Product data sheet
Characteristics

LC2K09105E7
reversing Contactor, TeSys K, 3P, AC-3/ AC-3e,440V 9A, 1NO, 48V AC coil, solder pins for printed circuit boards



Main

Range	TeSys
Product name	TeSys K
Product or component type	Reversing contactor
Device short name	LC2K
Device application	Control
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-4 AC-1 AC-3e
Device presentation	Preassembled with reversing power busbar
Poles description	3P
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 16 A (at <70 °C) at 690 V AC AC-1 for power circuit 9 A at <= 440 V AC AC-3 for power circuit 9 A at <= 440 V AC AC-3e for power circuit
Motor power kW	2.2 KW at 220...230 V AC 50/60 Hz 4 KW at 380...415 V AC 50/60 Hz 4 KW at 440 V AC 50/60 Hz 4 KW at 480 V AC 50/60 Hz 4 KW at 500...600 V AC 50/60 Hz 4 KW at 660...690 V AC 50/60 Hz
Control circuit type	AC at 50/60 Hz
[Uc] control circuit voltage	48 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 50 °C) for power circuit 10 A (at 50 °C) for signalling circuit
Irms rated making capacity	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
Rated breaking capacity	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

[Icw] rated short-time withstand current	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 80 A - 1 s for signalling circuit 90 A - 500 ms for signalling circuit 110 A - 100 ms for signalling circuit 20 A 50 °C - >= 15 min for power circuit
Associated fuse rating	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
Average impedance	3 MOhm - Ith 20 A 50 Hz for power circuit
[Ui] rated insulation voltage	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
Electrical durability	1.3 Mcycles 9 A AC-3 at Ue <= 440 V 1.3 Mcycles 9 A AC-3e at Ue <= 440 V 0.16 Mcycles 20 A AC-1 at Ue <= 690 V 0.02 Mcycles 54 A AC-4 at Ue <= 440 V
Interlocking type	Mechanical
Mounting support	Rail Plate
Standards	EN/IEC 60947-4-1 GB/T 14048.4 UL 60947-4-1 CSA C22.2 No 60947-4-1 JIS C8201-4-1
Product certifications	CB Scheme[RETURN]CCC[RETURN]UL[RETURN]CSA[RETURN]EAC[RETURN]CE[RETURN]U
Connections - terminals	Solder pins (external diameter: 0.035 mm)
Operating time	10...20 ms coil energisation and NO closing 10...20 ms coil de-energisation and NO opening
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
Mechanical durability	5 Mcycles
Maximum operating rate	3600 Cyc/H

Complementary

Control circuit voltage limits	Operational: 0.8...1.15 Uc (at <50 °C) Drop-out: 0.2...0.75 Uc (at <50 °C)
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	IP20 conforming to VDE 0106
Protective treatment	TC conforming to IEC 60068 TC conforming to DIN 50016
Ambient air temperature for operation	-25…50 °C
Ambient air temperature for storage	-50…80 °C
Operating altitude	2000 m without derating

Flame retardance	V1 conforming to UL 94 Requirement 2 conforming to NF F 16-101 Requirement 2 conforming to NF F 16-102
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	90 Mm
Depth	57 Mm
Net weight	0.39 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.200 Cm
Package 1 Width	6.900 Cm
Package 1 Length	9.400 Cm
Package 1 Weight	408.000 G
Unit Type of Package 2	S02
Number of Units in Package 2	25
Package 2 Height	15.000 Cm
Package 2 Width	30.000 Cm
Package 2 Length	40.000 Cm
Package 2 Weight	10.505 Kg

Offer Sustainability

Recyclability potential, in %	63
Total lifecycle Carbon footprint	113 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	2.0950458964399807
Carbon footprint of the manufacturing phase [A1 to A3]	2 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.8085799213116505
Carbon footprint of the distribution phase [A4]	0.8 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.05558651163004881
Carbon footprint of the installation phase [A5]	0.1 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	109.09130710440348
REACh free of SVHC	Yes
Carbon footprint of the use phase [B2, B3, B4, B6]	109 kg CO2 eq.
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	0.5871824203271291
Carbon footprint of the end-of-life phase [C1 to C4]	0.6 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	113
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
REACh Regulation	Free of Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant
California proposition 65	WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony tr
End of life manual availability	End Of Life Information
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection a

Contractual warranty

Warranty (in months)	18

Product Life Status :	Commercialised