# Product data sheet
## Characteristics

# LC1K09004P7
contactor, TeSys K, 4P(4NO), AC-1, 440V 20A, 230V AC coil




## Main

| | |
|---|---|
| Range | TeSys |
| Product or component type | Contactor |
| Device short name | LC1K |
| Device application | Control |
| Contactor application | Resistive load |

## Complementary

| | |
|---|---|
| Utilisation category | AC-1 |
| Poles description | 4P |
| Pole contact composition | 4 NO |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC <= 400 Hz<br>Signalling circuit: <= 690 V AC <= 400 Hz |
| [Ie] rated operational current | 20 A (at <60 °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 60 °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 IEC 60947 |
| Rated breaking capacity | 110 A at 220...230 V conforming to IEC 60947<br>110 A at 380...400 V conforming to IEC 60947<br>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>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>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 |
| 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 |
| 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 |

| | |
|---|---|
| Control circuit voltage limits | Operational: 0.8...1.15 Uc (at <50 °C)<br>Drop-out: >= 0.20 Uc (at <50 °C) |
| Connections - terminals | Screw clamp terminals 1 cable(s) 1.5…4 mm²solid<br>Screw clamp terminals 1 cable(s) 0.75…4 mm²flexible without cable end<br>Screw clamp terminals 1 cable(s) 0.34…2.5 mm²flexible with cable end<br>Screw clamp terminals 2 cable(s) 1.5…4 mm²solid<br>Screw clamp terminals 2 cable(s) 0.75…4 mm²flexible without cable end<br>Screw clamp terminals 2 cable(s) 0.34…1.5 mm²flexible with cable end |
| Maximum operating rate | 3600 Cyc/H |
| Coil technology | Without built-in suppressor module |
| Signalling circuit frequency | <= 400 Hz |
| Mounting support | Plate<br>Rail |
| 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 de-energisation and NO opening<br>10...20 ms coil energisation and NO closing |
| 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 | 10 Mcycles |
| Electrical durability | 0.16 Mcycles 20 A AC-1 at Ue <= 690 V |
| 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 | 45 Mm |
| Depth | 57 Mm |
| Net weight | 0.18 Kg |

## Environment

| | |
|---|---|
| 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<br>IEC 60335-1:Clause 30.2<br>IEC 60335-2-40:Annex JJ<br>UL 60335-2-40:Annex JJ |
| Product certifications | CB Scheme[RETURN]CCC[RETURN]UL[RETURN]CSA[RETURN]EAC[RETURN]CE[RETURN]U |
| IP degree of protection | IP2X conforming to VDE 0106 |
| Protective treatment | TC conforming to IEC 60068<br>TC conforming to DIN 50016 |
| 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 |

## Packing Units

| | |
|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 4.800 Cm |
| Package 1 Width | 6.200 Cm |
| Package 1 Length | 6.600 Cm |
| Package 1 Weight | 178.000 G |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 50 |
| Package 2 Height | 15.000 Cm |

| | |
|---|---|
| Package 2 Width | 30.000 Cm |
| Package 2 Length | 40.000 Cm |
| Package 2 Weight | 9.140 Kg |

## Offer Sustainability

| | |
|---|---|
| Recyclability potential, in % | 63 |
| Total lifecycle Carbon footprint | 58 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 0.9294198707245992 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 0.9 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.35870824940541357 |
| Carbon footprint of the distribution phase [A4] | 0.4 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.024659702463330477 |
| Carbon footprint of the installation phase [A5] | 0 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 56.65241524409137 |
| REACh free of SVHC | Yes |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 57 kg CO2 eq. |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| Sustainable packaging | Yes |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.26049024039022145 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.3 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 58 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| REACh Regulation | Free of Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony tr |
| End of life manual availability | End Of Life Information |
| Take-back | No |
| WEEE Label | The product must be disposed on European Union markets following specific waste collection a |

## Contractual warranty

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

Product Life Status : Commercialised