Product data sheet
Characteristics

LP1K09004ND3
TeSys K contactor - 4P(4 NO) - AC-1 - <= 440 V 20 A - 60 V DC coil

Main

Range	TeSys
Product name	TeSys K
Product or component type	Contactor
Device short name	LP1K
Contactor application	Resistive load
Utilisation category	AC-1
Poles description	4P
Power pole contact composition	4 NO
[Ue] rated operational voltage	690 V AC 50/60 Hz for power circuit
[Ie] rated operational current	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
Control circuit type	DC standard
Control circuit voltage	60 V DC
[Uimp] rated impulse withstand voltage	8 kV
Overvoltage category	III
[Ith] conventional free air thermal current	20 A at <= 50 °C for power circuit
Irms rated making capacity	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 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	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 power circuit conforming to CSA C22.2 No 14 690 V for power circuit conforming to IEC 60947-4-1 600 V for power circuit conforming to UL 508
Electrical durability	0.18 Mcycles 20 A AC-1 at Ue <= 440 V
Mounting support	Plate Rail
Standards	BS 5424 IEC 60947 NF C 63-110 VDE 0660
Product certifications	CSA UL

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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 ms coil de-energisation and NO opening 30...40 ms coil energisation and NO closing
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	0.1...0.75 Uc at <= 50 °C drop-out 0.8...1.15 Uc at <= 50 °C operational
Inrush power in W	3 W at 20 °C
Hold-in power consumption in W	3 W at 20 °C
Heat dissipation	3 W

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	Shocks contactor closed, on Y axis 10 Gn for 11 ms IEC 60068-2-27 Shocks contactor closed, on X axis 15 Gn for 11 ms IEC 60068-2-27 Shocks contactor opened, on Y axis 6 Gn for 11 ms IEC 60068-2-27 Shocks contactor opened, on X axis 10 Gn for 11 ms IEC 60068-2-27 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 closed, on Z axis 15 Gn for 11 ms IEC 60068-2-27
Height	58 mm
Width	45 mm
Depth	57 mm
Product weight	0.225 kg