Product datasheet
Characteristics

LC1D80BD
TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 80 A - 24 V DC standard coil

Main

Range of product	TeSys D
Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-1
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	<= 690 V AC for power circuit <= 300 V DC 25...400 Hz for power circuit
[Ie] rated operational current	80 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit 125 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	45 kW at 1000 V AC 50/60 Hz 45 kW at 415...440 V AC 50/60 Hz 22 kW at 220...230 V AC 50/60 Hz 45 kW at 660...690 V AC 50/60 Hz 37 kW at 380...400 V AC 50/60 Hz 55 kW at 500 V AC 50/60 Hz
Motor power hp	60 hp at 575/600 V AC 50/60 Hz for 3 phases motors 20 hp at 200/208 V AC 50/60 Hz for 3 phases motors 25 hp at 230/240 V AC 50/60 Hz for 3 phases motors 15 hp at 230/240 V AC 50/60 Hz for 1 phase motors 7.5 hp at 115 V AC 50/60 Hz for 1 phase motors 60 hp at 460/480 V AC 50/60 Hz for 3 phases motors
Control circuit type	DC standard
Control circuit voltage	24 V DC
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	Conforming to IEC 60947
Overvoltage category	III

[Ith] conventional free air thermal current	125 A at <= 60 °C for power circuit 10 A at <= 60 °C for signalling circuit
Irms rated making capacity	140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1 1100 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	140 A 100 ms signalling circuit 135 A <= 40 °C 10 min power circuit 100 A 1 s signalling circuit 640 A <= 40 °C 10 s power circuit 120 A 500 ms signalling circuit 320 A <= 40 °C 1 min power circuit 990 A <= 40 °C 1 s power circuit
Associated fuse rating	160 A gG at <= 690 V coordination type 2 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1 200 A gG at <= 690 V coordination type 1 for power circuit
Average impedance	0.8 mOhm at 50 Hz - Ith 125 A for power circuit
[Ui] rated insulation voltage	600 V for signalling circuit certifications CSA 690 V for signalling circuit conforming to IEC 60947-1 600 V for power circuit certifications UL 600 V for power circuit certifications CSA 600 V for signalling circuit certifications UL 1000 V for power circuit conforming to IEC 60947-4-1
Electrical durability	1.5 Mcycles 80 A AC-3 at Ue <= 440 V 0.8 Mcycles 125 A AC-1 at Ue <= 440 V
Power dissipation per pole	12.5 W AC-1 5.1 W AC-3
Protective cover	With
Mounting support	Rail Plate
Standards	EN 60947-5-1 IEC 60947-5-1 IEC 60947-4-1 CSA C22.2 No 14 UL 508 EN 60947-4-1
Product certifications	GL BV GOST CCC UL DNV LROS CSA RINA
Connections - terminals	Control circuit : screw clamp terminals 2 cable(s) 1...2.5 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 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: flexible - without cable end Power circuit : connector 2 cable(s) 4...16 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: solid - without cable end Power circuit : connector 2 cable(s) 4...25 mm² - cable stiffness: solid - without cable end Power circuit : connector 1 cable(s) 4...50 mm² - cable stiffness: flexible - without cable end Power circuit : connector 2 cable(s) 4...25 mm² - cable stiffness: flexible - without cable end Power circuit : connector 1 cable(s) 4...50 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end Power circuit : connector 1 cable(s) 4...50 mm² - cable stiffness: solid - without cable end
Tightening torque	Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit : 9 N.m - on connector hexagonal 4 mm Power circuit : 9 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm
Operating time	20...35 ms opening 95...130 ms closing
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	4 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.1...0.3 Uc drop-out at 55 °C, DC 0.85...1.1 Uc operational at 55 °C, DC
Time constant	75 ms
Inrush power in W	22 W at 20 °C
Hold-in power consumption in W	22 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
Contact compatibility	M9
Compatibility code	LC1D

Environment

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 closed 3 Gn, 5...300 Hz Vibrations contactor open 2 Gn, 5...300 Hz Shocks contactor closed 10 Gn for 11 ms Shocks contactor open 8 Gn for 11 ms
Height	127 mm
Width	85 mm
Depth	186 mm
Product weight	2.59 kg

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0706 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold Reference not containing SVHC above the threshold
Product environmental profile	Available Product environmental
Product end of life instructions	Need no specific recycling operations

Contractual warranty

Warranty period	18 months