



## Main

|                           |               |
|---------------------------|---------------|
| Range                     | TeSys         |
| Product or component type | Contactor     |
| Device short name         | LC1K          |
| Device application        | Control       |
| Contactor application     | Motor control |

## Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Utilisation category                        | AC-3<br>AC-3e<br>AC-4                                                                                                                                                                                                                                                                                                                                                         |
| Poles description                           | 3P                                                                                                                                                                                                                                                                                                                                                                            |
| Power pole contact composition              | 3 NO                                                                                                                                                                                                                                                                                                                                                                          |
| [Ue] rated operational voltage              | Power circuit: ≤ 690 V AC ≤ 400 Hz<br>Signalling circuit: ≤ 690 V AC ≤ 400 Hz                                                                                                                                                                                                                                                                                                 |
| [Ie] rated operational current              | 6 A (at ≤60 °C) at ≤ 440 V AC AC-3 for power circuit<br>6 A (at ≤60 °C) at ≤ 440 V AC AC-3e for power circuit                                                                                                                                                                                                                                                                 |
| Control circuit type                        | AC at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                |
| [Uc] control circuit voltage                | 120 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                             |
| Motor power kW                              | 1.5 kW at 220...230 V AC 50/60 Hz AC-3<br>2.2 kW at 380...415 V AC 50/60 Hz AC-3<br>3 kW at 440/690 V AC 50/60 Hz AC-3<br>1.5 kW at 220...230 V AC 50/60 Hz AC-3e<br>2.2 kW at 380...415 V AC 50/60 Hz AC-3e<br>3 kW at 440/690 V AC 50/60 Hz AC-3e<br>1.5 kW at 220...230 V AC 50/60 Hz AC-4<br>2.2 kW at 380...415 V AC 50/60 Hz AC-4<br>3 kW at 440/690 V AC 50/60 Hz AC-4 |
| Auxiliary contact composition               | 1 NO                                                                                                                                                                                                                                                                                                                                                                          |
| [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<br>110 A AC for signalling 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                                                                                                      |

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| [I <sub>cw</sub> ] 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<br>80 A - 1 s for signalling circuit<br>90 A - 500 ms for signalling circuit<br>110 A - 100 ms for signalling 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 - I <sub>th</sub> 20 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| [U <sub>i</sub> ] 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                                                                                                                                                                                                                                                                                            |
| Insulation resistance                                 | > 10 MOhm for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 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 U <sub>c</sub> (at <50 °C)<br>Drop-out: >= 0.20 U <sub>c</sub> (at <50 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 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                                                                                                                                                                                |
| Maximum operating rate                                | 3600 cyc/h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Auxiliary contacts type                               | Type instantaneous 1 NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Signalling circuit frequency                          | <= 400 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Minimum switching current                             | 5 mA for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Minimum switching voltage                             | 17 V for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Non overlap distance                                  | 0.5 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Mechanical durability                                 | 10 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Electrical durability                                 | 1.3 Mcycles 6 A AC-3 at U <sub>e</sub> <= 440 V<br>1.3 Mcycles 6 A AC-3e at U <sub>e</sub> <= 440 V<br>0.05 Mcycles 36 A AC-4 at U <sub>e</sub> <= 440 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<br>Scheme[RETURN]CCC[RETURN]UL[RETURN]CSA[RETURN]EAC[RETURN]CE[RETURN]UKCA[RETURN]                                                                                       |
| 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                                                                |

## 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                                                                                                                               |
| Sustainable packaging      | Yes                                                                                                                               |
| RoHS exemption information |  <a href="#">Yes</a>                           |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins       |