

# Product data sheet

Specifications



## TeSys D reversing contactor - 3P(3 NO) - AC-3 - <= 440 V 32 A - 21 V AC coil

LC2D32Z7V

ⓘ Discontinued

### Main

|   |   |
|---|---|
| Range                                       | TeSys   |
| Product Name                                | TeSys D   |
| 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  |
| 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              | 32 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>50 A (at <60 °C) at <= 440 V AC AC-1 for power circuit  |
| Motor Power Kw                              | 7.5 kW at 220...230 V AC 50 Hz<br>15 kW at 380...400 V AC 50 Hz<br>15 kW at 415...440 V AC 50 Hz<br>18.5 kW at 500 V AC 50 Hz<br>18.5 kW at 660...690 V AC 50 Hz  |
| Motor Power Hp (UI / Csa)                   | 2 hp at 115 V AC 60 Hz for 1 phase motors<br>5 hp at 230/240 V AC 60 Hz for 1 phase motors<br>7.5 hp at 200/208 V AC 60 Hz for 3 phases motors<br>10 hp at 230/240 V AC 60 Hz for 3 phases motors<br>20 hp at 460/480 V AC 60 Hz for 3 phases motors<br>30 hp at 575/600 V AC 60 Hz for 3 phases motors |
| Control Circuit Type                        | AC at 50/60 Hz  |
| [Uc] Control Circuit Voltage                | 21 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>50 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>550 A at 440 V for power circuit conforming to IEC 60947  |
| Rated Breaking Capacity                     | 550 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> | 60 A 40 °C - 10 min for power circuit<br>138 A 40 °C - 1 min for power circuit<br>260 A 40 °C - 10 s for power circuit<br>430 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>63 A gG at <= 690 V coordination type 1 for power circuit<br>63 A gG at <= 690 V coordination type 2 for power circuit  |
| <b>Average Impedance</b>                        | 2 mOhm - lth 50 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 32 A AC-3 at Ue <= 440 V<br>1.4 Mcycles 50 A AC-1 at Ue <= 440 V   |
| <b>Power Dissipation Per Pole</b>               | 2 W AC-3<br>5 W AC-1  |
| <b>Front Cover</b>                              | With  |
| <b>Interlocking Type</b>                        | Electrical and 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>                   | RINA<br>LROS (Lloyds register of shipping)<br>CCC<br>UL<br>BV<br>DNV<br>GOST<br>CSA<br>GL   |
| <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) 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 |
| <b>Tightening Torque</b>                        | 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  |
| <b>Operating Time</b>                           | 12...22 ms closing<br>4...19 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>                    | 15 Mcycles  |

|                        |                  |
|------------------------|------------------|
| Maximum Operating Rate | 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              | 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  |
| 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 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                            | 0.797 kg  |

## Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
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