Product datasheet

Specifications



Contactor, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 80A, 220V AC 50/60Hz coil, screw clamp terminals

LC1D80M7

Main

Range	TeSys
Range of product	TeSys Deca
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-3e AC-4 AC-1
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 300 V DC 25...400 Hz Power circuit: <= 690 V AC
[Ie] rated operational current	125 A (at <60 °C) at <= 1000 V AC AC-1 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	220 V AC 50/60 Hz

Complementary

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 415...440 V AC 50/60 Hz (AC-3) 55 kW at 500 V AC 50/60 Hz (AC-3) 45 kW at 660...690 V AC 50/60 Hz (AC-3) 15 kW at 400 V AC 50/60 Hz (AC-4) 22 kW at 220...230 V AC 50/60 Hz (AC-3e) 37 kW at 380...400 V AC 50/60 Hz (AC-3e) 45 kW at 415...440 V AC 50/60 Hz (AC-3e) 55 kW at 500 V AC 50/60 Hz (AC-3e) 45 kW at 660...690 V AC 50/60 Hz (AC-3e)
Motor power hp	7.5 hp at 120 V AC 50/60 Hz for 1 phase motors 15 hp at 230/240 V AC 50/60 Hz for 1 phase motors 30 hp at 200/208 V AC 50/60 Hz for 3 phases motors 30 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
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 125 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 1100 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	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	640 A 40 °C - 10 s for power circuit 990 A 40 °C - 1 s for power circuit 135 A 40 °C - 10 min for power circuit 320 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 60947-5-1 200 A gG at <= 690 V coordination type 1 for power circuit 160 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	0.8 mOhm - Ith 125 A 50 Hz for power circuit
Power dissipation per pole	5.1 W AC-3 12.5 W AC-1 5.1 W AC-3e
[Ui] rated insulation voltage	Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Power circuit: 1000 V conforming to IEC 60947-4-1 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	8 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	4 Mcycles
Electrical durability	0.8 Mcycles 125 A AC-1 at Ue <= 440 V 1.5 Mcycles 80 A AC-3 at Ue <= 440 V 1.5 Mcycles 80 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	0.85...1.1 Uc (-40…55 °C):operational AC 60 Hz 0.3...0.6 Uc (-40…70 °C):drop-out AC 50/60 Hz 0.8...1.1 Uc (-40…55 °C):operational AC 50 Hz 1...1.1 Uc (55…70 °C):operational AC 50/60 Hz
Inrush power in VA	245 VA 60 Hz cos phi 0.75 (at 20 °C) 245 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	26 VA 60 Hz cos phi 0.3 (at 20 °C) 26 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	6…10 W at 50/60 Hz
Operating time	20...35 ms closing 6...20 ms opening
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…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: solid without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without cable end Power circuit: connector 1 4…50 mm² - cable stiffness: flexible without cable end Power circuit: connector 2 4…25 mm² - cable stiffness: flexible without cable end Power circuit: connector 1 4…50 mm² - cable stiffness: flexible with cable end Power circuit: connector 2 4…16 mm² - cable stiffness: flexible with cable end Power circuit: connector 1 4…50 mm² - cable stiffness: solid without cable end Power circuit: connector 2 4…25 mm² - cable stiffness: solid without cable end
Tightening torque	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 Power circuit: 12 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm Power circuit: 12 N.m - on connector hexagonal screw head 4 mm Control circuit: 1.2 N.m - on screw clamp terminals - 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	Plate Rail

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
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) 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
Net weight	1.59 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	14.000 cm
Package 1 Width	13.500 cm
Package 1 Length	10.000 cm
Package 1 Weight	1.546 kg
Unit Type of Package 2	S02
Number of Units in Package 2	5
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	8.085 kg
Unit Type of Package 3	P06
Number of Units in Package 3	80
Package 3 Height	75.000 cm
Package 3 Width	60.000 cm
Package 3 Length	80.000 cm
Package 3 Weight	133.300 kg

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	**97 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**11 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0.2 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0.3 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**81 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**4 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**

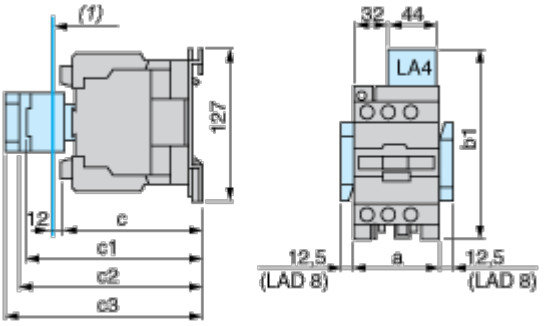
Use Again

Repack and remanufacture

Recyclability potential, in %	**76**
End of life manual availability	**No need of specific recycling operations**
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		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

Connections and Schema

Wiring

