# Product datasheet
## Characteristics

# LC2D50ABBE
## TeSys D reversing contactor - 3P - <= 440 V - 50 A AC-3 - 24 V DC coil

## Main

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|---|---|
| Range of product | TeSys D |
| Range | TeSys |
| Product name | TeSys D Green |
| Product or component type | Reversing contactor |
| Device short name | LC2D |
| Contactor application | Resistive load<br>Motor control |
| Utilisation category | AC-3<br>AC-1 |
| Device presentation | Preassembled with reversing power busbar |
| Poles description | 3P |
| Pole contact composition | 3 NO |
| [Ue] rated operational voltage | <= 690 V AC 25...400 Hz for power circuit |
| [Ie] rated operational current | 50 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit<br>80 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit |
| Motor power kW | 15 kW at 220...230 V AC 50/60 Hz<br>22 kW at 380...400 V AC 50/60 Hz<br>25 kW at 415 V AC 50/60 Hz<br>30 kW at 440 V AC 50/60 Hz<br>30 kW at 500 V AC 50/60 Hz<br>33 kW at 660...690 V AC 50/60 Hz |
| Control circuit type | DC DC low consumption |
| [Uc] control circuit voltage | 24 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 | 80 A at <= 60 °C for power circuit<br>10 A at <= 60 °C for signalling circuit |
| Irms rated making capacity | 900 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 |

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|---|---|
| Rated breaking capacity | 900 A at 440 V for power circuit conforming to IEC 60947 |
| [Icw] rated short-time withstand current | 100 A 1 s signalling circuit<br>120 A 500 ms signalling circuit<br>140 A 100 ms signalling circuit<br>400 A <= 40 °C 10 s power circuit<br>810 A <= 40 °C 1 s power circuit<br>84 A <= 40 °C 10 min power circuit<br>208 A <= 40 °C 1 min power circuit |
| Associated fuse rating | 100 A gG at <= 690 V coordination type 1 for power circuit<br>100 A gG at <= 690 V coordination type 2 for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947-5-1 |
| Average impedance | 1.5 mOhm at 50 Hz - Ith 80 A for power circuit |
| [Ui] rated insulation voltage | 690 V for power circuit conforming to IEC 60947-4-1<br>690 V for signalling circuit conforming to IEC 60947-1 |
| Electrical durability | 1.4 Mcycles 50 A AC-3 <= 440 V >= 17221<br>700000 cycles 80 A AC-1 <= 440 V >= 17221<br>38000 cycles AC-4 <= 440 V >= 17221 |
| Power dissipation per pole | 3.7 W AC-3<br>9.6 W AC-1 |
| Protective cover | With |
| Interlocking type | Mechanical |
| Mounting support | Rail<br>Plate |
| Standards | EN/IEC 60947-4-1<br>UL 60947-4-1<br>CSA C22.2 No 60947-4-1<br>EN/IEC 60947-5-1 |
| Product certifications | UL<br>CSA<br>CCC<br>EAC<br>KC |
| Connections - terminals | Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end<br>Power circuit : EverLink BTR screw connectors 1 cable(s) 1...35 mm² - cable stiffness: flexible - without cable end<br>Power circuit : EverLink BTR screw connectors 1 cable(s) 1...35 mm² - cable stiffness: flexible - with cable end<br>Power circuit : EverLink BTR screw connectors 1 cable(s) 1...35 mm² - cable stiffness: solid - without cable end<br>Power circuit : EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: flexible - without cable end<br>Power circuit : EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: flexible - with cable end<br>Power circuit : EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: solid - without cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end<br>Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - with cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: solid - without cable end<br>Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: solid - without cable end |
| 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 : 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm² hexagonal 4 mm<br>Power circuit : 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm² hexagonal 4 mm |
| Operating time | 55...65 ms closing<br>20...120 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 | 6000000 cycles |
| Operating rate | 3600 cyc/h at <= 60 °C |

## Complementary

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|---|---|
| Coil technology | Built-in bidirectional peak limiting |

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|---|---|
| Control circuit voltage limits | 0.8...1.2 Uc operational at 60 °C<br><= 0.1 Uc drop-out at 60 °C |
| Inrush power in W | 11 W at 20 °C |
| Hold-in power consumption in W | 0.5 W at 20 °C |
| Heat dissipation | 0.5 W |
| 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

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|---|---|
| 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 operation | -25...60 °C |
| Ambient air temperature for storage | -60...80 °C |
| Permissible ambient air temperature around the device | -40...70 °C at Uc |
| Operating altitude | 3000 m without derating in temperature |
| 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 | 122 mm |
| Width | 119 mm |
| Depth | 120 mm |
| Product weight | 2.164 kg |
| Colour | Grey SE GREY 6<br>Green SE GREEN 2 |

## Offer Sustainability

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|---|---|
| Sustainable offer status | Green Premium product |
| RoHS (date code: YYWW) | Compliant - since 1625 - Schneider Electric declaration of conformity<br>Schneider Electric declaration of conformity |
| REACh | Reference not containing SVHC above the threshold<br>Reference not containing SVHC above the threshold |
| Product environmental profile | Available<br>Product environmental |
| Product end of life instructions | Available<br>End of life manual |