

# LC1D80BD

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  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	Resistive load Motor control
Utilisation category	AC-4 AC-3 AC-1
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	$\leq 690$ V AC for power circuit $\leq 300$ V DC 25...400 Hz for power circuit
[Ie] rated operational current	125 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit 80 A ( $\leq 60$ °C) at $\leq 440$ 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	DC standard
[Uc] control circuit voltage	24 V DC
Auxiliary contact composition	1 NO + 1 NC

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

[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	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	DNV LROS (Lloyds register of shipping) GL CSA UL CCC RINA BV GOST
Connections - terminals	Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit : connector 2 cable(s) 4...25 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: flexible - with cable end Power circuit : connector 2 cable(s) 4...16 mm <sup>2</sup> - cable stiffness: flexible - with cable end Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: solid - without cable end Power circuit : connector 2 cable(s) 4...25 mm <sup>2</sup> - 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 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 de-energisation (between NC and NO contact) 1.5 ms on energisation (between NC and NO contact)
Insulation resistance	> 10 MOhm for signalling circuit
Power range	15...25 kW 200...240 V 3 phases 30...50 kW 380...440 V 3 phases 30...50 kW 480...500 V 3 phases 55...100 kW 480...500 V 3 phases
Motor starter type	Direct on-line contactor
Contactor coil voltage	24 V DC standard

### 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	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 <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold <a href="#">Reference not containing SVHC above the threshold</a>
Product environmental profile	Available

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Product end of life instructions	Need no specific recycling operations
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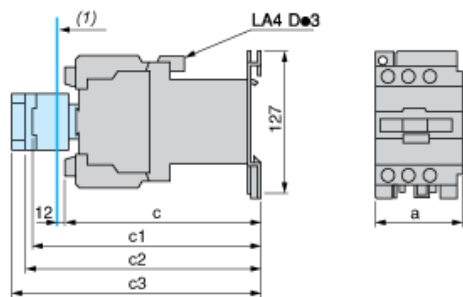
### Contractual warranty

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Warranty period	18 months
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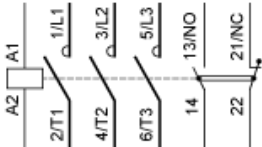
Dimensions







(1) Minimum electrical clearance

LC1		D80 and D95
a		85
b1	with LAD 4BB3	–
	with LA4 DF, DT	–
c	without cover or add-on blocks	181
	with cover, without add-on blocks	186
c1	with LAD N (1 contact)	204
	with LAD N or C (2 to 4 contacts)	210
c2	with LA6 DK10	221
c3	with LAD T, R, S	229
	with LAD T, R, S and sealing cover	233

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	 LC1D80BD
37	15	 GV3ME80	 LC1D80BD

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.