

### Main

Range	TeSys
Product name	TeSys K
Product or component type	Reversing contactor
Device short name	LP2K
Device application	Control
Contactor application	Motor control Resistive load
Utilisation category	AC-4 AC-3 AC-1
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
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	DC standard
[Uc] control circuit voltage	24 V DC
Auxiliary contact composition	1 NC
[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	0.18 Mcycles 20 A AC-1 at Ue <= 440 V 1.3 Mcycles 9 A AC-3 at Ue <= 440 V
Interlocking type	Mechanical
Mounting support	Plate Rail
Standards	VDE 0660 BS 5424 NF C 63-110 IEC 60947
Product certifications	UL CSA UKCA
Connections - terminals	Screw clamp terminals 1 cable(s) 1.5...4 mm <sup>2</sup> solid Screw clamp terminals 1 cable(s) 0.75...4 mm <sup>2</sup> flexible without cable end Screw clamp terminals 1 cable(s) 0.34...2.5 mm <sup>2</sup> flexible with cable end Screw clamp terminals 2 cable(s) 1.5...4 mm <sup>2</sup> solid Screw clamp terminals 2 cable(s) 0.75...4 mm <sup>2</sup> flexible without cable end Screw clamp terminals 2 cable(s) 0.34...1.5 mm <sup>2</sup> flexible with cable end
Tightening torque	1.3 N.M - on screw clamp terminals - with screwdriver Philips No 2 1.3 N.M - on screw clamp terminals - with screwdriver flat Ø 6 mm 1.3 N.M - on screw clamp terminals - with screwdriver pozidriv No 2
Operating time	30...40 ms coil energisation and NO closing 10 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: 0.1...0.75 Uc (at <50 °C)
Inrush power in W	3 W (at 20 °C)
Hold-in power consumption in W	3 W at 20 °C
Heat dissipation	3 W
Auxiliary contacts type	Type instantaneous 1 NC
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 Z axis: 15 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 Shocks contactor opened, on X axis: 10 Gn for 11 ms conforming- to IEC 60068-2-27 Shocks contactor opened, on Y axis: 6 Gn for 11 ms conforming- to IEC 60068-2-27 Shocks contactor closed, on X axis: 15 Gn for 11 ms conforming- to IEC 60068-2-27 Shocks contactor closed, on Y axis: 10 Gn for 11 ms conforming- to IEC 60068-2-27
Height	58 Mm
Width	90 Mm
Depth	57 Mm
Net weight	0.48 Kg

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	447.0 G
Package 1 Height	6.0 Cm
Package 1 width	6.5 Cm
Package 1 Length	9.2 Cm
Unit Type of Package 2	P06
Number of Units in Package 2	160
Package 2 Weight	83.66 Kg
Package 2 Height	45.0 Cm
Package 2 width	80.0 Cm
Package 2 Length	60.0 Cm
Unit Type of Package 3	S02
Number of Units in Package 3	20
Package 3 Weight	9.41 Kg
Package 3 Height	15.0 Cm
Package 3 width	30.0 Cm
Package 3 Length	40.0 Cm

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 <a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Compliant  <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	 <a href="#">Yes</a>
China RoHS Regulation	 <a href="#">China RoHS Declaration</a>

Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Contractual warranty

Warranty	18 months
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Product Life Status :	Commercialised
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