Product datasheet

Specifications



Discontinued

TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 50 A - 48 V DC standard coil

LC1D50AED

Discontinued on: 29 Sept 2020

To be end-of-service on: 30 Dec 2027

EAN Code: 3389119408790

Main

Range	TeSys TeSys Deca
Range of product	TeSys Deca Advanced
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-1 AC-4
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC
[Ie] rated operational current	50 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
[Uc] control circuit voltage	48 V DC

Complementary

Motor power kW	15 kW at 220/230 V AC 50/60 Hz (AC-3) 22 kW at 380/400 V AC 50/60 Hz (AC-3) 25 kW at 415 V AC 50/60 Hz (AC-3) 30 kW at 440 V AC 50/60 Hz (AC-3) 30 kW at 500 V AC 50/60 Hz (AC-3) 33 kW at 660/690 V AC 50/60 Hz (AC-3) 11 kW at 400 V AC 50/60 Hz (AC-4)
Motor power hp	3 hp at 115 V AC 50/60 Hz for 1 phase motors 7.5 hp at 230/240 V AC 50/60 Hz for 1 phase motors 15 hp at 200/208 V AC 50/60 Hz for 3 phases motors 15 hp at 230/240 V AC 50/60 Hz for 3 phases motors 40 hp at 460/480 V AC 50/60 Hz for 3 phases motors 40 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 80 A (at 60 °C) for power 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 60947-5-1 900 A at 440 V for power circuit conforming to IEC 60947

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

Rated breaking capacity	900 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	400 A 40 °C - 10 s for power circuit 810 A 40 °C - 1 s for power circuit 84 A 40 °C - 10 min for power circuit 208 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 60947-5-1 100 A gG at <= 690 V coordination type 1 for power circuit 100 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	1.5 mOhm - Ith 80 A 50 Hz for power circuit
Power dissipation per pole	3.7 W AC-3 9.6 W AC-1
[Ui] rated insulation voltage	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 Power circuit: 690 V conforming to IEC 60947-4-1
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	10 Mcycles
Electrical durability	1.45 Mcycles 50 A AC-3 at Ue <= 440 V 0.5 Mcycles 80 A AC-1 at Ue <= 440 V
Control circuit type	DC standard
Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.3 Uc (-40…70 °C):drop-out DC 0.75...1.25 Uc (-40…60 °C):operational DC 1...1.25 Uc (60…70 °C):operational DC
Inrush power in W	19 W (at 20 °C)
Hold-in power consumption in W	7.4 W at 20 °C
Operating time	50 ±15 % ms closing 16...24 ms opening
Time constant	34 ms
Maximum operating rate	3600 cyc/h at 60 °C

Connections - terminals	Control circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 1 1…35 mm² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 1…25 mm² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 1…35 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 1…25 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 1…35 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 1…25 mm² - cable stiffness: solid without cable end
Tightening torque	Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver flat Ø 6 mm Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver Philips No 2 Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25…35 mm² hexagonal screw head 4 mm Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1…25 mm² hexagonal screw head 4 mm Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver pozidriv No 2 Power circuit: 2.5 N.m - on EverLink BTR screw connectors - with screwdriver pozidriv No 2
Auxiliary contact composition	1 NO + 1 NC
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 voltage	17 V for signalling circuit
Minimum switching current	5 mA for signalling circuit
Insulation resistance	> 10 MOhm 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
Mounting support	Rail Plate

Environment

Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 CSA C22.2 No 14 UL 60947-4-1 IEC 60335-2-40:Annex JJ UL 60335-2-40:Annex JJ IEC 60335-1:Clause 30.2
Product certifications	CCC UL CB Scheme CSA CE UKCA Marine EAC

IP degree of protection	IP20 front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Climatic withstand	conforming to IACS E10 exposure to damp heat conforming to IEC 60947-1 Annex Q category D exposure to damp heat
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
Mechanical robustness	Vibrations contactor open (2 Gn, 5...300 Hz) Vibrations contactor closed (4 Gn, 5...300 Hz) Shocks contactor closed (15 Gn for 11 ms) Shocks contactor open (10 Gn for 11 ms)
Height	122 mm
Width	55 mm
Depth	120 mm
Net weight	0.93 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.200 cm
Package 1 Width	13.700 cm
Package 1 Length	15.200 cm
Package 1 Weight	1.025 kg
Unit Type of Package 2	S02
Number of Units in Package 2	10
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	10.260 kg
Unit Type of Package 3	P12
Number of Units in Package 3	160
Package 3 Height	45.000 cm
Package 3 Width	80.000 cm
Package 3 Length	120.000 cm
Package 3 Weight	176.160 kg

Logistical informations

Country of origin	FR

Contractual warranty

Warranty (in months)	18

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

Total lifecycle Carbon footprint	**87 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**5 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0.4 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0.1 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**80 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**1 kg CO2 eq.**
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	**Free of Substances of Very High Concern above the threshold**
PVC free	**Yes**

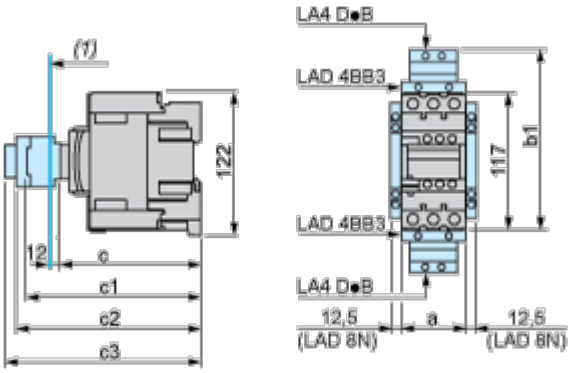
Use Again

Repack and remanufacture

Recyclability potential, in %	**62**
End of life manual availability	**End of Life Information**
Take-back	**No**
WEEE Label	**The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins**

Dimensions Drawings

Dimensions



(1) Minimum electrical clearance

LC1		D40A…D65A
a		55
b1	with LAD 4BB3	136
	with LA4 DF, DT	157
c	without cover or add-on blocks	118
	with cover, without add-on blocks	120
c1	with LAD N (1 contact)	–
	with LAD N or C (2 or 4 contacts)	150
c2	with LA6 DK10	163
c3	with LAD T, R, S	171
	with LAD T, R, S and sealing cover	175

Connections and Schema

Wiring

