



Main

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

Complementary

Utilisation category	AC-3 AC-3e AC-1 AC-4
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit: ≤ 690 V AC ≤ 400 Hz Signalling circuit: ≤ 690 V AC ≤ 400 Hz
[Ie] rated operational current	12 A (at <60 °C) at ≤ 440 V AC AC-3 for power circuit 12 A (at <60 °C) at ≤ 440 V AC AC-3e for power circuit 20 A (at <60 °C) at ≤ 690 V AC AC-1 for power circuit
Control circuit type	DC low consumption
[Uc] control circuit voltage	24 V DC
Motor power kW	3 kW at 220...230 V AC 50/60 Hz 5.5 kW at 380...415 V AC 50/60 Hz 5.5 kW at 440 V AC 50/60 Hz 4 kW at 690 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	20 A (at 60 °C) for power circuit 10 A (at 50 °C) for signalling circuit
Irms rated making capacity	144 A AC for power circuit conforming to IEC 60947 110 A AC for signalling circuit conforming to IEC 60947
Rated breaking capacity	110 A at 440 V conforming to IEC 60947 80 A at 500 V conforming to IEC 60947 70 A at 660...690 V conforming to IEC 60947
[Icw] rated short-time withstand current	115 A 50 °C - 1 s for power circuit 105 A 50 °C - 5 s for power circuit 100 A 50 °C - 10 s for power circuit 75 A 50 °C - 30 s for power circuit 55 A 50 °C - 1 min for power circuit 50 A 50 °C - 3 min for power circuit 25 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
Associated fuse rating	25 A gG at ≤ 440 V for power circuit 10 A gG for signalling circuit conforming to IEC 60947 10 A gG for signalling circuit conforming to VDE 0660





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Average impedance	3 mOhm - lth 20 A 50 Hz for power circuit
[Ui] rated insulation voltage	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 Power circuit: 750 V conforming to VDE 0110 group C Power circuit: 690 V conforming to BS 5424 Power circuit: 690 V conforming to NF C 20-040
Safety cover	With
Insulation resistance	> 10 MOhm for signalling circuit
Inrush power in W	1.8 W (at 20 °C)
Hold-in power consumption in W	1.8 W at 20 °C
Heat dissipation	1.8 W
Control circuit voltage limits	Operational: 0.7...1.3 Uc (at <50 °C) Drop-out: >= 0.10 Uc (at <50 °C)
Connections - terminals	Power circuit: lugs-ring terminals (external diameter: 7 mm)
Maximum operating rate	3600 cyc/h
Coil technology	With integral suppression device
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
Mounting support	Rail Plate
Tightening torque	Power circuit: 0.8...1.3 N.m - on lugs-ring terminals - with screwdriver 3.2 mm flat Ø 6 mm Power circuit: 0.8...1.3 N.m - on lugs-ring terminals - with screwdriver 3.2 mm Philips No 2 Power circuit: 0.8...1.3 N.m - on lugs-ring terminals pozidriv No 2
Operating time	10...20 ms coil de-energisation and NO opening 30...40 ms coil energisation and NO closing
Safety reliability level	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
Non overlap distance	0.5 mm
Mechanical durability	30 Mcycles
Electrical durability	0.3 Mcycles 20 A AC-1 at Ue <= 440 V 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 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
Height	58 mm
Width	45 mm
Depth	57 mm
Net weight	0.235 kg

Environment

Standards	BS 5424 IEC 60947 NF C 63-110 VDE 0660 IEC 60077-1 IEC 60077-2 EN 45545: R22 HL3 EN/IEC 60947-4-1 EN/IEC 60947-5-1 UL 60947-4-1 CSA C22.2 No 60947-4-1
Product certifications	CB Scheme[RETURN]CCC[RETURN]UL[RETURN]CSA[RETURN]EAC[RETURN]CE[RETURN]UK
IP degree of protection	IP20 conforming to VDE 0106
Protective treatment	TC conforming to IEC 60068 TC conforming to DIN 50016
Ambient air temperature for storage	-50...80 °C
Permissible ambient air temperature around the device	-40...70 °C at Uc
Operating altitude	2000 m without derating
Flame retardance	V0 conforming to UL 94

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Compliant  EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	Yes
RoHS exemption information	 Yes
China RoHS Regulation	 China RoHS Declaration
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins