



## Main

|                           |                                 |
|---------------------------|---------------------------------|
| Range                     | TeSys                           |
| Product or component type | Contactor                       |
| Product name              | TeSys K                         |
| Device short name         | LC1K                            |
| Device application        | Control                         |
| Contactor application     | Resistive load<br>Motor control |

## Complementary

|                                             |                                                                                                                                                                                                                                                                          |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Utilisation category                        | AC-3<br>AC-4<br>AC-1                                                                                                                                                                                                                                                     |
| 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>9 A at ≤ 440 V AC AC-3 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                | 24 V AC 50/60 Hz                                                                                                                                                                                                                                                         |
| Motor power kW                              | 2.2 kW at 220...230 V AC 50/60 Hz AC-3<br>4 kW at 380...415 V AC 50/60 Hz AC-3<br>4 kW at 440 V AC 50/60 Hz AC-3<br>4 kW at 480 V AC 50/60 Hz AC-3<br>4 kW at 500...600 V AC 50/60 Hz AC-3<br>4 kW at 660...690 V AC 50/60 Hz AC-3<br>2.2 kW at 400 V AC 50/60 Hz AC-4   |
| Auxiliary contact composition               | 1 NC                                                                                                                                                                                                                                                                     |
| [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 |

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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: 0.2...0.75 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 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 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                                     | 1.3 N.M - on screw clamp terminals - with screwdriver Philips No 2<br>1.3 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 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                                 | 0.18 Mcycles 20 A AC-1 at U <sub>e</sub> ≤ 440 V<br>1.3 Mcycles 9 A AC-3 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Depth                                                 | 57 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Net weight                                            | 0.18 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Environment

|                                     |                                                                                                              |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Standards                           | BS 5424<br>IEC 60947<br>NF C 63-110<br>VDE 0660                                                              |
| Product certifications              | CSA<br>UL                                                                                                    |
| 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 Weight             | 177 g      |
| Package 1 Height             | 4.8 cm     |
| Package 1 width              | 6.2 cm     |
| Package 1 Length             | 6.6 cm     |
| Unit Type of Package 2       | S02        |
| Number of Units in Package 2 | 50         |
| Package 2 Weight             | 9.37 kg    |
| Package 2 Height             | 15 cm      |
| Package 2 width              | 30 cm      |
| Package 2 Length             | 40 cm      |
| Unit Type of Package 3       | P06        |
| Number of Units in Package 3 | 800        |
| Package 3 Weight             | 159.755 kg |
| Package 3 Height             | 80 cm      |
| Package 3 width              | 80 cm      |
| Package 3 Length             | 60 cm      |

## 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                                                                                                                               |
| RoHS exemption information |  <a href="#">Yes</a>                           |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</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 |
|----------|-----------|