

# Product data sheet

## Characteristics

# LC1D09B7

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  V  
9 A - 24 V AC coil



Product availability : Stock - Normally stocked in distribution facility



### 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-1 AC-3
Poles description	3P
Pole contact composition	3 NO
System Voltage	$\leq 300$ V DC power circuit $\leq 690$ V AC 25...400 Hz power circuit
[Ie] rated operational current	25 A ( $\leq 140$ °F (60 °C)) at $\leq 440$ V AC AC-1 power circuit 9 A ( $\leq 140$ °F (60 °C)) at $\leq 440$ V AC AC-3 power circuit
Motor power kW	2.2 kW at 400 V AC 50/60 Hz AC-4 2.2 kW at 220...230 V AC 50/60 Hz AC-3 4 kW at 380...400 V AC 50/60 Hz AC-3 5.5 kW at 500 V AC 50/60 Hz AC-3 5.5 kW at 660...690 V AC 50/60 Hz AC-3 4 kW at 415...440 V AC 50/60 Hz AC-3
Motor power hp	0.5 hp at 115 V AC 50/60 Hz 1 phase motors 1 hp at 230/240 V AC 50/60 Hz 1 phase motors 2 hp at 200/208 V AC 50/60 Hz 3 phases motors 2 hp at 230/240 V AC 50/60 Hz 3 phases motors 5 hp at 460/480 V AC 50/60 Hz 3 phases motors 7.5 hp at 575/600 V AC 50/60 Hz 3 phases motors
Control circuit type	AC 50/60 Hz
[Uc] control circuit voltage	24 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC

Jul 31, 2017

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	6 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	25 A at <= 140 °F (60 °C) power circuit 10 A at <= 140 °F (60 °C) signalling circuit
Irms rated making capacity	250 A at 440 V power circuit conforming to IEC 60947 140 A AC signalling circuit conforming to IEC 60947-5-1 250 A DC signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	250 A at 440 V power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	105 A <= 104 °F (40 °C) 10 s power circuit 210 A <= 104 °F (40 °C) 1 s power circuit 30 A <= 104 °F (40 °C) 10 min power circuit 61 A <= 104 °F (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	20 A gG at <= 690 V coordination type 2 power circuit 25 A gG at <= 690 V coordination type 1 power circuit 10 A gG signalling circuit conforming to IEC 60947-5-1
Average impedance	2.5 mOhm at 50 Hz - Ith 25 A power circuit
[Ui] rated insulation voltage	600 V power circuit certifications CSA 600 V power circuit certifications UL 690 V power circuit conforming to IEC 60947-4-1 690 V signalling circuit conforming to IEC 60947-1 600 V signalling circuit certifications CSA 600 V signalling circuit certifications UL
Electrical durability	0.6 Mcycles 25 A AC-1 at Ue <= 440 V 2 Mcycles 9 A AC-3 at Ue <= 440 V
Power dissipation per pole	0.2 W AC-3 1.56 W AC-1
Protective cover	With
Mounting support	Rail Plate
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	UL CSA BV CCC GL DNV LROS GOST RINA
Connections - terminals	Control circuit: screw clamp terminals 2 cable(s) 0...0 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) - cable stiffness: flexible - with cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid - without cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible - without cable end Power circuit: screw clamp terminals 2 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible - without cable end Power circuit: screw clamp terminals 2 cable(s) 0...0 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) - cable stiffness: flexible - with cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid - without cable end

Power circuit: screw clamp terminals 2 cable(s) 0...0.01 in<sup>2</sup> (1...4 mm<sup>2</sup>) - cable stiffness: solid - without cable end

Tightening torque	Power circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver Philips No 2 Control circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver Philips No 2
Operating time	4...19 ms opening 12...22 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	15 Mcycles
Operating rate	3600 cyc/h at ≤ 140 °F (60 °C)

## Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc drop-out at 140 °F (60 °C), AC 50/60 Hz 0.8...1.1 Uc operational at 140 °F (60 °C), AC 50 Hz 0.85...1.1 Uc operational at 140 °F (60 °C), AC 60 Hz
Inrush power in VA	70 VA at 68 °F (20 °C) (cos φ 0.75) 60 Hz 70 VA at 68 °F (20 °C) (cos φ 0.75) 50 Hz
Hold-in power consumption in VA	7.5 VA at 68 °F (20 °C) (cos φ 0.3) 60 Hz 7 VA at 68 °F (20 °C) (cos φ 0.3) 50 Hz
Heat dissipation	2...3 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 signalling circuit
Minimum switching voltage	17 V 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 signalling circuit
Power range	1.1...2 kW 200...240 V 3 phases 2.2...3 kW 380...440 V 3 phases 4...6 kW 380...440 V 3 phases 4...6 kW 480...500 V 3 phases
Motor starter type	Direct on-line contactor
Contactor coil voltage	24 V AC standard

## 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	-4...140 °F (-20...60 °C)
Ambient air temperature for storage	-76...176 °F (-60...80 °C)
Permissible ambient air temperature around the device	-40...158 °F (-40...70 °C) at Uc
Operating altitude	9842.52 ft (3000 m) without derating in temperature
Fire resistance	1562 °F (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	3.03 in (77 mm)
Width	1.77 in (45 mm)
Depth	3.39 in (86 mm)
Product weight	0.71 lb(US) (0.32 kg)

### Ordering and shipping details

Category	22345 - CTR,D-LINE,OPEN,NONREV-NEW
Discount Schedule	I12
GTIN	00785901206927
Nbr. of units in pkg.	1
Package weight(Lbs)	0.77000000000000002
Returnability	Y
Country of origin	ID

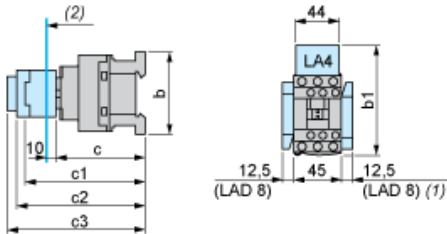
### Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0627 - 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
Product end of life instructions	Available

### Contractual warranty

Warranty period	18 months
-----------------	-----------

Dimensions



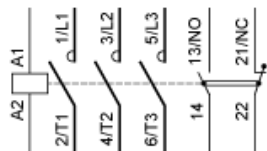
- (1) Including LAD 4BB  
(2) Minimum electrical clearance

LC1		D09...D18	D093...D123	D099...D129
b	without add-on blocks	77	99	80
b1	with LAD 4BB	94	107	95.5
	with LA4 DF10 <sup>(1)</sup>	123 <sup>(1)</sup>	111.5 <sup>(1)</sup>	
	with LA4 DF11 <sup>(1)</sup>	132 <sup>(1)</sup>	120.5 <sup>(1)</sup>	
	with LA4 DF12 <sup>(1)</sup>	139 <sup>(1)</sup>	127.5 <sup>(1)</sup>	
c	without cover or add-on blocks	84	84	84
	with cover, without add-on blocks	86	86	
c1	with LAD N or C (2 or 4 contacts)	117	117	117
c2	with LA6 DK10, LAD 6K10	129	129	129
c3	with LAD T, R, S	137	137	137
	with LAD T, R, S and sealing cover	141	141	
(1)	Including LAD 4BB.			

---

Wiring

---



Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power from 0,06 to 4 kW and 415 VAC

Motor Power (kW)	Icu (kA)	Breaker	Contactors
0.06	> 100	 GV2ME02	 LC1D09B7
0.09	> 100	 GV2ME03	 LC1D09B7
0.55	> 100	 GV2ME06	 LC1D09B7
0.75	> 100	 GV2ME07	 LC1D09B7
2.2	> 100	 GV2ME10	 LC1D09B7
0,12 to 0,18	> 100	 GV2ME04	 LC1D09B7
0,25 to 0,37	> 100	 GV2ME05	 LC1D09B7
1,1 to 1,5	> 100	 GV2ME08	 LC1D09B7
3 to 4	> 100	 GV2ME14	 LC1D09B7

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.