

# Product datasheet

Specifications



## TeSys Deca reversing contactor - 3P(3 NO) - AC-3 - <= 440 V 50 A - 100 V AC coil

LC2D50A3K7

⚠ Discontinued on: 10 Oct 2020

⚠ Discontinued

### Main

|                                             |                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                                                                                    |
| Product name                                | TeSys Deca                                                                                                                                                                                                                                                                                               |
| Product or component type                   | Reversing contactor                                                                                                                                                                                                                                                                                      |
| Device short name                           | LC2D                                                                                                                                                                                                                                                                                                     |
| Contactor application                       | Motor control<br>Resistive load                                                                                                                                                                                                                                                                          |
| Utilisation category                        | AC-1<br>AC-3                                                                                                                                                                                                                                                                                             |
| Device presentation                         | Preassembled with reversing power busbar                                                                                                                                                                                                                                                                 |
| Poles description                           | 3P                                                                                                                                                                                                                                                                                                       |
| power 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              | 50 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>80 A (at <60 °C) at <= 440 V AC AC-1 for power circuit                                                                                                                                                                                         |
| Motor power kW                              | 15 kW at 220...230 V AC 50 Hz<br>22 kW at 380...400 V AC 50 Hz<br>30 kW at 500 V AC 50 Hz<br>33 kW at 660...690 V AC 50 Hz<br>25 kW at 415 V AC 50 Hz<br>30 kW at 440 V AC 50 Hz                                                                                                                         |
| Motor power hp                              | 3 hp at 115 V AC 60 Hz for 1 phase motors<br>7.5 hp at 230/240 V AC 60 Hz for 1 phase motors<br>15 hp at 200/208 V AC 60 Hz for 3 phases motors<br>15 hp at 230/240 V AC 60 Hz for 3 phases motors<br>40 hp at 460/480 V AC 60 Hz for 3 phases motors<br>40 hp at 575/600 V AC 60 Hz for 3 phases motors |
| Control circuit type                        | AC at 50/60 Hz                                                                                                                                                                                                                                                                                           |
| [Uc] control circuit voltage                | 100 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>80 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>900 A at 440 V for power circuit conforming to IEC 60947                                                                                                                   |
| Rated breaking capacity                     | 900 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                 |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>[Icw] rated short-time withstand current</b> | 400 A 40 °C - 10 s for power circuit<br>810 A 40 °C - 1 s for power circuit<br>84 A 40 °C - 10 min for power circuit<br>208 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                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Associated fuse rating</b>                   | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Average impedance</b>                        | 1.5 mOhm - lth 80 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>[Ui] rated insulation voltage</b>            | 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                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Electrical durability</b>                    | 1.45 Mcycles 50 A AC-3 at Ue <= 440 V<br>1.1 Mcycles 80 A AC-1 at Ue <= 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Power dissipation per pole</b>               | 3.7 W AC-3<br>9.6 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Front cover</b>                              | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Interlocking type</b>                        | Mechanical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Mounting support</b>                         | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Standards</b>                                | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Product certifications</b>                   | CSA<br>UL<br>CCC<br>GOST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Connections - terminals</b>                  | Control circuit: spring terminals 1 cable(s) 2.5 mm²flexible without cable end<br>Control circuit: spring terminals 2 cable(s) 2.5 mm²flexible without cable end<br>Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm²flexible without cable end<br>Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm²flexible without cable end<br>Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm²flexible with cable end<br>Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm²flexible with cable end<br>Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm²solid<br>Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm²solid |
| <b>Tightening torque</b>                        | Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm² hexagonal screw head 4 mm<br>Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 2.5...25 mm² hexagonal screw head 4 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Operating time</b>                           | 4...19 ms opening<br>12...26 ms closing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Safety reliability level</b>                 | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Mechanical durability</b>                    | 6 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Maximum operating rate</b>                   | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Complementary

|                 |                                    |
|-----------------|------------------------------------|
| 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              | 140 VA 60 Hz cos phi 0.75 (at 20 °C)<br>160 VA 50 Hz cos phi 0.75 (at 20 °C)                                                                                                                              |
| Hold-in power consumption in VA | 13 VA 60 Hz cos phi 0.3 (at 20 °C)<br>15 VA 50 Hz cos phi 0.3 (at 20 °C)                                                                                                                                  |
| Heat dissipation                | 4...5 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                                                                                  |
| 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                                | 122 mm                                                                                                                                                                             |
| Width                                 | 119 mm                                                                                                                                                                             |
| Depth                                 | 120 mm                                                                                                                                                                             |
| Product weight                        | 1.88 kg                                                                                                                                                                            |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 14 cm   |
| Package 1 Width              | 16.2 cm |
| Package 1 Length             | 19.8 cm |
| Package 1 Weight             | 2.1 kg  |

# Contractual warranty

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



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

Environmental Disclosure

[Product Environmental Profile](#)

## Use Better



### Materials and Substances

EU RoHS Directive

[Compliant](#)

PVC free

Yes

## Use Longer



### Lifetime extension

Repair

No

## Use Again



### Repack and remanufacture

End of life manual availability

[End of Life Information](#)

WEEE Label



The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins