Product datasheet
Characteristics

LC1D18BD
TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 18 A - 24 V DC coil

Main

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 AC-4
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 AC-3 10 kW at 660...690 V AC 50/60 Hz AC-3 4 kW at 220...230 V AC 50/60 Hz AC-3 7.5 kW at 380...400 V AC 50/60 Hz AC-3 9 kW at 415...440 V AC 50/60 Hz AC-3 4 kW at 400 V AC 50/60 Hz AC-4
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 standard
[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
[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

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	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 Ue <= 440 V 1 Mcycles 32 A AC-1 at Ue <= 440 V
Power dissipation per pole	0.8 W AC-3 2.5 W AC-1
Protective cover	With
Mounting support	Plate Rail
Standards	UL 508 CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1
Product certifications	BV CCC CSA DNV GL GOST LROS (Lloyds register of shipping) RINA UL
Connections - terminals	Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end Power circuit : screw clamp terminals 1 cable(s) 1...6 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: solid - without cable end Power circuit : screw clamp terminals 1 cable(s) 1.5...6 mm² - cable stiffness: flexible - without cable end Power circuit : screw clamp terminals 2 cable(s) 1.5...6 mm² - cable stiffness: flexible - without cable end Power circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: flexible - with cable end Power circuit : screw clamp terminals 1 cable(s) 1.5...6 mm² - cable stiffness: solid - without cable end Power circuit : screw clamp terminals 2 cable(s) 1.5...6 mm² - cable stiffness: solid - 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	53.55...72.45 ms closing 16...24 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

Coil technology	With integral suppression device
Control circuit voltage limits	0.1...0.25 Uc drop-out at 60 °C, DC 0.7...1.25 Uc operational at 60 °C, DC
Time constant	28 ms
Inrush power in W	5.4 W at 20 °C
Hold-in power consumption in W	5.4 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 energisation between NC and NO contact 1.5 ms on de-energisation between NC and NO contact
Insulation resistance	> 10 MOhm for signalling circuit

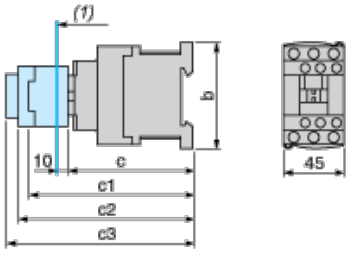
Environment

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 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

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0627 - Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

Dimensions



(1) Minimum electrical clearance

LC1		D09…D18	D093…D123	D099…D129
b		77	99	80
c	without cover or add-on blocks	93	93	93
	with cover, without add-on blocks	95	95	95
c1	with LAD N or C (2 or 4 contacts)	126	126	126
c2	with LA6 DK10	138	138	138
c3	with LAD T, R, S	146	146	146
	with LAD T, R, S and sealing cover	150	150	150

Wiring