# Product data sheet
## Characteristics

# LC2D25P7V
Reversing Contactor, TeSys Deca, 3P(3NO), AC-3, <=440V, 25A, 230V AC 50/60Hz coil, with mechanical and electrical interlocking, screw clamp terminals



## Main

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|---|---|
| Range | TeSys |
| Product name | TeSys D |
| Product or component type | Reversing contactor |
| Device short name | LC2D |
| Contactor application | Motor control<br>Resistive load |
| Utilisation category | AC-1<br>AC-3<br>AC-3e |
| Device presentation | Preassembled with reversing power busbar |
| Poles description | 3P |
| Pole contact composition | 3 NO |
| [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-3 for power circuit<br>40 A (at <60 °C) at <= 440 V AC AC-1 for power circuit |
| Motor power kW | 5.5 KW at 220...230 V AC 50...60 Hz<br>11 KW at 380...400 V AC 50...60 Hz<br>11 KW at 415 V AC 50...60 Hz<br>11 KW at 440 V AC 50...60 Hz<br>15 KW at 500 V AC 50...60 Hz<br>15 KW at 660...690 V AC 50...60 Hz |
| Motor power hp | 3 Hp at 230/240 V AC 60 Hz for 1 phase motors<br>5 Hp at 200/208 V AC 60 Hz for 3 phases motors<br>2 Hp at 115 V AC 60 Hz for 1 phase motors<br>7.5 Hp at 230/240 V AC 60 Hz for 3 phases motors<br>15 Hp at 460/480 V AC 60 Hz for 3 phases motors<br>20 Hp at 575/600 V AC 60 Hz for 3 phases motors |
| Control circuit type | AC at 50/60 Hz |
| [Uc] control circuit voltage | 230 V AC 50/60 Hz |
| 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 | 10 A (at 60 °C) for signalling circuit<br>40 A (at 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>450 A at 440 V for power circuit conforming to IEC 60947 |
| Rated breaking capacity | 450 A at 440 V for power circuit conforming to IEC 60947 |

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|---|---|
| [Icw] rated short-time withstand current | 50 A 40 °C - 10 min for power circuit<br>120 A 40 °C - 1 min for power circuit<br>240 A 40 °C - 10 s for power circuit<br>380 A 40 °C - 1 s 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>63 A gG at <= 690 V coordination type 1 for power circuit<br>40 A gG at <= 690 V coordination type 2 for power circuit |
| Average impedance | 2 MOhm - Ith 40 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 | 1.65 Mcycles 25 A AC-3 at Ue <= 440 V<br>1.4 Mcycles 40 A AC-1 at Ue <= 440 V<br>1.65 Mcycles 25 A AC-3e at Ue <= 440 V |
| Power dissipation per pole | 1.25 W AC-3<br>3.2 W AC-1<br>1.25 W AC-3e |
| Protective cover | With |
| Interlocking type | Electrical and mechanical |
| Mounting support | Rail<br>Plate |
| 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 60335-2-40:Annex JJ |
| Product certifications | DNV[RETURN]CSA[RETURN]CCC[RETURN]UL[RETURN]GL[RETURN]LROS (Lloyds register of |
| Connections - terminals | Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1…4 mm²flexible without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible with cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1…2.5 mm²flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²solid<br>Control circuit: screw clamp terminals 2 cable(s) 1…4 mm²solid<br>Power circuit: screw clamp terminals 1 cable(s) 2.5…10 mm²flexible without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 2.5…10 mm²flexible without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1…10 mm²flexible with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1.5…6 mm²flexible with cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1.5…10 mm²solid<br>Power circuit: screw clamp terminals 2 cable(s) 2.5…10 mm²solid |
| Tightening torque | 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>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver Philips No 2 |
| Operating time | 12...22 ms closing<br>4...19 ms opening |
| 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 |
| Maximum operating rate | 3600 Cyc/H 60 °C |

## Complementary

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|---|---|
| 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 |
| 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 |

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|---|---|
| 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 |

## Environment

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|---|---|
| IP degree of protection | IP20 front face conforming to IEC 60529 |
| Climatic withstand | Conforming to IACS E10<br>conforming to IEC 60947-1 Annex Q category D |
| Protective treatment | TH conforming to IEC 60068-2-30 |
| Pollution degree | 3 |
| Ambient air temperature for operation | -40…60 °C<br>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 |
| 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 closed: 15 Gn for 11 ms<br>Shocks contactor open: 8 Gn for 11 ms |
| Height | 85 Mm |
| Width | 90 Mm |
| Depth | 92 Mm |
| Net weight | 0.787 Kg |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 11.700 Cm |
| Package 1 Width | 12.000 Cm |
| Package 1 Length | 14.100 Cm |
| Package 1 Weight | 948.000 G |

## Offer Sustainability

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|---|---|
| Recyclability potential, in % | 66 |
| Total lifecycle Carbon footprint | 254 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 4.837809627300629 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 5 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.3652458529429971 |
| Carbon footprint of the distribution phase [A4] | 0.4 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 246.842304725881 |
| REACh free of SVHC | Yes |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 247 kg CO2 eq. |
| Sustainable packaging | Yes |
| Carbon footprint of the end-of-life phase [C1 to C4] | 1.9114035758292245 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 2 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 254 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| REACh Regulation | Free of Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant |
| PVC free | Yes |

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| End of life manual availability | End Of Life Information |
| Take-back | No |
| WEEE Label | The product must be disposed on European Union markets following specific waste collection and |

## Contractual warranty

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|---|---|
| Warranty (in months) | 18 |

Product Life Status : Commercialised