

Product datasheet

Specifications



TeSys D contactor - 3P(3 NO) - AC-3 - ≤ 440 V 9 A - 110 V AC coil

LC1D09F7

Main

Range of product	TeSys Deca
Product or component type	Contactors
Device short name	LC1D
Contactors application	Resistive load Motor control
Utilisation category	AC-1 AC-3 AC-4 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: ≤ 690 V AC 25...400 Hz Power circuit: ≤ 300 V DC
[Ie] rated operational current	9 A (at <60 °C) at ≤ 440 V AC AC-3 for power circuit 25 A (at <60 °C) at ≤ 440 V AC AC-1 for power circuit 9 A (at <60 °C) at ≤ 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	110 V AC 50/60 Hz

Complementary

Motor power kW	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) 4 kW at 415...440 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) 2.2 kW at 400 V AC 50/60 Hz (AC-4) 2.2 kW at 220...230 V AC 50/60 Hz (AC-3e) 4 kW at 380...400 V AC 50/60 Hz (AC-3e) 4 kW at 415...440 V AC 50/60 Hz (AC-3e) 5.5 kW at 500 V AC 50/60 Hz (AC-3e) 5.5 kW at 660...690 V AC 50/60 Hz (AC-3e)
Motor power hp	1 hp at 230/240 V AC 50/60 Hz for 1 phase motors 2 hp at 200/208 V AC 50/60 Hz for 3 phases motors 2 hp at 230/240 V AC 50/60 Hz for 3 phases motors 5 hp at 460/480 V AC 50/60 Hz for 3 phases motors 7.5 hp at 575/600 V AC 50/60 Hz for 3 phases motors 0.33 hp at 115 V AC 50/60 Hz for 1 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[Ith] conventional free air thermal current	25 A (at 60 °C) for power circuit 10 A (at 60 °C) for signalling circuit
Irms rated making capacity	250 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	250 A at 440 V for power circuit conforming to IEC 60947

[Icw] rated short-time withstand current	105 A 40 °C - 10 s for power circuit 210 A 40 °C - 1 s for power circuit 30 A 40 °C - 10 min for power circuit 61 A 40 °C - 1 min for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit
Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 25 A gG at <= 690 V coordination type 1 for power circuit 20 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2.5 mOhm - Ith 25 A 50 Hz for power circuit
Power dissipation per pole	1.56 W AC-1 0.2 W AC-3 0.2 W AC-3e
[Ui] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
overvoltage category	III
pollution degree	3
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
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
Electrical durability	0.6 Mcycles 25 A AC-1 at Ue <= 440 V 2 Mcycles 9 A AC-3 at Ue <= 440 V 2 Mcycles 9 A AC-3e at Ue <= 440 V
Control circuit type	AC at 50/60 Hz standard
Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc (-40...70 °C):drop-out AC 50/60 Hz 0.8...1.1 Uc (-40...60 °C):operational AC 50 Hz 0.85...1.1 Uc (-40...60 °C):operational AC 60 Hz 1...1.1 Uc (60...70 °C):operational AC 50/60 Hz
Inrush power in VA	70 VA 60 Hz cos phi 0.75 (at 20 °C) 70 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	7.5 VA 60 Hz cos phi 0.3 (at 20 °C) 7 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	2...3 W at 50/60 Hz
Operating time	12...22 ms closing 4...19 ms opening
Maximum operating rate	3600 cyc/h at 60 °C

Connections - terminals	<p>Power circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible without cable end</p> <p>Power circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: flexible without cable end</p> <p>Power circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible with cable end</p> <p>Power circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: flexible with cable end</p> <p>Power circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: solid without cable end</p> <p>Power circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: solid without cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible without cable end</p> <p>Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: flexible without cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible with cable end</p> <p>Control circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: flexible with cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: solid without cable end</p> <p>Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: solid without cable end</p>
Tightening torque	<p>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm</p> <p>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2</p> <p>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm</p> <p>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2</p> <p>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2</p> <p>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2</p>
Auxiliary contact composition	1 NO + 1 NC
Auxiliary contacts type	<p>type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1</p> <p>type mirror contact 1 NC conforming to IEC 60947-4-1</p>
Signalling circuit frequency	25...400 Hz
Minimum switching voltage	17 V for signalling circuit
Minimum switching current	5 mA for signalling circuit
Insulation resistance	> 10 MOhm for signalling circuit
Non-overlap time	<p>1.5 ms on de-energisation between NC and NO contact</p> <p>1.5 ms on energisation between NC and NO contact</p>
Mounting support	<p>Plate</p> <p>Rail</p>

Environment

Standards	<p>CSA C22.2 No 14</p> <p>EN 60947-4-1</p> <p>EN 60947-5-1</p> <p>IEC 60947-4-1</p> <p>IEC 60947-5-1</p> <p>UL 60947-4-1</p> <p>IEC 60335-1:Clause 30.2</p> <p>IEC 60335-2-40:Annex JJ</p> <p>UL 60335-2-40:Annex JJ</p> <p>CSA C22.2 No 60947-4-1</p>
Product certifications	<p>UL</p> <p>CCC</p> <p>CSA</p> <p>Marine</p> <p>UKCA</p> <p>EAC</p> <p>CB Scheme</p>
IP degree of protection	IP20 front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Climatic withstand	<p>conforming to IACS E10 exposure to damp heat</p> <p>conforming to IEC 60947-1 Annex Q category D exposure to damp heat</p>

Permissible ambient air temperature around the device	-40...60 °C 60...70 °C with derating
Operating altitude	0...3000 m
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	86 mm
Net weight	0.32 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.000 cm
Package 1 Width	9.200 cm
Package 1 Length	11.200 cm
Package 1 Weight	353.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	20
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	7.390 kg

Contractual warranty

Warranty	18 months
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Environmental footprint

Carbon footprint (kg.eq.CO2 per CR, Total Life cycle) **18**

Environmental Disclosure [Product Environmental Profile](#)

Use Better

Materials and Substances

Packaging made with recycled cardboard **Yes**

Packaging without single use plastic **Yes**

[EU RoHS Directive](#) **Compliant**

REACH Regulation [REACH Declaration](#)

China RoHS Regulation [China RoHS declaration](#)

PVC free **Yes**

Use Again

Repack and remanufacture

Circularity Profile [End of Life Information](#)

WEEE  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Take-back **No**

Dimensions Drawings

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 D•2	110 ⁽¹⁾	123 ⁽¹⁾	111.5 ⁽¹⁾
	with LA4 DF, DT	119 ⁽¹⁾	132 ⁽¹⁾	120.5 ⁽¹⁾
	with LA4 DW, DL	126 ⁽¹⁾	139 ⁽¹⁾	127.5 ⁽¹⁾
c	without cover or add-on blocks	84	84	84
	with cover, without add-on blocks	86	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	141
(1)	Including LAD 4BB.			

Connections and Schema

Wiring

