

# Product data sheet

Specifications



## Contactor, TeSys K, 3P, AC-3/ AC-3e, <=440V 9A, aux. 1NC, 48V AC coil

LC1K0901E7

### Main

Range	TeSys
Product or component type	Contactor
Product name	TeSys K
Device short name	LC1K
Device application	Control
Contactor application	Resistive load Motor control

### Complementary

Utilisation category	AC-4 AC-3 AC-1 AC-3e
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit: 690 V AC 50/60 Hz 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 9 A at <= 440 V AC AC-3 for power circuit 16 A (at <=70 °C) at 690 V AC AC-1 for power circuit 9 A at <= 440 V AC AC-3e for power circuit
Control circuit type	AC at 50/60 Hz
[Uc] control circuit voltage	48 V AC 50/60 Hz
Motor power kW	2.2 kW at 220...230 V AC 50/60 Hz AC-3 4 kW at 380...415 V AC 50/60 Hz AC-3 4 kW at 440 V AC 50/60 Hz AC-3 4 kW at 480 V AC 50/60 Hz AC-3 4 kW at 500...600 V AC 50/60 Hz AC-3 4 kW at 660...690 V AC 50/60 Hz AC-3 2.2 kW at 400 V AC 50/60 Hz AC-4 2.2 kW at 220...230 V AC 50/60 Hz AC-3e 4 kW at 380...415 V AC 50/60 Hz AC-3e 4 kW at 440 V AC 50/60 Hz AC-3e 4 kW at 480 V AC 50/60 Hz AC-3e 4 kW at 500...600 V AC 50/60 Hz AC-3e 4 kW at 660...690 V AC 50/60 Hz AC-3e
Auxiliary contact composition	1 NC
[Uimp] rated impulse withstand voltage	8 kV
Overvoltage category	III

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>[Ith] conventional free air thermal current</b>	20 A (at 50 °C) for power circuit 10 A (at 50 °C) for signalling circuit
<b>Irms rated making capacity</b>	110 A AC for power circuit conforming to NF C 63-110 110 A AC for power circuit conforming to IEC 60947 110 A AC for signalling circuit conforming to IEC 60947
<b>Rated breaking capacity</b>	110 A at 415 V conforming to IEC 60947 110 A at 440 V conforming to IEC 60947 80 A at 500 V conforming to IEC 60947 110 A at 220...230 V conforming to IEC 60947 110 A at 380...400 V conforming to IEC 60947 70 A at 660...690 V conforming to IEC 60947
<b>[Icw] rated short-time withstand current</b>	90 A 50 °C - 1 s for power circuit 85 A 50 °C - 5 s for power circuit 80 A 50 °C - 10 s for power circuit 60 A 50 °C - 30 s for power circuit 45 A 50 °C - 1 min for power circuit 40 A 50 °C - 3 min for power circuit 20 A 50 °C - >= 15 min for power circuit 80 A - 1 s for signalling circuit 90 A - 500 ms for signalling circuit 110 A - 100 ms for signalling circuit
<b>Associated fuse rating</b>	25 A gG at <= 440 V for power circuit 25 A aM for power circuit 10 A gG for signalling circuit conforming to IEC 60947 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>[Ui] rated insulation voltage</b>	Power circuit: 600 V conforming to UL 508 Power circuit: 690 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-5-1 Signalling circuit: 600 V conforming to UL 508 Power circuit: 600 V conforming to CSA C22.2 No 14 Signalling circuit: 600 V conforming to CSA C22.2 No 14
<b>Insulation resistance</b>	> 10 MOhm for signalling 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>Heat dissipation</b>	1.3 W
<b>Control circuit voltage limits</b>	Operational: 0.8...1.15 Uc (at <50 °C) Drop-out: 0.2...0.75 Uc (at <50 °C)
<b>Connections - terminals</b>	Screw clamp terminals 1 cable(s) 1.5...4 mm <sup>2</sup> solid Screw clamp terminals 1 cable(s) 0.75...4 mm <sup>2</sup> flexible without cable end Screw clamp terminals 1 cable(s) 0.34...2.5 mm <sup>2</sup> flexible with cable end Screw clamp terminals 2 cable(s) 1.5...4 mm <sup>2</sup> solid Screw clamp terminals 2 cable(s) 0.75...4 mm <sup>2</sup> flexible without cable end Screw clamp terminals 2 cable(s) 0.34...1.5 mm <sup>2</sup> flexible with cable end
<b>Maximum operating rate</b>	3600 cyc/h
<b>Auxiliary contacts type</b>	type instantaneous 1 NC
<b>Signalling circuit frequency</b>	<= 400 Hz
<b>Minimum switching current</b>	5 mA for signalling circuit
<b>Minimum switching voltage</b>	17 V for signalling circuit
<b>Mounting support</b>	Rail Plate
<b>Tightening torque</b>	0.8...1.3 N.m - on screw clamp terminals Philips No 2 0.8...1.3 N.m - on screw clamp terminals flat Ø 6 mm 0.8...1.3 N.m - on screw clamp terminals pozidriv No 2
<b>Operating time</b>	10...20 ms coil de-energisation and NO opening 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 B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1
<b>Non overlap distance</b>	0.5 mm
<b>Mechanical durability</b>	10 Mcycles
<b>Electrical durability</b>	0.18 Mcycles 20 A AC-1 at Ue <= 440 V 1.3 Mcycles 9 A AC-3 at Ue <= 440 V 1.3 Mcycles 9 A AC-3e at Ue <= 440 V

<b>Mechanical robustness</b>	Shocks contactor closed, on X axis: 10 Gn for 11 ms conforming to IEC 60068-2-27 Shocks contactor closed, on Y axis: 15 Gn for 11 ms conforming to IEC 60068-2-27 Shocks contactor closed, on Z axis: 15 Gn for 11 ms conforming to IEC 60068-2-27 Shocks contactor opened, on X axis: 6 Gn for 11 ms conforming to IEC 60068-2-27 Shocks contactor opened, on Y axis: 10 Gn for 11 ms conforming to IEC 60068-2-27 Shocks contactor opened, on Z axis: 10 Gn for 11 ms conforming to IEC 60068-2-27 Vibrations contactor closed: 4 Gn, 5...300 Hz conforming to IEC 60068-2-6 Vibrations contactor opened: 2 Gn, 5...300 Hz conforming to IEC 60068-2-6
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<b>Depth</b>	57 mm
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<b>Net weight</b>	0.18 kg
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## Environment

<b>Standards</b>	EN/IEC 60947-4-1 GB/T 14048.4 UL 60947-4-1 CSA C22.2 No 60947-4-1 JIS C8201-4-1
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<b>Product certifications</b>	CB Scheme CCC UL CSA EAC CE UKCA
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<b>IP degree of protection</b>	IP2X conforming to VDE 0106
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<b>Protective treatment</b>	TC conforming to IEC 60068 TC conforming to DIN 50016
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<b>Ambient air temperature for storage</b>	-50...80 °C
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<b>Operating altitude</b>	2000 m without derating
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<b>Flame retardance</b>	V1 conforming to UL 94 Requirement 2 conforming to NF F 16-101 Requirement 2 conforming to NF F 16-102
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## Packing Units

<b>Unit Type of Package 1</b>	PCE
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<b>Number of Units in Package 1</b>	1
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<b>Package 1 Height</b>	4.8 cm
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<b>Package 1 Width</b>	6.2 cm
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<b>Package 1 Length</b>	6.5 cm
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<b>Package 1 Weight</b>	180.083 g
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<b>Unit Type of Package 2</b>	S02
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<b>Number of Units in Package 2</b>	50
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<b>Package 2 Height</b>	15.0 cm
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<b>Package 2 Width</b>	30.0 cm
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<b>Package 2 Length</b>	40.0 cm
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<b>Package 2 Weight</b>	9.264 kg
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## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
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<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
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<b>REACH free of SVHC</b>	Yes
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<b>EU RoHS Directive</b>	Compliant <a href="#">EU RoHS Declaration</a>
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<b>Toxic heavy metal free</b>	Yes
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<b>Mercury free</b>	Yes
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a> Pro-active China RoHS declaration (out of China RoHS legal scope)
<b>RoHS exemption information</b>	Yes
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>
<b>WEEE</b>	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
<b>California proposition 65</b>	WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

## Contractual warranty

<b>Warranty</b>	18 months
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## Recommended replacement(s)