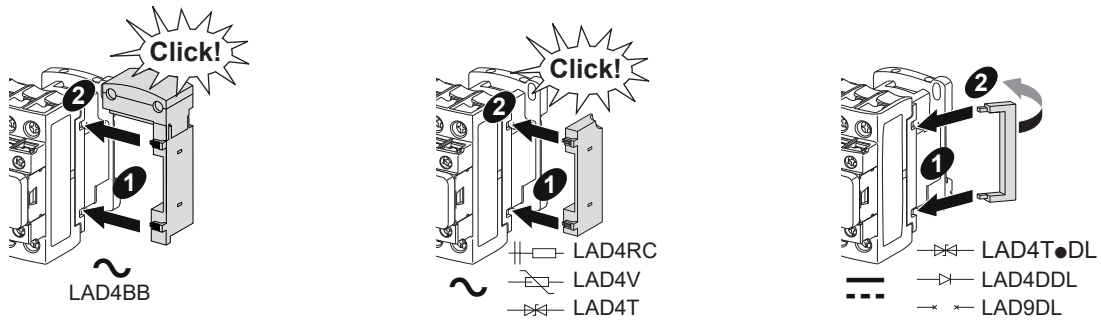
**RISK OF FIRE OR ELECTRIC SHOCK (FOR CONTACTOR WITH UL HI-FAULT SHORT CIRCUIT CURRENT RATINGS ONLY)**
■ The opening of the branch-circuit protective device may be an indication that a fault current has been interrupted.
■ To reduce the risk of fire or electric shock, current-carrying parts and the other components of the controller should be examined and replaced if damaged.
**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

**可能有火灾或者触电的危险（仅限UL高故障短路电流额定值的接触器）**
■ 支路保护设备断开，表明故障电流已被中断。
■ 为降低火灾或触电风险，应检查带电部件和 其他控制元件，如有损坏，需及时更换。
**不遵循上述说明可能导致人员伤亡或设备损坏。**

"For motor starting use Schneider Electric TeSys Protect - Deca overload relays."
电动机起动请使用施耐德电气TeSys保护Deca系列热过载继电器。

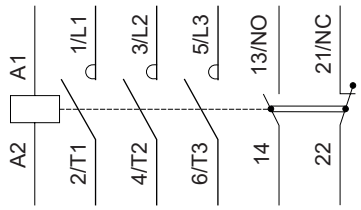
3P AC TeSys Deca contactors are grade 3 (LC1D09 -> LC1D18) and grade 2 (LC1D25 -> LC1D38)according to GB 21518.
Maximum power consumption lower than 9.5 VA.
根据GB 21518标准，三极TeSys Deca 系列交流接触器能效等级为3级 (LC1D09 -> LC1D18)和2级(LC1D25 -> LC1D38),
产品最大吸持 功率低于9.5 VA



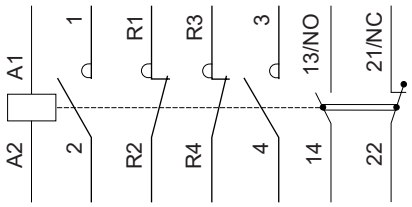




**AC/DC**
■ use of this product in EMC environment B may require mitigation measures to avoid unwanted disturbance.
■ full open AC at 10%Us.
■ 在EMC环境B中使用 此产品可能需要采取缓解 措施以避免不 必要的干扰。
■ 交流情况需在10%Us下完全释放。

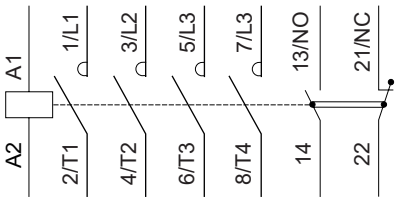
**LC1D09 − D150**




**LC1D098 − D258**




**LC1DT20 − DT80A**



| mm / in. | LC1D09/D12 | LC1DT20/DT25/ D098/D128 | LC1D18 | LC1D25/D32/D38/ T02AN13/T02BN13/ T02CN13 | LC1DT32/DT40/ D188/D258 | LC1D●●/LA●●/ T02AN13/T02BN13/ T02CN13 |
|---|---|---|---|---|---|---|
| | 8 mm<br>*5/16"* | 12 mm<br>*6/13"* | 8 mm<br>*5/16"* | 10 mm<br>*3/8"* | 12 mm<br>*6/13"* | 8 mm<br>*5/16"* |
| [mm²] | 1…4 | 1…4 | 1.5…6 | 2.5…10 | 2.5…10 | 1…4 |
| [mm²] | 1…4 | 1…4 | 1.5…6 | 2.5…10 | 2.5…10 | 1…4 |
| [mm²] | 1…4 | 1…4 | 1…6 | 1…10 | 2.5…10 | 1…4 |
| [mm²] | 1…2.5 | 1…2.5 | 1…4 | 1.5…6 | 2.5…10 | 1…2.5 |
| [mm²] | 1…4 | 1…4 | 1.5…6 | 1.5…10 | 2.5…16 | 1…4 |
| [mm²] | 1…4 | 1…4 | 1.5…6 | 2.5…10 | 2.5…16 | 1…4 |
| AWG | 10-18<br>Cu 75°C | 10-18<br>Cu 75°C | 8-18<br>Cu 75°C | 6-14<br>Cu 75°C | 8-12<br>Cu 75°C | 10-18<br>Cu 75°C |
| | 6 mm | 6 mm | 6 mm | 6 mm | 6 mm | 6 mm |
| C | 1.7 N.m<br>*15 lb-in* | 1.7 N.m<br>*15 lb-in* | 1.7 N.m<br>*15 lb-in* | 2.5 N.m<br>*22 lb-in* | 1.8 N.m<br>*16 lb-in* | 1.7 N.m<br>*15 lb-in* |

| **UL/CSA Lighting Ratings / UL/CSA 照明电流额定值** | | |
|---|---|---|
| **Device / 设备** | **Ballast, 600 V / 镇流器** | **Tungsten, 480 Y / 277 V 钨丝灯** |
| LC1D09 | 20 A | 20 A |
| LC1D12 | 25 A | 25 A CSA only |
| LC1D18 | 32 A | 25 A |
| LC1D25/T02AN13/T02BN13 | 40 A | 40 A |
| LC1D32 / T02CN13 | 50 A | 50 A |
| LC1DT20 | 20 A | 20 A |
| LC1DT25 | 25 A | 25 A CSA only |
| LC1DT32 | 32 A | 25 A |
| LC1DT40 | 40 A | 40 A |

Only applicable for UL/CSA marked products except DC coil.

**Definite Purpose ratings, 3 Phase, Load wiring: breaking all lines**
Hermetic refrigeration compressor
**特定用途额定值，3相，断开所有线路**
封闭式制冷压缩机设备

| | | LRA | | |
|---|---|---|---|---|
| **Device / 设备** | **FLA** | **240 V** | **480 V** | **600 V** |
| LC1D09 | 9 | 54 | 45 | 36 |
| LC1D12 | 12 | 72 | 60 | 48 |
| LC1D18 | 18 | 108 | 90 | 72 |
| LC1D25/T02AN13/T02BN13 | 25 | 150 | 125 | 100 |
| LC1D32/T02CN13 | 32 | 192 | 160 | 128 |

| **Elevator Duty HP ratings / 电梯专用马力（HP）额定值** | | | | | |
|---|---|---|---|---|---|
| | **One Phase / 单相** | **Three Phases / 三相** | | | |
| | **230 V** | **200/208 V** | **230 V** | **460 V** | **575 V** |
| LC1D12 | 1.5 | 2 | 3 | 7.5 | 7.5 |
| LC1D18 | 3 | 5 | 5 | - | - |
| LC1D25/ T02AN13/ T02BN13 | 3 | 5 | 7.5 | 15 | 20 |
| LC1D32/ T02CN13 | 5 | 10 | 7.5 | - | - |