Product data sheet
Characteristics

LC2D09BL
REVERSING CONTACTOR 575VAC 9A IEC



Main

Range	TeSys
Product name	TeSys D
Product or component type	Reversing contactor
Device short name	LC2D
Contactor application	Resistive load Motor control
Utilisation category	AC-3 AC-1
Device presentation	Preassembled with reversing power busbar
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC
[Ie] rated operational current	9 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	2.2 kW at 220...230 V AC 50 Hz 4 kW at 380...400 V AC 50 Hz 4 kW at 415...440 V AC 50 Hz 5.5 kW at 500 V AC 50 Hz 5.5 kW at 660...690 V AC 50 Hz
Motor power HP (UL / CSA)	0.5 hp at 115 V AC 60 Hz for 1 phase motors 1 hp at 230/240 V AC 60 Hz for 1 phase motors 2 hp at 200/208 V AC 60 Hz for 3 phases motors 2 hp at 230/240 V AC 60 Hz for 3 phases motors 5 hp at 460/480 V AC 60 Hz for 3 phases motors 7.5 hp at 575/600 V AC 60 Hz for 3 phases motors
Control circuit type	DC low consumption
[Uc] control circuit voltage	24 V DC
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overvoltage category	III

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 25 A (at 60 °C) for power circuit
Irms rated making capacity	250 A at 440 V for power circuit conforming to IEC 60947 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	250 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	30 A 40 °C - 10 min for power circuit 61 A 40 °C - 1 min for power circuit 105 A 40 °C - 10 s for power circuit 210 A 40 °C - 1 s for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit
Associated fuse rating	25 A gG at <= 690 V coordination type 1 for power circuit 20 A gG at <= 690 V coordination type 2 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
Average impedance	2.5 mOhm - Ith 25 A 50 Hz for power circuit
[Ui] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
Electrical durability	0.6 Mcycles 25 A AC-1 at Ue <= 440 V 2 Mcycles 9 A AC-3 at Ue <= 440 V
Power dissipation per pole	0.2 W AC-3 1.56 W AC-1
Front cover	With
Interlocking type	Mechanical
Mounting support	Rail Plate
Standards	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508
Product certifications	CSA GOST BV CCC UL RINA GL LROS (Lloyds register of shipping) DNV
Connections - terminals	Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible without cable end Power circuit: screw clamp terminals 2 cable(s) 1…4 mm²flexible without cable end Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible with cable end Power circuit: screw clamp terminals 2 cable(s) 1…2.5 mm²flexible with cable end Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²solid without cable end Power circuit: screw clamp terminals 2 cable(s) 1…4 mm²solid without cable end Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1…4 mm²flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1…2.5 mm²flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²solid without cable end Control circuit: screw clamp terminals 2 cable(s) 1…4 mm²solid without cable end
Tightening torque	Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2
Operating time	65.45...88.55 ms closing 20...30 ms 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	30 Mcycles

Maximum operating rate	3600 cyc/h 60 °C

Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Time constant	40 ms
Inrush power in W	2.4 W (at 20 °C)
Hold-in power consumption in W	2.4 W at 20 °C
Auxiliary contacts type	type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 type mirror contact 1 NC conforming to IEC 60947-4-1
Signalling circuit frequency	25...400 Hz
Minimum switching current	5 mA for signalling circuit
Minimum switching voltage	17 V for signalling circuit
Non-overlap time	1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact
Insulation resistance	> 10 MOhm for signalling circuit
Contact compatibility	M5
Compatibility code	LC2D
Motor power range	1.1…2 kW at 200…240 V 3 phases 2.2…3 kW at 380…440 V 3 phases 4…6 kW at 380…440 V 3 phases 4…6 kW at 480…500 V 3 phases
Motor starter type	Reversing contactor
Contactor coil voltage	24 V DC low consumption

Environment

IP degree of protection	IP20 front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Pollution degree	3
Ambient air temperature for storage	-60…80 °C
Operating altitude	3000 m without derating
Fire resistance	850 °C conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	Vibrations contactor open: 2 Gn, 5...300 Hz Vibrations contactor closed: 4 Gn, 5...300 Hz Shocks contactor open: 10 Gn for 11 ms Shocks contactor closed: 15 Gn for 11 ms
Height	77 mm
Width	90 mm
Depth	95 mm
Net weight	1.017 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	1.145 kg
Package 1 Height	9.5 cm
Package 1 width	11.5 cm
Package 1 Length	13.8 cm
Unit Type of Package 2	S02
Number of Units in Package 2	6
Package 2 Weight	7.241 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

Unit Type of Package 3	P06
Number of Units in Package 3	96
Package 3 Weight	126.18 kg
Package 3 Height	80 cm
Package 3 width	80 cm
Package 3 Length	60 cm

Offer Sustainability

Sustainable offer status	Green Premium product
REACh free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration Pro-active China RoHS declaration (out of China RoHS legal scope)
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes

Contractual warranty

Warranty	18 months