

## Product data sheet

### Characteristics

# LC1D09JL

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$   
V 9 A - 12 V DC coil





## Main

|   |   |
|---|---|
| Range                                       | TeSys   |
| Product name                                | TeSys D   |
| Product or component type                   | Contacteur  |
| Device short name                           | LC1D  |
| Contacteur application                      | Resistive load<br>Motor control   |
| Utilisation category                        | AC-4<br>AC-1<br>AC-3  |
| Poles description                           | 3P  |
| Power pole contact composition              | 3 NO  |
| [Ue] rated operational voltage              | Power circuit: $\leq 690$ V AC 25...400 Hz<br>Power circuit: $\leq 300$ V DC  |
| [Ie] rated operational current              | 9 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit<br>25 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit   |
| Motor power kW                              | 2.2 kW at 220...230 V AC 50/60 Hz (AC-3)<br>4 kW at 380...400 V AC 50/60 Hz (AC-3)<br>4 kW at 415...440 V AC 50/60 Hz (AC-3)<br>5.5 kW at 500 V AC 50/60 Hz (AC-3)<br>5.5 kW at 660...690 V AC 50/60 Hz (AC-3)<br>2.2 kW at 400 V AC 50/60 Hz (AC-4)  |
| Motor power HP (UL / CSA)                   | 1 Hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>2 Hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>2 Hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>5 Hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>7.5 Hp at 575/600 V AC 50/60 Hz for 3 phases motors<br>0.33 hp at 115 V AC 50/60 Hz for 1 phase motors |
| Control circuit type                        | DC low consumption  |
| [Uc] control circuit voltage                | 12 V DC   |
| Auxiliary contact composition               | 1 NO + 1 NC   |
| [Uimp] rated impulse withstand voltage      | 6 kV conforming to IEC 60947  |
| Overvoltage category                        | III   |
| [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  |
| [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>25 A gG at $\leq 690$ V coordination type 1 for power circuit<br>20 A gG at $\leq 690$ V coordination type 2 for power circuit  |
| Average impedance                           | 2.5 mOhm - Ith 25 A 50 Hz for power circuit   |

|                               |  |
|-------------------------------|--|
| [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  |
| Electrical durability         | 0.6 Mcycles 25 A AC-1 at $U_e \leq 440$ V<br>2 Mcycles 9 A AC-3 at $U_e \leq 440$ V  |
| Power dissipation per pole    | 1.56 W AC-1<br>0.2 W AC-3  |
| Front cover                   | With   |
| Mounting support              | Plate<br>Rail  |
| 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        | LROS (Lloyds register of shipping)<br>CCC<br>UL<br>GL<br>BV<br>RINA<br>DNV<br>GOST<br>CSA  |
| Connections - terminals       | Power circuit: screw clamp terminals 1 cable(s) 1...<br>4 mm <sup>2</sup> flexible without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...<br>4 mm <sup>2</sup> flexible without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1...<br>4 mm <sup>2</sup> flexible with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...<br>2.5 mm <sup>2</sup> flexible with cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1...<br>4 mm <sup>2</sup> solid without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...<br>4 mm <sup>2</sup> solid without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...<br>4 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...<br>4 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...<br>4 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...<br>2.5 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...<br>4 mm <sup>2</sup> solid without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...<br>4 mm <sup>2</sup> solid without cable end |
| Tightening torque             | Power circuit: 1.7 N.m - on screw clamp terminals -<br>with screwdriver flat Ø 6 mm<br>Power circuit: 1.7 N.m - on screw clamp terminals -<br>with screwdriver Philips No 2<br>Control circuit: 1.7 N.m - on screw clamp terminals -<br>with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals -<br>with screwdriver Philips No 2   |
| Operating time                | 65.45...88.55 ms closing<br>20...30 ms opening   |
| Safety reliability level      | B10d = 1369863 cycles contactor with nominal load<br>conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical<br>load conforming to EN/ISO 13849-1   |
| Mechanical durability         | 30 Mcycles   |
| Maximum operating rate        | 3600 cyc/h 60 °C   |

## Complementary

|                                |  |
|--------------------------------|--|
| Coil technology                | Built-in bidirectional peak limiting diode suppressor  |
| Time constant                  | 40 ms  |
| Inrush power in W              | 2.4 W (at 20 °C)   |
| Hold-in power consumption in W | 2.4 W at 20 °C   |
| 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 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<br>1.5 ms on energisation between NC and NO contact                  |
| Insulation resistance          | > 10 MOhm for signalling circuit   |
| Contact compatibility          | M5   |
| Compatibility code             | LC1D   |

## Environment

|                                     |  |
|-------------------------------------|--|
| IP degree of protection             | IP20 front face conforming to IEC 60529  |
| Protective treatment                | TH conforming to IEC 60068-2-30  |
| Pollution degree                    | 3  |
| Ambient air temperature for storage | -60...80 °C  |
| Operating altitude                  | 3000 m without derating  |
| 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                               | 95 mm  |
| Net weight                          | 0.48 kg  |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Weight             | 364 g   |
| Package 1 Height             | 4.9 cm  |
| Package 1 width              | 11.1 cm |
| Package 1 Length             | 8.9 cm  |

## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH free of SVHC         | Yes   |
| EU RoHS Directive          | Compliant <a href="#">EU RoHS Declaration</a>   |
| Toxic heavy metal free     | Yes   |
| Mercury free               | Yes   |
| RoHS exemption information | <a href="#">Yes</a>   |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>  |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End Of Life Information</a>   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free                   | Yes   |

## Contractual warranty

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| Warranty | 18 months |
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