

Product data sheet

Specifications



TeSys Deca contactor , 3P(3 NO) ,
AC-3/AC-3e , <= 440V, 80A , 220V
AC 50/60 Hz coil

LC1D80M7

Main

| | |
|--|---|
| Range | TeSys |
| Product name | TeSys D TeSys Deca |
| Product or component type | Contacteur |
| Device short name | LC1D |
| Contacteur application | Motor control Resistive load |
| Utilisation category | AC-1 AC-4 AC-3 AC-3e |
| Poles description | 3P |
| Power pole contact composition | 3 NO |
| [Ue] rated operational voltage | Power circuit: <= 300 V DC 25...400 Hz Power circuit: <= 690 V AC |
| [Ie] rated operational current | 125 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| Motor power kW | 22 kW at 220...230 V AC 50/60 Hz (AC-3) 37 kW at 380...400 V AC 50/60 Hz (AC-3) 45 kW at 415...440 V AC 50/60 Hz (AC-3) 55 kW at 500 V AC 50/60 Hz (AC-3) 45 kW at 660...690 V AC 50/60 Hz (AC-3) 45 kW at 1000 V AC 50/60 Hz (AC-3) 15 kW at 400 V AC 50/60 Hz (AC-4) |
| Motor power HP (UL / CSA) | 7.5 hp at 120 V AC 50/60 Hz for 1 phase motors 15 hp at 230/240 V AC 50/60 Hz for 1 phase motors 30 hp at 200/208 V AC 50/60 Hz for 3 phases motors 30 hp at 230/240 V AC 50/60 Hz for 3 phases motors 60 hp at 460/480 V AC 50/60 Hz for 3 phases motors 60 hp at 575/600 V AC 50/60 Hz for 3 phases motors |
| Control circuit type | AC at 50/60 Hz |
| [Uc] control circuit voltage | 220 V AC 50/60 Hz |
| Auxiliary contact composition | 1 NO + 1 NC |
| [Uimp] rated impulse withstand voltage | 8 kV conforming to IEC 60947 |
| Overvoltage category | III |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit 125 A (at 60 °C) for power circuit |
| 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 |

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 40 °C - 10 s for power circuit 990 A 40 °C - 1 s for power circuit 135 A 40 °C - 10 min for power circuit 320 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 60947-5-1 200 A gG at <= 690 V coordination type 1 for power circuit 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 |
| [Ui] rated insulation voltage | Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Power circuit: 1000 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified |
| Electrical durability | 0.8 Mcycles 125 A AC-1 at Ue <= 440 V 1.5 Mcycles 80 A AC-3 at Ue <= 440 V 1.5 Mcycles 80 A AC-3e at Ue <= 440 V |
| Power dissipation per pole | 5.1 W AC-3 12.5 W AC-1 5.1 W AC-3e |
| Front cover | With |
| Mounting support | Plate Rail |
| Standards | CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 |
| Product certifications | GOST RINA CCC CSA BV DNV GL LROS (Lloyds register of shipping) UL |
| Connections - terminals | Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm ² flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm ² flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm ² flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm ² flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm ² solid without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm ² solid without cable end Power circuit: connector 1 cable(s) 4...50 mm ² flexible without cable end Power circuit: connector 2 cable(s) 4...25 mm ² flexible without cable end Power circuit: connector 1 cable(s) 4...50 mm ² flexible with cable end Power circuit: connector 2 cable(s) 4...16 mm ² flexible with cable end Power circuit: connector 1 cable(s) 4...50 mm ² solid without cable end Power circuit: connector 2 cable(s) 4...25 mm ² solid without cable end |
| Tightening torque | Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit: 12 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm Power circuit: 12 N.m - on connector hexagonal screw head 4 mm Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 |
| Operating time | 20...35 ms closing 6...20 ms opening |
| 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 | 4 Mcycles |
| Maximum operating rate | 3600 cyc/h 60 °C |
| Complementary | |
| Coil technology | Without built-in suppressor module |
| Control circuit voltage limits | 0.85...1.1 Uc (-40...55 °C):operational AC 60 Hz 0.3...0.6 Uc (-40...70 °C):drop-out AC 50/60 Hz |

0.8...1.1 Uc (-40...55 °C):operational AC 50 Hz
 1...1.1 Uc (55...70 °C):operational AC 50/60 Hz

| | |
|--|--|
| Inrush power in VA | 245 VA 60 Hz cos phi 0.75 (at 20 °C) 245 VA 50 Hz cos phi 0.75 (at 20 °C) |
| Hold-in power consumption in VA | 26 VA 60 Hz cos phi 0.3 (at 20 °C) 26 VA 50 Hz cos phi 0.3 (at 20 °C) |
| Heat dissipation | 6...10 W at 50/60 Hz |
| Auxiliary contacts type | type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 type mirror contact 1 NC conforming to IEC 60947-4-1 |
| Signalling circuit frequency | 25...400 Hz |
| Minimum switching current | 5 mA for signalling circuit |
| Minimum switching voltage | 17 V for signalling circuit |
| Non-overlap time | 1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact |
| Insulation resistance | > 10 MOhm for signalling circuit |

Environment

| | |
|--|---|
| IP degree of protection | IP20 front face conforming to IEC 60529 |
| Climatic withstand | conforming to IACS E10 |
| Protective treatment | TH conforming to IEC 60068-2-30 |
| Pollution degree | 3 |
| Ambient air temperature for operation | -40...60 °C 60...70 °C with derating |
| Ambient air temperature for storage | -60...80 °C |
| Operating altitude | 0...3000 m |
| Fire resistance | 850 °C conforming to IEC 60695-2-1 |
| Mechanical robustness | Vibrations contactor open: 2 Gn, 5...300 Hz Shocks contactor open: 8 Gn for 11 ms Vibrations contactor closed: 3 Gn, 5...300 Hz Shocks contactor closed: 10 Gn for 11 ms |
| Height | 127 mm |
| Width | 85 mm |
| Depth | 130 mm |
| Net weight | 1.59 kg |

Packing Units

| | |
|-------------------------------------|----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 1.56 kg |
| Package 1 Height | 14.0 cm |
| Package 1 width | 13.5 cm |
| Package 1 Length | 10.0 cm |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 5 |
| Package 2 Weight | 8.085 kg |
| Package 2 Height | 15.0 cm |
| Package 2 width | 30.0 cm |
| Package 2 Length | 40.0 cm |

| | |
|-------------------------------------|----------|
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 80 |
| Package 3 Weight | 133.3 kg |
| Package 3 Height | 77.0 cm |
| Package 3 width | 60.0 cm |
| Package 3 Length | 80.0 cm |

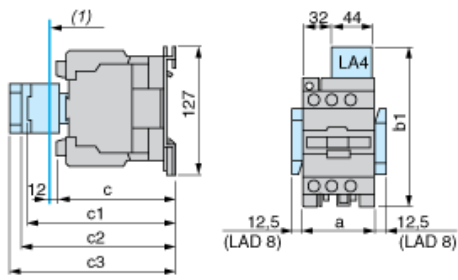
Offer Sustainability

| | |
|-----------------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| REACH free of SVHC | Yes |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| 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 |
| PVC free | Yes |
| 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 |

Contractual warranty

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

Dimensions



(1) Minimum electrical clearance

| LC1 | | D80 | D95 |
|-----------|------------------------------------|-----|-----|
| a | | 85 | 85 |
| b1 | with LA4 D•2 | 135 | 135 |
| | with LA4 DB3 or LAD 4BB3 | 135 | – |
| | with LA4 DF, DT | 142 | 142 |
| | with LA4 DM, DW, DL | 150 | 150 |
| c | without cover or add-on blocks | 125 | 125 |
| | with cover, without add-on blocks | 130 | 130 |
| c1 | with LAD N (1 contact) | 150 | 150 |
| | with LAD N or C (2 or 4 contacts) | 158 | 158 |
| c2 | with LA6 DK10, LAD 6DK | 170 | 170 |
| c3 | with LAD T, R, S | 178 | 178 |
| | with LAD T, R, S and sealing cover | 182 | 182 |

Wiring

