Product data sheet

Specifications



IEC contactor, TeSys Deca, nonreversing, 80A, 60HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 24VDC coil, open style

LC1D80BD

Product availability: Stock - Normally stocked in distribution facility

Main

Range	TeSys
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-3e AC-1 AC-4
Poles description	3P
[Ue] rated operational voltage	Power circuit <= 300 V DC 25...400 Hz Power circuit <= 1000 V AC
[Ie] rated operational current	125 A (at <140 °F (60 °C)) at <= 1000 V AC AC-1 for power circuit 80 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit 80 A (at <140 °F (60 °C)) at <= 440 V AC-3e for power circuit
[Uc] control circuit voltage	24 V DC

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) 45 kW at 1000 V AC 50/60 Hz (AC-3) 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) 45 kW at 1000 V AC 50/60 Hz (AC-3e) 15 kW at 400 V AC 50/60 Hz (AC-4)
Maximum Horse Power Rating	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 phase motors 30 hp at 230/240 V AC 50/60 Hz for 3 phase motors 60 hp at 460/480 V AC 50/60 Hz for 3 phase motors 60 hp at 575/600 V AC 50/60 Hz for 3 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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

[Ith] conventional free air thermal current	10 A (at 140 °F (60 °C)) for signalling circuit 125 A (at 140 °F (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
Rated breaking capacity	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	640 A 104 °F (40 °C) - 10 s for power circuit 990 A 104 °F (40 °C) - 1 s for power circuit 135 A 104 °F (40 °C) - 10 min for power circuit 320 A 104 °F (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 Power circuit 600 V UL Power circuit 1000 V IEC 60947-4-1 Signalling circuit 690 V IEC 60947-1 Signalling circuit 600 V CSA Signalling circuit 600 V UL
Overvoltage category	III
Pollution degree	3
[Uimp] rated impulse withstand voltage	8 kV IEC 60947
Safety reliability level	B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1 B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1
Mechanical durability	4 Mcycles
Electrical durability	0.8 Mcycles 125 A AC-1 <= 440 V 1.5 Mcycles 80 A AC-3 <= 440 V 1.5 Mcycles 80 A AC-3e <= 440 V
Control circuit type	DC standard
Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.1...0.3 Uc (-40…158 °F (-40…70 °C)):drop-out DC 0.85...1.1 Uc (-40…131 °F (-40…55 °C)):operational DC 1...1.1 Uc (131…158 °F (55…70 °C)):operational DC
Inrush power in W	22 W 68 °F (20 °C))
Hold-in power consumption in W	22 W 68 °F (20 °C)
Operating time	95...130 ms closing 20...35 ms opening
Time constant	75 ms
Maximum operating rate	3600 cyc/h at 60 °C

Connections - terminals	Control circuit: screw clamp terminals 2 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 0.002…0.006 in² (1…4 mm²) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 0.002…0.006 in² (1…4 mm²) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 0.002…0.006 in² (1…4 mm²) - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 0.002…0.006 in² (1…4 mm²) - cable stiffness: solid without cable end Power circuit: connector 1 0.006…0.08 in² (4…50 mm²) - cable stiffness: flexible without cable end Power circuit: connector 2 0.006…0.04 in² (4…25 mm²) - cable stiffness: flexible without cable end Power circuit: connector 1 0.006…0.08 in² (4…50 mm²) - cable stiffness: flexible with cable end Power circuit: connector 2 0.006…0.02 in² (4…16 mm²) - cable stiffness: flexible with cable end Power circuit: connector 1 0.006…0.08 in² (4…50 mm²) - cable stiffness: solid without cable end Power circuit: connector 2 0.006…0.04 in² (4…25 mm²) - cable stiffness: solid without cable end
Tightening torque	Control circuit 10.6 lbf.in (1.2 N.m) screw clamp terminals flat Ø 6 mm Control circuit 10.6 lbf.in (1.2 N.m) screw clamp terminals Philips No 2 Power circuit 106.2 lbf.in (12 N.m) connector flat Ø 6 to Ø 8 mm Power circuit 106.2 lbf.in (12 N.m) connector hexagonal 0.2 in (4 mm) Control circuit 10.6 lbf.in (1.2 N.m) screw clamp terminals pozidriv No 2
Auxiliary contact composition	1 NO + 1 NC
Auxiliary contacts type	Mechanically linked 1 NO + 1 NC IEC 60947-5-1 Mirror contact 1 NC 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	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 60947-4-1
Product Certifications	CCC UL CB Scheme CSA CE UKCA Marine EAC
IP degree of protection	IP20 front face IEC 60529
Protective treatment	THIEC 60068-2-30
Climatic withstand	IACS E10 exposure to damp heat
Permissible ambient air temperature around the device	-40…140 °F (-40…60 °C) 140…158 °F (60…70 °C) with derating
Operating altitude	0...9842.52 ft (0...3000 m)

Fire resistance	1562 °F (850 °C) 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	5 in (127 mm)
Width	3.3 in (85 mm)
Depth	7.3 in (186 mm)
Net Weight	5.71 lb(US) (2.59 kg)

Ordering and shipping details

Category	US1CTR121252
Discount Schedule	CTR1
GTIN	3389110439977
Returnability	Yes
Country of origin	CZ

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	4.331 in (11.000 cm)
Package 1 Width	6.378 in (16.200 cm)
Package 1 Length	8.661 in (22.000 cm)
Package weight(Lbs)	5.699 lb(US) (2.585 kg)
Unit Type of Package 2	S02
Number of Units in Package 2	2
Package 2 Height	5.906 in (15.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	12.050 lb(US) (5.466 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	32
Package 3 Height	29.528 in (75.000 cm)
Package 3 Width	23.622 in (60.000 cm)
Package 3 Length	31.496 in (80.000 cm)
Package 3 Weight	215.392 lb(US) (97.700 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	**176 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**17 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0.3 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0.5 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**151 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**6 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**
California proposition 65	**WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer and/or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.**
PVC free	**Yes**

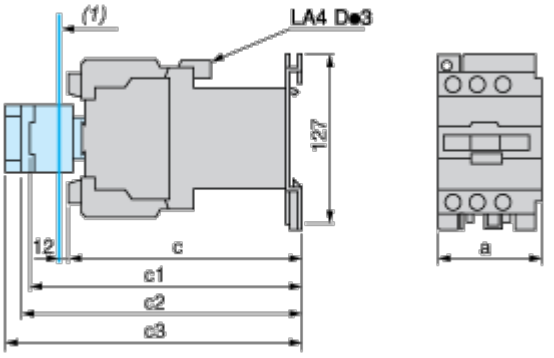
Use Again

Repack and remanufacture

Recyclability potential, in %	**76**
Circularity Profile	**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 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 or 4 contacts)	210
c2	with LA6 DK10	221
c3	with LAD T, R, S	229
	with LAD T, R, S and sealing cover	233

Connections and Schema

Wiring

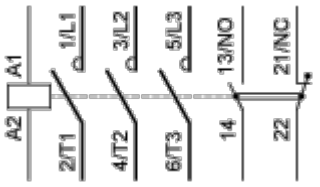


Image of product / Alternate images

Alternative

