

# LC1K0910B72

TeSys K contactor - 3P(3 NO) - AC-3 - <= 440 V 9 A - 24 V AC coil



## Main

Range of product	TeSys K
Product or component type	Contactor
Device short name	LC1K
Contactor application	Motor control Resistive load
Utilisation category	AC-1 AC-3 AC-4
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	<= 690 V AC 50/60 Hz for signalling circuit 690 V AC 50/60 Hz for power circuit
[Ie] rated operational current	9 A AC AC-3 for power circuit at <= 440 V 16 A (<= 70 °C) at 690 V AC AC-1 for power circuit 20 A (<= 50 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	4 kW at 660...690 V AC 50/60 Hz 4 kW at 500...600 V AC 50/60 Hz 4 kW at 480 V AC 50/60 Hz 4 kW at 440 V AC 50/60 Hz 4 kW at 380...415 V AC 50/60 Hz 2.2 kW at 220...230 V AC 50/60 Hz
Control circuit type	AC 50/60 Hz
Control circuit voltage	24 V AC 50/60 Hz
Auxiliary contact composition	1 NO
[Uimp] rated impulse withstand voltage	8 kV
Overvoltage category	III
[Ith] conventional free air thermal current	10 A at <= 50 °C for signalling circuit 20 A at <= 50 °C for power circuit
Irms rated making capacity	110 A AC for signalling circuit conforming to IEC 60947 110 A AC for power circuit conforming to IEC 60947 110 A AC for power circuit conforming to NF C 63-110
Rated breaking capacity	70 A at 660...690 V conforming to IEC 60947 110 A at 380...400 V conforming to IEC 60947 110 A at 220...230 V conforming to IEC 60947 80 A at 500 V conforming to IEC 60947 110 A at 440 V conforming to IEC 60947 110 A at 415 V conforming to IEC 60947
[Icw] rated short-time withstand current	20 A <= 50 °C >= 15 s power circuit 110 A 100 ms signalling circuit 90 A 500 ms signalling circuit 80 A 1 s signalling circuit 40 A <= 50 °C 3 min power circuit 45 A <= 50 °C 1 min power circuit 60 A <= 50 °C 30 s power circuit 80 A <= 50 °C 10 s power circuit 85 A <= 50 °C 5 s power circuit 90 A <= 50 °C 1 s power circuit
Associated fuse rating	10 A gG for signalling circuit conforming to VDE 0660 10 A gG for signalling circuit conforming to IEC 60947 25 aM for power circuit 25 A gG at <= 440 V for power circuit

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Average impedance	3 mOhm at 50 Hz - lth 20 A for power circuit
[Ui] rated insulation voltage	600 V for signalling circuit conforming to UL 508 690 V for signalling circuit conforming to IEC 60947-5-1 690 V for signalling circuit conforming to IEC 60947-4-1 690 V for power circuit conforming to IEC 60947-4-1 600 V for signalling circuit conforming to CSA 22-2 No 14 600 V for power circuit conforming to CSA 22-2 No 14 600 V for power circuit conforming to UL 508
Electrical durability	1.3 Mcycles 9 A AC-3 at $U_e \leq 440$ V 0.18 Mcycles 20 A AC-1 at $U_e \leq 440$ V
Mounting support	Plate Rail
Standards	BS 5424 IEC 60947 NF C 63-110 VDE 0660
Product certifications	CSA UL
Connections - terminals	Screw clamp terminals 2 cable(s) 0.34...1.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end Screw clamp terminals 2 cable(s) 0.75...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end Screw clamp terminals 2 cable(s) 1.5...4 mm <sup>2</sup> - cable stiffness: solid Screw clamp terminals 1 cable(s) 0.34...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end Screw clamp terminals 1 cable(s) 0.75...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end Screw clamp terminals 1 cable(s) 1.5...4 mm <sup>2</sup> - cable stiffness: solid
Tightening torque	1.3 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm 1.3 N.m - on screw clamp terminals - with screwdriver Philips No 2
Operating time	10...20 ms coil energisation and NO closing 10...20 ms coil de-energisation and NO opening
Safety reliability level	B10d = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1
Mechanical durability	10 Mcycles
Operating rate	3600 cyc/h

### Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.2...0.75 $U_c$ at $\leq 50$ °C drop-out 0.8...1.15 $U_c$ at $\leq 50$ °C operational
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
Auxiliary contacts type	Type instantaneous (1 NO)
Signalling circuit frequency	$\leq 400$ Hz
Minimum switching current	5 mA for signalling circuit
Minimum switching voltage	17 V for signalling circuit
Non overlap distance	0.5 mm
Insulation resistance	$> 10$ MOhm for signalling circuit

## Environment

IP degree of protection	IP2x conforming to VDE 0106
Protective treatment	TC conforming to DIN 50016 TC conforming to IEC 60068
Ambient air temperature for operation	-25...50 °C
Ambient air temperature for storage	-50...80 °C
Operating altitude	2000 m without derating in temperature
Flame retardance	Requirement 2 conforming to NF F 16-102 Requirement 2 conforming to NF F 16-101 V1 conforming to UL 94
Mechanical robustness	Vibrations contactor opened 2 Gn, 5...300 Hz IEC 60068-2-6 Vibrations contactor closed 4 Gn, 5...300 Hz IEC 60068-2-6 Shocks contactor opened, on Z axis 10 Gn for 11 ms IEC 60068-2-27 Shocks contactor opened, on Y axis 10 Gn for 11 ms IEC 60068-2-27 Shocks contactor opened, on X axis 6 Gn for 11 ms IEC 60068-2-27 Shocks contactor closed, on Z axis 15 Gn for 11 ms IEC 60068-2-27 Shocks contactor closed, on Y axis 15 Gn for 11 ms IEC 60068-2-27 Shocks contactor closed, on X axis 10 Gn for 11 ms IEC 60068-2-27
Height	58 mm
Width	45 mm
Depth	57 mm
Product weight	0.18 kg

## RoHS compliance

RoHS EUR status	Compliant
RoHS EUR conformity date	0825