Product datasheet
Characteristics

LC1D80P7

TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 80 A - 230 V AC 50/60 Hz 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 for power circuit <= 300 V DC 25...400 Hz for power circuit
[Ie] rated operational current	125 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit 80 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit
Motor power kW	22 kW at 220...230 V AC 50/60 Hz AC-3 37 kW at 380...400 V AC 50/60 Hz AC-3 45 kW at 660...690 V AC 50/60 Hz AC-3 45 kW at 415...440 V AC 50/60 Hz AC-3 55 kW at 500 V AC 50/60 Hz AC-3 45 kW at 1000 V AC 50/60 Hz AC-3 15 kW at 400 V AC 50/60 Hz AC-4
Motor power hp	20 hp at 200/208 V AC 50/60 Hz for 3 phases motors 7.5 hp at 115 V AC 50/60 Hz for 1 phase motors 15 hp at 230/240 V AC 50/60 Hz for 1 phase motors 25 hp at 230/240 V AC 50/60 Hz for 3 phases motors 60 hp at 460/480 V AC 50/60 Hz for 3 phases motors 60 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	AC 50/60 Hz
[Uc] control circuit voltage	230 V AC 50/60 Hz
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	1100 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	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	135 A <= 40 °C 10 min power circuit 100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit 640 A <= 40 °C 10 s power circuit 990 A <= 40 °C 1 s power circuit

	320 A <= 40 °C 1 min power circuit
Associated fuse rating	160 A gG at <= 690 V coordination type 2 for power circuit 200 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	0.8 mOhm at 50 Hz - Ith 125 A for power circuit
[Ui] rated insulation voltage	1000 V for power circuit conforming to IEC 60947-4-1 600 V for power circuit certifications CSA 600 V for power circuit certifications UL 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	0.8 Mcycles 125 A AC-1 at Ue <= 440 V 1.5 Mcycles 80 A AC-3 at Ue <= 440 V
Power dissipation per pole	5.1 W AC-3 12.5 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 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: solid - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: solid - without 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: 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 Power circuit : connector 2 cable(s) 4...16 mm² - cable stiffness: flexible - with cable end Power circuit : connector 1 cable(s) 4...50 mm² - cable stiffness: solid - without cable end Power circuit : connector 2 cable(s) 4...25 mm² - cable stiffness: solid - without cable end
Tightening torque	Power circuit : 9 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm Power circuit : 9 N.m - on connector hexagonal 4 mm Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit : 1.2 N.m - on screw clamp

	terminals - with screwdriver Philips No 2
Operating time	20...35 ms closing 6...20 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	4 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.85...1.1 Uc operational at 55 °C, AC 60 Hz 0.3...0.6 Uc drop-out at 55 °C, AC 50/60 Hz 0.8...1.1 Uc operational at 55 °C, AC 50 Hz
Inrush power in VA	245 VA at 20 °C (cos ϕ 0.75) 60 Hz 245 VA at 20 °C (cos ϕ 0.75) 50 Hz
Hold-in power consumption in VA	26 VA at 20 °C (cos ϕ 0.3) 60 Hz 26 VA at 20 °C (cos ϕ 0.3) 50 Hz
Heat dissipation	6...10 W at 50/60 Hz
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

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 Shocks contactor open 8 Gn for 11 ms Vibrations contactor closed 3 Gn, 5...300 Hz Shocks contactor closed 10 Gn for 11 ms
height	127 mm
width	85 mm
depth	130 mm
product weight	1.59 kg

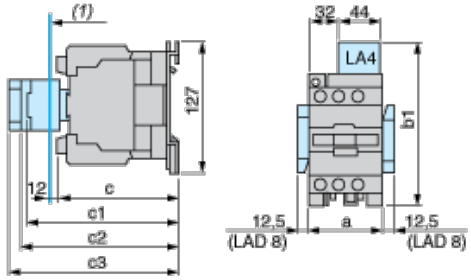
Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0701 - Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Need no specific recycling operations

Contractual warranty

Warranty period	18 months

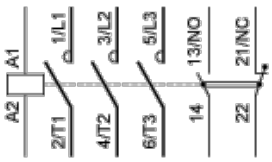
Dimensions



(1) Minimum electrical clearance

LC1		D80	D95
a		85	85
b1	with LA4 D●2	135	135
	with LA4 DB3 or LAD 4BB3	135	–
	with LA4 DF, DT	142	142
	with LA4 DM, DW, DL	150	150
c	without cover or add-on blocks	125	125
	with cover, without add-on blocks	130	130
c1	with LAD N (1 contact)	150	150
	with LAD N or C (2 or 4 contacts)	158	158
c2	with LA6 DK10, LAD 6DK	170	170
c3	with LAD T, R, S	178	178
	with LAD T, R, S and sealing cover	182	182

Wiring



Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power 37 kW and 415 VAC

Motor Power (kW)	Icu (kA)	Breaker	Contactor
37	36	 GV7RE80	 LC1D80P7
37	15	 GV3ME80	 LC1D80P7

Non contractual pictures. Type 1 coordination requires that in a short-circuit condition, the contactor or starter must not present any danger to personnel or installations and must not be able to resume operation without repair or the replacement of parts.