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LC1D186BL

TeSys D contactor - 3P(3 NO) - AC-3 - ≤ 440 V 18 A - 24 V DC coil

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Main

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Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-1 AC-3
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	≤ 690 V AC 25...400 Hz for power circuit ≤ 300 V DC for power circuit
[Ie] rated operational current	18 A (≤ 60 °C) at ≤ 440 V AC AC-3 for power circuit 32 A (≤ 60 °C) at ≤ 440 V AC AC-1 for power circuit
Motor power kW	10 kW at 500 V AC 50/60 Hz 10 kW at 660...690 V AC 50/60 Hz 4 kW at 220...230 V AC 50/60 Hz 7.5 kW at 380...400 V AC 50/60 Hz 9 kW at 415...440 V AC 50/60 Hz
Motor power hp	1 hp at 115 V AC 50/60 Hz for 1 phase motors 3 hp at 230/240 V AC 50/60 Hz for 1 phase motors 5 hp at 200/208 V AC 50/60 Hz for 3 phases motors 5 hp at 230/240 V AC 50/60 Hz for 3 phases motors 10 hp at 460/480 V AC 50/60 Hz for 3 phases motors 15 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	DC low consumption
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
[Ith] conventional free air thermal current	32 A at ≤ 60 °C for power circuit 10 A at ≤ 60 °C for signalling circuit
Irms rated making capacity	300 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	300 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	145 A ≤ 40 °C 10 s power circuit 240 A ≤ 40 °C 1 s power circuit 40 A ≤ 40 °C 10 min power circuit 84 A ≤ 40 °C 1 min power circuit 100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit
Associated fuse rating	35 A gG at ≤ 690 V coordination type 2 for power circuit 50 A gG at ≤ 690 V coordination type 1 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
Average impedance	2.5 mOhm at 50 Hz - Ith 32 A for power circuit
[Ui] rated insulation voltage	600 V for power circuit certifications CSA

	600 V for power circuit certifications UL 690 V for power circuit conforming to IEC 60947-4-1 690 V for signalling circuit conforming to IEC 60947-1 600 V for signalling circuit certifications CSA 600 V for signalling circuit certifications UL
Electrical durability	1.65 Mcycles 18 A AC-3 at $U_e \leq 440$ V 1 Mcycles 32 A AC-1 at $U_e \leq 440$ V
Power dissipation per pole	0.8 W AC-3 2.5 W AC-1
Protective cover	With
Mounting support	Plate Rail
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 CSA C22.2 No 14
Product certifications	BV CCC CSA DNV GL GOST RINA UL LROS
Connections - terminals	Control circuit : lugs-ring terminals - external diameter: 8 mm Power circuit : lugs-ring terminals - external diameter: 8 mm
Tightening torque	Control circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm screw : M3.5 Control circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 screw : M3.5 Power circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 8 mm screw : M3.5 Power circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 screw : M3.5
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
Operating rate	3600 cyc/h at ≤ 60 °C

Complementary Hide

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.3 U_c at 60 °C drop-out 0.8...1.25 U_c at 60 °C operational
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

Environment Hide

IP degree of protection	IP2x front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Pollution degree	3

Ambient air temperature for operation	-5...60 °C
Ambient air temperature for storage	-60...80 °C
Permissible ambient air temperature around the device	-40...70 °C at Uc
Operating altitude	3000 m without derating in temperature
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	45 mm
Depth	95 mm
Product weight	0.49 kg
Contractual warranty	
Period	18 months

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