# Product data sheet
## Characteristics

# LC2D09BNE
Reversing contactor, TeSys Deca Advanced, 3P(3NO), AC-3/3e, <=440V, 9A, 24...60V AC/DC coil, screw clamp terminals



## Main

| | |
|---|---|
| Product name | TeSys Deca Advanced |
| Product or component type | Reversing contactor |
| Device short name | LC2D |
| Contactor application | Motor control<br>Resistive load |
| Utilisation category | AC-3<br>AC-1<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 |
| [Ie] rated operational current | 9 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>9 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| Motor power kW | 2.2 KW at 220...230 V AC 50 Hz<br>4 KW at 380...400 V AC 50 Hz<br>4 KW at 415 V AC 50 Hz<br>4 KW at 440 V AC 50 Hz<br>5.5 KW at 500 V AC 50 Hz<br>5.5 KW at 660...690 V AC 50 Hz |
| Motor power hp | 0.33 Hp at 115 V AC 60 Hz for 1 phase motors<br>1 Hp at 230/240 V AC 60 Hz for 1 phase motors<br>2 Hp at 200/208 V AC 60 Hz for 3 phases motors<br>2 Hp at 230/240 V AC 60 Hz for 3 phases motors<br>5 Hp at 460/480 V AC 60 Hz for 3 phases motors<br>7.5 Hp at 575/600 V AC 60 Hz for 3 phases motors |
| Control circuit type | AC at 50/60 Hz AC/DC electronic<br>DC AC/DC electronic |
| [Uc] control circuit voltage | 24...60 V AC 50/60 Hz<br>24...60 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 | 10 A (at 60 °C) for signalling circuit<br>25 A (at 60 °C) for power 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 <= 690 V coordination type 1 for power circuit<br>20 A gG at <= 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>Signalling circuit: 690 V conforming to IEC 60947-1 |
| Power dissipation per pole | 1.56 W AC-1<br>0.2 W AC-3<br>0.2 W AC-3e |
| Protective cover | With |
| Interlocking type | Mechanical |
| Mounting support | Rail<br>Plate |
| Connections - terminals | Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1…4 mm²flexible without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1…2.5 mm²flexible with cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²solid<br>Power circuit: screw clamp terminals 2 cable(s) 1…4 mm²solid<br>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 |
| 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>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 |
| 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 |
| Maximum operating rate | 3600 Cyc/H 60 °C |

## Complementary

| | |
|---|---|
| Coil technology | Built-in bidirectional peak limiting |
| Control circuit voltage limits | <= 0.1 Uc (-40…70 °C):drop-out AC/DC<br>0.85...1.1 Uc (-40…60 °C):operational AC<br>0.8...1.1 Uc (-40…60 °C):operational DC<br>1...1.1 Uc (60…70 °C):operational AC/DC |
| 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 |

## Environment

| | |
|---|---|
| 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 open: 10 Gn for 11 ms<br>Shocks contactor closed: 15 Gn for 11 ms |
| Height | 77 Mm |
| Width | 90 Mm |
| Depth | 86 Mm |
| Net weight | 0.783 Kg |
| Colour | Grey (SE GREY 6)<br>Green (SE GREEN 2) |

## Packing Units

| | |
|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 9.500 Cm |
| Package 1 Width | 11.500 Cm |
| Package 1 Length | 14.000 Cm |
| Package 1 Weight | 875.000 G |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 6 |
| Package 2 Height | 15.000 Cm |
| Package 2 Width | 30.000 Cm |
| Package 2 Length | 40.000 Cm |
| Package 2 Weight | 5.597 Kg |

## Offer Sustainability

| | |
|---|---|
| Recyclability potential, in % | 70 |
| Total lifecycle Carbon footprint | 17 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 6.473607906353944 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 6 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.23373173178881795 |
| Carbon footprint of the distribution phase [A4] | 0.2 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.08725072205911388 |
| Carbon footprint of the installation phase [A5] | 0.1 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 8.77926315789474 |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 9 kg CO2 eq. |
| Mercury free | Yes |
| Sustainable packaging | Yes |
| Carbon footprint of the end-of-life phase [C1 to C4] | 1.3408209193744656 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 1 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 17 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| SCIP Number | 7d699774-c34b-4bf4-9ecb-388a149eefdd |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant By Exemption |
| Halogen-free status | Halogen free plastic parts & cables product |
| 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 a |

## Contractual warranty

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

| | |
|---|---|
| Product Life Status : | Commercialised |