Product data sheet
Characteristics

LC1K0610B72
TeSys K contactor - 3P(3 NO) - AC-3 - <= 440 V 6 A - 24 V AC coil

Main

Range of product	TeSys K
Product or component type	Contactor
Device short name	LC1K
Contactor application	Motor control
Utilisation category	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	6 A AC AC-3 for power circuit at <= 440 V
Motor power kW	3 kW at 660...690 V AC 50/60 Hz 3 kW at 500...600 V AC 50/60 Hz 3 kW at 480 V AC 50/60 Hz 3 kW at 440 V AC 50/60 Hz 2.2 kW at 380...415 V AC 50/60 Hz 1.5 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 A aM for power circuit 25 A gG at <= 440 V for power circuit
Average impedance	3 mOhm at 50 Hz - Ith 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 6 A AC-3 at Ue <= 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 mm² - cable stiffness: flexible - with cable end Screw clamp terminals 2 cable(s) 0.75...4 mm² - cable stiffness: flexible - without cable end Screw clamp terminals 2 cable(s) 1.5...4 mm² - cable stiffness: solid Screw clamp terminals 1 cable(s) 0.34...2.5 mm² - cable stiffness: flexible - with cable end Screw clamp terminals 1 cable(s) 0.75...4 mm² - cable stiffness: flexible - without cable end Screw clamp terminals 1 cable(s) 1.5...4 mm² - 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 = 20000000 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 Uc at <= 50 °C drop-out 0.8...1.15 Uc at <= 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	<= 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