



## Product data sheet

### Characteristics

# LC2K0910D7

TeSys K reversing contactor - 3P - AC-3 <= 440 V 9 A - 1 NO - 42 V AC coil



Local distributor code: 398263960



## Main

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                                                                                                                                                                                   |
| Product name                                | TeSys K                                                                                                                                                                                                                                                                                                                                                                                                 |
| Product or component type                   | Reversing contactor                                                                                                                                                                                                                                                                                                                                                                                     |
| Device short name                           | LC2K                                                                                                                                                                                                                                                                                                                                                                                                    |
| Device application                          | Control                                                                                                                                                                                                                                                                                                                                                                                                 |
| Contactor application                       | Resistive load<br>Motor control                                                                                                                                                                                                                                                                                                                                                                         |
| Utilisation category                        | AC-4<br>AC-1<br>AC-3<br>AC-3e                                                                                                                                                                                                                                                                                                                                                                           |
| 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 50/60 Hz<br>Signalling circuit: ≤ 690 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                                             |
| [Ie] rated operational current              | 20 A (at ≤50 °C) at ≤ 440 V AC AC-1 for power circuit<br>16 A (at ≤70 °C) at 690 V AC AC-1 for power circuit<br>9 A at ≤ 440 V AC AC-3 for power circuit<br>9 A at ≤ 440 V AC AC-3e for power circuit                                                                                                                                                                                                   |
| Motor power kW                              | 2.2 kW at 220...230 V AC 50/60 Hz<br>4 kW at 380...415 V AC 50/60 Hz<br>4 kW at 440 V AC 50/60 Hz<br>4 kW at 480 V AC 50/60 Hz<br>4 kW at 500...600 V AC 50/60 Hz<br>4 kW at 660...690 V AC 50/60 Hz                                                                                                                                                                                                    |
| Control circuit type                        | AC at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                          |
| [Uc] control circuit voltage                | 42 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                        |
| Auxiliary contact composition               | 1 NO                                                                                                                                                                                                                                                                                                                                                                                                    |
| [Uimp] rated impulse withstand voltage      | 8 kV                                                                                                                                                                                                                                                                                                                                                                                                    |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                                                                                                                     |
| [Ith] conventional free air thermal current | 20 A (at 50 °C) for power circuit<br>10 A (at 50 °C) for signalling circuit                                                                                                                                                                                                                                                                                                                             |
| Irms rated making capacity                  | 110 A AC for power circuit conforming to NF C 63-110<br>110 A AC for power circuit conforming to IEC 60947<br>110 A AC for signalling circuit conforming to IEC 60947                                                                                                                                                                                                                                   |
| Rated breaking capacity                     | 110 A at 415 V conforming to IEC 60947<br>110 A at 440 V conforming to IEC 60947<br>80 A at 500 V conforming to IEC 60947<br>110 A at 220...230 V conforming to IEC 60947<br>110 A at 380...400 V conforming to IEC 60947<br>70 A at 660...690 V conforming to IEC 60947                                                                                                                                |
| [Icw] rated short-time withstand current    | 90 A 50 °C - 1 s for power circuit<br>85 A 50 °C - 5 s for power circuit<br>80 A 50 °C - 10 s for power circuit<br>60 A 50 °C - 30 s for power circuit<br>45 A 50 °C - 1 min for power circuit<br>40 A 50 °C - 3 min for power circuit<br>80 A - 1 s for signalling circuit<br>90 A - 500 ms for signalling circuit<br>110 A - 100 ms for signalling circuit<br>20 A 50 °C - ≥ 15 min for power circuit |
| Associated fuse rating                      | 25 A gG at ≤ 440 V for power circuit<br>25 A aM for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947<br>10 A gG for signalling circuit conforming to VDE 0660                                                                                                                                                                                                                    |

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Average impedance             | 3 mOhm - Ith 20 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| [Ui] rated insulation voltage | Power circuit: 600 V conforming to UL 508<br>Power circuit: 690 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-5-1<br>Signalling circuit: 600 V conforming to UL 508<br>Power circuit: 600 V conforming to CSA C22.2 No 14<br>Signalling circuit: 600 V conforming to CSA C22.2 No 14                                                                                                             |
| Electrical durability         | 1.3 Mcycles 9 A AC-3 at $U_e \leq 440$ V<br>1.3 Mcycles 9 A AC-3e at $U_e \leq 440$ V<br>0.16 Mcycles 20 A AC-1 at $U_e \leq 690$ V<br>0.02 Mcycles 54 A AC-4 at $U_e \leq 440$ V                                                                                                                                                                                                                                                                                                              |
| Interlocking type             | Mechanical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Mounting support              | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Standards                     | EN/IEC 60947-4-1<br>GB/T 14048.4<br>UL 60947-4-1<br>CSA C22.2 No 60947-4-1<br>JIS C8201-4-1                                                                                                                                                                                                                                                                                                                                                                                                    |
| Product certifications        | CB<br>Scheme[RETURN]CCC[RETURN]UL[RETURN]CSA[RETURN]EAC                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Connections - terminals       | Screw clamp terminals 1 cable(s) 1.5...4 mm <sup>2</sup> solid<br>Screw clamp terminals 1 cable(s) 0.75...4 mm <sup>2</sup> flexible without cable end<br>Screw clamp terminals 1 cable(s) 0.34...2.5 mm <sup>2</sup> flexible with cable end<br>Screw clamp terminals 2 cable(s) 1.5...4 mm <sup>2</sup> solid<br>Screw clamp terminals 2 cable(s) 0.75...4 mm <sup>2</sup> flexible without cable end<br>Screw clamp terminals 2 cable(s) 0.34...1.5 mm <sup>2</sup> flexible with cable end |
| Tightening torque             | 0.8...1.3 N.M - on screw clamp terminals Philips No 2<br>0.8...1.3 N.M - on screw clamp terminals flat Ø 6 mm<br>0.8...1.3 N.m - on screw clamp terminals pozidriv No 2                                                                                                                                                                                                                                                                                                                        |
| Operating time                | 10...20 ms coil energisation and NO closing<br>10...20 ms coil de-energisation and NO 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         | 5 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Maximum operating rate        | 3600 cyc/h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Complementary

|                                 |                                                                                                 |
|---------------------------------|-------------------------------------------------------------------------------------------------|
| Control circuit voltage limits  | Operational: 0.8...1.15 $U_c$ (at $\leq 50$ °C)<br>Drop-out: 0.2...0.75 $U_c$ (at $\leq 50$ °C) |
| Inrush power in VA              | 30 VA (at 20 °C)                                                                                |
| Hold-in power consumption in VA | 4.5 VA (at 20 °C)                                                                               |
| Heat dissipation                | 1.3 W                                                                                           |
| Auxiliary contacts type         | Type instantaneous 1 NO                                                                         |
| Signalling circuit frequency    | $\leq 400$ Hz                                                                                   |
| Minimum switching current       | 5 mA for signalling circuit                                                                     |
| Minimum switching voltage       | 17 V for signalling circuit                                                                     |
| Non overlap distance            | 0.5 mm                                                                                          |
| Insulation resistance           | > 10 MOhm for signalling circuit                                                                |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20 conforming to VDE 0106                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Protective treatment                  | TC conforming to IEC 60068<br>TC conforming to DIN 50016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Ambient air temperature for operation | -25...50 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Ambient air temperature for storage   | -50...80 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Operating altitude                    | 2000 m without derating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Flame retardance                      | V1 conforming to UL 94<br>Requirement 2 conforming to NF F 16-101<br>Requirement 2 conforming to NF F 16-102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Mechanical robustness                 | Shocks contactor closed, on X axis: 10 Gn for 11 ms conforming to IEC 60068-2-27<br>Shocks contactor closed, on Y axis: 15 Gn for 11 ms conforming to IEC 60068-2-27<br>Shocks contactor closed, on Z axis: 15 Gn for 11 ms conforming to IEC 60068-2-27<br>Shocks contactor opened, on X axis: 6 Gn for 11 ms conforming to IEC 60068-2-27<br>Shocks contactor opened, on Y axis: 10 Gn for 11 ms conforming to IEC 60068-2-27<br>Shocks contactor opened, on Z axis: 10 Gn for 11 ms conforming to IEC 60068-2-27<br>Vibrations contactor closed: 4 Gn, 5...300 Hz conforming to IEC 60068-2-6<br>Vibrations contactor opened: 2 Gn, 5...300 Hz conforming to IEC 60068-2-6 |
| Height                                | 58 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Width                                 | 90 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Depth                                 | 57 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Net weight                            | 0.39 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 6.000 cm  |
| Package 1 Width              | 6.200 cm  |
| Package 1 Length             | 9.200 cm  |
| Package 1 Weight             | 368.000 g |
| Unit Type of Package 2       | S02       |
| Number of Units in Package 2 | 25        |
| Package 2 Height             | 15.000 cm |
| Package 2 Width              | 30.000 cm |
| Package 2 Length             | 40.000 cm |
| Package 2 Weight             | 9.580 kg  |

## Offer Sustainability

|                            |                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                             |
| REACH Regulation           |  <a href="#">REACH Declaration</a>             |
| REACH free of SVHC         | Yes                                                                                                                               |
| EU RoHS Directive          | Compliant  <a href="#">EU RoHS Declaration</a> |
| Toxic heavy metal free     | Yes                                                                                                                               |
| Mercury free               | Yes                                                                                                                               |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| RoHS exemption information |  <a href="#">Yes</a>                           |
| Environmental Disclosure   |  <a href="#">Product Environmental Profile</a> |
| Circularity Profile        |  <a href="#">End Of Life Information</a>       |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins       |

Contractual warranty

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