

# Product datasheet

Specifications



## TeSys D reversing contactor - 3P(3 NO) - AC-3 - <= 440 V 18 A - 72 V DC coil

LC2D185SD

! Discontinued

### Main

|                                             |                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                                                                                                                         |
| 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              | 18 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>32 A (at <60 °C) at <= 440 V AC AC-1 for power circuit                                                                                                                                                                                     |
| Motor power kW                              | 4 kW at 220...230 V AC 50 Hz<br>7.5 kW at 380...400 V AC 50 Hz<br>9 kW at 415...440 V AC 50 Hz<br>10 kW at 500 V AC 50 Hz<br>10 kW at 660...690 V AC 50 Hz                                                                                                                                           |
| Motor power hp                              | 1 hp at 115 V AC 60 Hz for 1 phase motors<br>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>5 hp at 230/240 V AC 60 Hz for 3 phases motors<br>10 hp at 460/480 V AC 60 Hz for 3 phases motors<br>15 hp at 575/600 V AC 60 Hz for 3 phases motors |
| Control circuit type                        | DC standard                                                                                                                                                                                                                                                                                          |
| [Uc] control circuit voltage                | 72 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>32 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>300 A at 440 V for power circuit conforming to IEC 60947                                                                                                               |
| Rated breaking capacity                     | 300 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> | 40 A 40 °C - 10 min for power circuit<br>84 A 40 °C - 1 min for power circuit<br>145 A 40 °C - 10 s for power circuit<br>240 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Associated fuse rating</b>                   | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>50 A gG at <= 690 V coordination type 1 for power circuit<br>35 A gG at <= 690 V coordination type 2 for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Average impedance</b>                        | 2.5 mOhm - lth 32 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>                    | 1.65 Mcycles 18 A AC-3 at Ue <= 440 V<br>1 Mcycles 32 A AC-1 at Ue <= 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Power dissipation per pole</b>               | 0.8 W AC-3<br>2.5 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Front cover</b>                              | Without                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Interlocking type</b>                        | Mechanical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Mounting support</b>                         | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <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>                   | UL<br>DNV<br>GOST<br>BV<br>LROS (Lloyds register of shipping)<br>GL<br>CCC<br>RINA<br>CSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Connections - terminals</b>                  | 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) 1.5...6 mm²flexible without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1.5...6 mm²flexible without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1...6 mm²flexible with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...4 mm²flexible with cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1.5...6 mm²solid<br>Power circuit: screw clamp terminals 2 cable(s) 1.5...6 mm²solid |
| <b>Tightening torque</b>                        | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Operating time</b>                           | 53.55...72.45 ms closing<br>16...24 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <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>                    | 30 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Maximum operating rate</b>                   | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Complementary

|                                |                                                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | Built-in bidirectional peak limiting diode suppressor                                                                            |
| Control circuit voltage limits | 0.1...0.25 Uc (-40...70 °C):drop-out DC<br>0.7...1.25 Uc (-40...60 °C):operational DC<br>1...1.25 Uc (60...70 °C):operational DC |
| Time constant                  | 28 ms                                                                                                                            |
| Inrush power in W              | 5.4 W (at 20 °C)                                                                                                                 |
| Hold-in power consumption in W | 5.4 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                                                                                                 |

## 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 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                                 | 93 mm                                                                                                                                                                              |
| Net weight                            | 1.037 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 >](#)

### Use Longer

| Lifetime extension |    |
|--------------------|----|
| Repair             | No |