



## Product data sheet

### Characteristics

# LC2K12004P7

TeSys K changeover contactor - 4P - AC-1 <= 440 V 20 A - 230 V AC coil





## Main

|                                             |                                                                                                                                                                                                                                                                                       |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                                                                 |
| Product name                                | TeSys K                                                                                                                                                                                                                                                                               |
| Product or component type                   | Changeover contactor                                                                                                                                                                                                                                                                  |
| Device short name                           | LC2K                                                                                                                                                                                                                                                                                  |
| Device application                          | Control                                                                                                                                                                                                                                                                               |
| Contactor application                       | Resistive load                                                                                                                                                                                                                                                                        |
| Utilisation category                        | AC-1                                                                                                                                                                                                                                                                                  |
| Device presentation                         | Preamsembled with reversing power busbar                                                                                                                                                                                                                                              |
| Poles description                           | 4P                                                                                                                                                                                                                                                                                    |
| Power pole contact composition              | 4 NO                                                                                                                                                                                                                                                                                  |
| [Ue] rated operational voltage              | Power 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                                                                                                                                                                         |
| Control circuit type                        | AC at 50/60 Hz                                                                                                                                                                                                                                                                        |
| [Uc] control circuit voltage                | 230 V AC 50/60 Hz                                                                                                                                                                                                                                                                     |
| [Uimp] rated impulse withstand voltage      | 8 kV                                                                                                                                                                                                                                                                                  |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                   |
| [Ith] conventional free air thermal current | 20 A (at 50 °C) for power circuit                                                                                                                                                                                                                                                     |
| Irms rated making capacity                  | 144 A at 690 V AC for power circuit conforming to NF C 63-110<br>144 A at 690 V AC for power circuit conforming to IEC 60947                                                                                                                                                          |
| Rated breaking capacity                     | 110 A at 440 V conforming to IEC 60947<br>80 A at 500 V conforming to IEC 60947<br>70 A at 660...690 V conforming to IEC 60947                                                                                                                                                        |
| [Icw] rated short-time withstand current    | 115 A 50 °C - 1 s for power circuit<br>105 A 50 °C - 5 s for power circuit<br>100 A 50 °C - 10 s for power circuit<br>75 A 50 °C - 30 s for power circuit<br>55 A 50 °C - 1 min for power circuit<br>50 A 50 °C - 3 min for power circuit<br>25 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                                                                                                                                                                                                                    |
| 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>Power circuit: 600 V conforming to CSA C22.2 No 14                                                                                                                                   |
| Electrical durability                       | 0.3 Mcycles 20 A AC-1 at Ue <= 440 V                                                                                                                                                                                                                                                  |
| Interlocking type                           | Mechanical                                                                                                                                                                                                                                                                            |
| Mounting support                            | Rail<br>Plate                                                                                                                                                                                                                                                                         |
| 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[RETURN]                                                                                                                                                                                                                       |

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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...<br>4 mm <sup>2</sup> flexible without cable end<br>Screw clamp terminals 1 cable(s) 0.34...<br>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...<br>4 mm <sup>2</sup> flexible without cable end<br>Screw clamp terminals 2 cable(s) 0.34...<br>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                                                                                                                                                                                                                                                                                                                                                                                                  |
| 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 <sub>c</sub> (at <50 °C)<br>Drop-out: 0.2...0.75 U <sub>c</sub> (at <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                                                                                                 |

### 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                            | 0.38 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### Packing Units

|                              |        |
|------------------------------|--------|
| Unit Type of Package 1       | PCE    |
| Number of Units in Package 1 | 1      |
| Package 1 Height             | 6 cm   |
| Package 1 Width              | 6.2 cm |
| Package 1 Length             | 9.2 cm |
| Package 1 Weight             | 390 g  |

## Offer Sustainability

|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| 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 |
|----------|-----------|