

# LP1K090085BDTQ

contactor TeSys LP1-K - 4P (2NO + 2NC) - AC-1  
440V 20 A - coil 24 V DC



## Main

Range of product	TeSys K
Product or component type	Contacteur
Device short name	LP1K
Contacteur application	Resistive load
Utilisation category	AC-1
Control circuit type	DC
Coil type	DC standard
Poles description	4P
Pole contact composition	2 NO + 2 NC
[Ie] rated operational current	20 A (<= 50 °C) AC AC-1 for power circuit
Motor power kW	4 kW at 380...415 V AC 50/60 Hz 4 kW at 660...690 V AC 50/60 Hz 2.2 kW at 220...230 V AC 50/60 Hz 4 kW at 415...440 V AC 50/60 Hz 4 kW at 440/500 V AC 50/60 Hz
Motor power hp	2 hp at 200/208 V AC 60 Hz conforming to CSA 2 hp at 200/208 V AC 60 Hz conforming to UL 3 hp at 230/240 V AC 60 Hz conforming to CSA 3 hp at 230/240 V AC 60 Hz conforming to UL 5 hp at 460/480 V AC 60 Hz conforming to CSA 5 hp at 460/480 V AC 60 Hz conforming to UL 5 hp at 575/600 V AC 60 Hz conforming to CSA 5 hp at 575/600 V AC 60 Hz conforming to UL
Auxiliary contact composition	2 NO + 2 NC
[Uc] control circuit voltage	24 V DC
Connections - terminals	Power circuit : screw clamp terminal 1 cable 1.5 mm <sup>2</sup> - cable stiffness: solid Power circuit : screw clamp terminal 2 cable 4 mm <sup>2</sup> - cable stiffness: solid Power circuit : screw clamp terminal 1 cable 0.75 mm <sup>2</sup> - cable stiffness: flexible Power circuit : screw clamp terminal 2 cable 4 mm <sup>2</sup> - cable stiffness: flexible Power circuit : screw clamp terminal 1 cable 0.34 mm <sup>2</sup> - cable stiffness: flexible Power circuit : screw clamp terminal 1 cable 1.5 mm <sup>2</sup> - cable stiffness: flexible Power circuit : screw clamp terminal 1 cable 2.5 mm <sup>2</sup> - cable stiffness: flexible Control circuit : screw clamp terminal 1 cable 1.5 mm <sup>2</sup> - cable stiffness: solid Control circuit : screw clamp terminal 2 cable 4 mm <sup>2</sup> - cable stiffness: solid Control circuit : screw clamp terminal 1 cable 0.75 mm <sup>2</sup> - cable stiffness: flexible Control circuit : screw clamp terminal 2 cable 4 mm <sup>2</sup> - cable stiffness: flexible Control circuit : screw clamp terminal 1 cable 0.34 mm <sup>2</sup> - cable stiffness: flexible Control circuit : screw clamp terminal 1 cable 1.5 mm <sup>2</sup> - cable stiffness: flexible Control circuit : screw clamp terminal 1 cable 2.5 mm <sup>2</sup> - cable stiffness: flexible Power circuit : spring terminal 1 cable 0.75 mm <sup>2</sup> - cable stiffness: solid Power circuit : spring terminal 1 cable 1.5 mm <sup>2</sup> - cable stiffness: solid Power circuit : spring terminal 1 cable 0.75 mm <sup>2</sup> - cable stiffness: flexible Power circuit : spring terminal 1 cable 1.5 mm <sup>2</sup> -

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cable stiffness: flexible  
 Control circuit : spring terminal 1 cable 0.75 mm<sup>2</sup> -  
 cable stiffness: solid  
 Control circuit : spring terminal 1 cable 1.5 mm<sup>2</sup> -  
 cable stiffness: solid  
 Control circuit : spring terminal 1 cable 0.75 mm<sup>2</sup> -  
 cable stiffness: flexible  
 Control circuit : spring terminal 1 cable 1.5 mm<sup>2</sup> -  
 cable stiffness: flexible  
 Power circuit : Faston connectors 2 - width: 2.8  
 mm - cable stiffness: clip  
 Power circuit : Faston connectors 1 - width: 6.35  
 mm - cable stiffness: clip  
 Control circuit : Faston connectors 2 - width: 2.8  
 mm - cable stiffness: clip  
 Control circuit : Faston connectors 1 - width: 6.35  
 mm - cable stiffness: clip

## Complementary

Coil technology	Without built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	>= 0.10 U <sub>c</sub> at <= 50 °C drop-out 0.8...1.15 U <sub>c</sub> at <= 50 °C operational
[U <sub>i</sub> ] rated insulation voltage	690 V for control circuit conforming to BS 5424 690 V for control circuit conforming to IEC 60947 690 V for power circuit conforming to BS 5424 690 V for power circuit conforming to IEC 60947 690 V for power circuit conforming to NF C 20-040 750 V for control circuit conforming to VDE 0110 group C 750 V for power circuit conforming to VDE 0110 group C 600 V for control circuit conforming to CSA C22.2 No 14 600 V for power circuit certifications UL 508 conforming to CSA C22.2 No 14
[U <sub>imp</sub> ] rated impulse withstand voltage	8 kV
Mounting support	Plate Rail
Flame retardance	Class C2 conforming to NF F 16-101 Class C2 conforming to NF F 16-102 V1 conforming to UL 94
Tightening torque	Power circuit : 0.8...1.3 N.m - on solder pins - with screwdriver flat Ø 6 mm Power circuit : 0.8...1.3 N.m - on solder pins - with screwdriver Philips No 2
[U <sub>e</sub> ] rated operational voltage	<= 690 V AC <= 400 Hz for power circuit
[I <sub>th</sub> ] conventional free air thermal current	10 A at <= 50 °C for control circuit 20 A at <= 50 °C for power circuit
Irms rated making capacity	110 A at 690 V AC for control circuit conforming to IEC 60947 110 A at 690 V AC for power circuit conforming to IEC 60947 110 A at 690 V AC for power circuit conforming to NF C 63-110
Rated breaking capacity	110 A at 220...230 V for power circuit conforming to IEC 60947 110 A at 220...230 V for power circuit conforming to NF C 63-110 110 A at 380...400 V for power circuit conforming to IEC 60947 110 A at 380...400 V for power circuit conforming to NF C 63-110 110 A at 415 V for power circuit conforming to IEC 60947 110 A at 415 V for power circuit conforming to NF C 63-110 110 A at 440 V for power circuit conforming to IEC 60947 110 A at 440 V for power circuit conforming to NF C 63-110 70 A at 660...690 V for power circuit conforming to IEC 60947 70 A at 660...690 V for power circuit conforming to NF C 63-110 80 A at 500 V for power circuit conforming to IEC 60947 80 A at 500 V for power circuit conforming to NF C 63-110
Permissible short-time rating	20 A (<= 50 °C) - short time current duration: >= 15 min - for power circuit 40 A (<= 50 °C) - short time current duration: 3 min - for power circuit 45 A (<= 50 °C) - short time current duration: 1 min - for power circuit 60 A (<= 50 °C) - short time current duration: 30 s - for power circuit 80 A (<= 50 °C) - short time current duration: 10 s - for power circuit 85 A (<= 50 °C) - short time current duration: 5 s - for power circuit 90 A (<= 50 °C) - short time current duration: 1 s - for power circuit
Associated fuse rating	10 A gG for control circuit conforming to IEC 60947 10 A gG for control circuit conforming to VDE 0660 25 A gG at <= 440 V for power circuit
Average impedance	3 mOhm at 50 Hz - I <sub>th</sub> 20 A for power circuit
Inrush power in W	3 W at 20 °C
Hold-in power consumption in W	3 W at 20 °C
Operating time	10 ms coil de-energisation and NO opening

	15 ms coil de-energisation and NC opening 25...35 ms coil energisation and NC opening 30...40 ms between energisation of coil and closing of NO contact
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	10000000 cycles
Operating rate	3600 cyc/h
Minimum switching current	5 mA for control circuit
Minimum switching voltage	17 V for control circuit
Insulation resistance	> 10 MOhm for control circuit
Rated operational power in W	120 W at 24 V DC-13 - electrical durability: 1000000 cycles - for control circuit 15 W at 24 V DC-13 - electrical durability: 10000000 cycles - for control circuit 55 W at 24 V DC-13 - electrical durability: 3000000 cycles - for control circuit
Height	58 mm
Width	45 mm
Depth	57 mm
Product weight	0.225 kg

## Environment

standards	BS 5424 IEC 60947 NF C 63-110 VDE 0660
product certifications	CSA GOST UL
IP degree of protection	IP2x conforming to VDE 0106
protective treatment	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
fire resistance	850 °C conforming to IEC 60695-2-1
shock resistance	10 gn contactor closed 6 gn contactor opened
vibration resistance	2 gn 5...300 Hz contactor opened 4 gn 5...300 Hz contactor closed
heat dissipation	3 W for control circuit

## Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0633 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available