

# Product data sheet

Specifications



## TeSys K contactor , 3P , AC-3 <= 440 V 12 A , 1 NO aux. , 400 V AC coil

LC1K12103V7

❗ Discontinued

### Main

|                                |                                                                                                                                                             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range Of Product               | TeSys K                                                                                                                                                     |
| Range                          | TeSys                                                                                                                                                       |
| Product Name                   | TeSys K                                                                                                                                                     |
| Device Application             | Control                                                                                                                                                     |
| Product Or Component Type      | Contactor                                                                                                                                                   |
| Device Short Name              | LC1K                                                                                                                                                        |
| Utilisation Category           | AC-3<br>AC-4<br>AC-1                                                                                                                                        |
| Poles Description              | 3P                                                                                                                                                          |
| Pole Contact Composition       | 3 NO                                                                                                                                                        |
| [Ie] Rated Operational Current | 20 A (at <50 °C) at <= 440 V AC AC-1 for power circuit<br>12 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 |
| [Uc] Control Circuit Voltage   | type instantaneous 1 NO                                                                                                                                     |
| Signalling Circuit Frequency   | <= 400 Hz                                                                                                                                                   |
| Non Overlap Distance           | 0.5 mm                                                                                                                                                      |

### Complementary

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contactor Application          | Resistive load<br>Motor control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Auxiliary Contact Composition  | 1 NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Control Circuit Voltage Limits | Operational: 0.8...1.15 Uc (at <50 °C)<br>Drop-out: 0.2...0.75 Uc (at <50 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Control Circuit Type           | AC at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| [Uc] Control Circuit Voltage   | 400 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Connections - Terminals        | Spring terminals 1 cable(s) 0.75...1.5 mm²solid<br>Spring terminals 1 cable(s) 0.75...1.5 mm²flexible without cable end                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Electrical Durability          | 0.3 Mcycles 20 A AC-1 at Ue <= 440 V<br>1.3 Mcycles 12 A AC-3 at Ue <= 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 |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standards</b>                                   | 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                                                                                                                                                                                                                                                                                        |
| <b>Ip Degree Of Protection</b>                     | IP2X conforming to VDE 0106                                                                                                                                                                                                                                                                                                                                                        |
| <b>Protective Treatment</b>                        | TC conforming to IEC 60068<br>TC conforming to DIN 50016                                                                                                                                                                                                                                                                                                                           |
| <b>[Ui] Rated Insulation Voltage</b>               | 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 |
| <b>[Uimp] Rated Impulse Withstand Voltage</b>      | 8 kV                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Overvoltage Category</b>                        | III                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Mounting Support</b>                            | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Product Certifications</b>                      | CB Scheme<br>CCC<br>UL<br>CSA<br>EAC<br>CE<br>UKCA                                                                                                                                                                                                                                                                                                                                 |
| <b>Ambient Air Temperature For Storage</b>         | -50...80 °C                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Operating Altitude</b>                          | 2000 m without derating                                                                                                                                                                                                                                                                                                                                                            |
| <b>[Ue] Rated Operational Voltage</b>              | Power circuit: 690 V AC 50/60 Hz<br>Signalling circuit: ≤ 690 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                        |
| <b>[Ith] Conventional Free Air Thermal Current</b> | 20 A (at 50 °C) for power circuit<br>10 A (at 50 °C) for signalling circuit                                                                                                                                                                                                                                                                                                        |
| <b>Irms Rated Making Capacity</b>                  | 110 A AC for signalling circuit conforming to IEC 60947<br>144 A AC for power circuit conforming to NF C 63-110<br>144 A AC for power circuit conforming to IEC 60947                                                                                                                                                                                                              |
| <b>Rated Breaking Capacity</b>                     | 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                                                                                                                                                                                                                                                     |
| <b>Associated Fuse Rating</b>                      | 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                                                                                                                                                                                               |
| <b>Average Impedance</b>                           | 3 mOhm - Ith 20 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                          |
| <b>Inrush Power In Va</b>                          | 30 VA (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Hold-In Power Consumption In Va</b>             | 4.5 VA (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Operating Time</b>                              | 10...20 ms coil de-energisation and NO opening<br>10...20 ms coil energisation and NO closing                                                                                                                                                                                                                                                                                      |
| <b>Safety Reliability Level</b>                    | 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                                                                                                                                                                                                               |
| <b>Mechanical Durability</b>                       | 10 Mcycles                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Maximum Operating Rate</b>                      | 3600 cyc/h                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Minimum Switching Current</b>                   | 5 mA for signalling circuit                                                                                                                                                                                                                                                                                                                                                        |
| <b>Minimum Switching Voltage</b>                   | 17 V for signalling circuit                                                                                                                                                                                                                                                                                                                                                        |
| <b>Insulation Resistance</b>                       | > 10 MOhm for signalling circuit                                                                                                                                                                                                                                                                                                                                                   |

|                    |         |
|--------------------|---------|
| Height             | 58 mm   |
| Width              | 45 mm   |
| Depth              | 57 mm   |
| Net Weight         | 0.18 kg |
| Compatibility Code | LC1K    |

## Environment

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor Power Kw                           | 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<br>3 kW at 220...230 V AC 50/60 Hz<br>5.5 kW at 380...415 V AC 50/60 Hz<br>5.5 kW at 440 V AC 50/60 Hz                                                                                                                                                                                                      |
| [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>80 A - 1 s for signalling circuit<br>90 A - 500 ms for signalling circuit<br>110 A - 100 ms for signalling circuit<br>25 A 50 °C - >= 15 min for power circuit |
| Heat Dissipation                         | 1.3 W                                                                                                                                                                                                                                                                                                                                                                                                       |
| 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   |

## Contractual warranty

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