Product data sheet
Characteristics

LP1K12103BD
Contactor, TeSys K, 3P, AC-3/AC-3e, 440V, 12A, 1NO aux, 24V DC coil,spring terminal



Main

Range	TeSys
Product or component type	Contactor
Device short name	LP1K
Contactor application	Motor control Resistive load

Complementary

Utilisation category	AC-3 AC-3e AC-1 AC-4
Poles description	3P
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 standard
[Uc] control circuit voltage	24 V DC
Motor power kW	3 KW at 220...230 V AC 50/60 Hz AC-3 5.5 KW at 380...415 V AC 50/60 Hz AC-3 5.5 KW at 440 V AC 50/60 Hz AC-3 4 KW at 690 V AC 50/60 Hz AC-3 3 KW at 220...230 V AC 50/60 Hz AC-3e 5.5 KW at 380...415 V AC 50/60 Hz AC-3e 5.5 KW at 440 V AC 50/60 Hz AC-3e 4 KW at 690 V AC 50/60 Hz AC-3e 3 KW at 220...230 V AC 50/60 Hz AC-4 5.5 KW at 380...415 V AC 50/60 Hz AC-4 5.5 KW at 440 V AC 50/60 Hz AC-4
Auxiliary contact composition	1 NO
[Uimp] rated impulse withstand voltage	8 KV
Overvoltage category	III
[Ith] conventional free air thermal current	16 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 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 16 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
Insulation resistance	> 10 MOhm for signalling circuit
Inrush power in W	3 W (at 20 °C)
Hold-in power consumption in W	3 W at 20 °C
Heat dissipation	1.3 W
Control circuit voltage limits	Operational: 0.8...1.15 Uc (at <50 °C) Drop-out: >= 0.10 Uc (at <50 °C)
Connections - terminals	Spring terminals 1 cable(s) 0.75…1.5 mm²solid Spring terminals 1 cable(s) 0.75…1.5 mm²flexible without cable end Spring terminals 2 cable(s) 0.75…1.5 mm²flexible without cable end
Maximum operating rate	3600 Cyc/H
Coil technology	Without built-in suppressor module
Auxiliary contacts type	Type instantaneous 1 NO
Minimum switching current	5 MA for signalling circuit
Minimum switching voltage	17 V for signalling circuit
Mounting support	Rail Plate
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	10 Mcycles
Electrical durability	1.3 Mcycles 12 A AC-3 at Ue <= 440 V 1.3 Mcycles 12 A AC-3e at Ue <= 440 V 0.3 Mcycles 20 A AC-1 at Ue <= 690 V 0.02 Mcycles 72 A AC-4 at Ue <= 440 V
Height	58 Mm
Width	45 Mm
Depth	57 Mm
Net weight	0.225 Kg

Environment

Standards	EN/IEC 60947-4-1 EN/IEC 60947-5-1 UL 60947-4-1 UL 60947-5-1 CSA C22.2 No 60947-4-1 CSA C22.2 No 60947-5-1 GB/T 14048.4
Product certifications	CB Scheme[RETURN]CCC[RETURN]UL[RETURN]CSA[RETURN]EAC[RETURN]CE[RETURN]U
IP degree of protection	IP2X
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

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.600 Cm
Package 1 Width	6.100 Cm
Package 1 Length	4.800 Cm
Package 1 Weight	224.000 G
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	15.000 Cm
Package 2 Width	30.000 Cm
Package 2 Length	40.000 Cm
Package 2 Weight	9.539 Kg

Offer Sustainability

Recyclability potential, in %	63
Total lifecycle Carbon footprint	53 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	1.150221276476852
Carbon footprint of the manufacturing phase [A1 to A3]	1 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.4439262313083571
Carbon footprint of the distribution phase [A4]	0.4 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.030518084816497384
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	51.34125131495782
REACh free of SVHC	Yes
Carbon footprint of the use phase [B2, B3, B4, B6]	51 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]	0.32237466214038457
Carbon footprint of the end-of-life phase [C1 to C4]	0.3 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	53
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
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