

Product data sheet

Specifications



Contactor, TeSys Deca, 3P(3 NO),
AC-3/AC-3e, 0 to 440V, 50A, 24V
50Hz coil, EverLink

LC1D50AB5

Main

Range	TeSys TeSys Deca
Range of product	TeSys Deca
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-4 AC-1 AC-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: ≤ 690 V AC 50 Hz Power circuit: ≤ 300 V DC
[Ie] rated operational current	50 A (at ≤ 60 °C) at ≤ 440 V AC-3 for power circuit 80 A (at ≤ 60 °C) at ≤ 440 V AC-1 for power circuit 50 A (at ≤ 60 °C) at ≤ 440 V AC-3e for power circuit
[Uc] control circuit voltage	24 V AC 50 Hz

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) 15 kW at 220/230 V AC 50/60 Hz (AC-3e) 22 kW at 380/400 V AC 50/60 Hz (AC-3e) 25 kW at 415 V AC 50/60 Hz (AC-3e) 30 kW at 440 V AC 50/60 Hz (AC-3e) 30 kW at 500 V AC 50/60 Hz (AC-3e) 33 kW at 660/690 V AC 50/60 Hz (AC-3e) 11 kW at 400 V AC 50/60 Hz (AC-4)
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
Rated breaking capacity	900 A at 440 V for power circuit conforming to IEC 60947

[Icw] rated short-time withstand current	84 A 40 °C - 10 min for power circuit 208 A 40 °C - 1 min for power circuit 400 A 40 °C - 10 s for power circuit 810 A 40 °C - 1 s 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 - lth 80 A 50 Hz for power circuit
Power dissipation per pole	3.7 W AC-3 9.6 W AC-1 3.7 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	6 Mcycles
Electrical durability	1.45 Mcycles 50 A AC-3 at $U_e \leq 440$ V 1.1 Mcycles 80 A AC-1 at $U_e \leq 440$ V 1.45 Mcycles 50 A AC-3e at $U_e \leq 440$ V
Control circuit type	AC at 50 Hz standard
Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 U_c (-40...70 °C):drop-out AC 50 Hz 0.8...1.1 U_c (-40...60 °C):operational AC 50 Hz 1...1.1 U_c (60...70 °C):operational AC 50 Hz
Inrush power in VA	160 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	15 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	4...5 W at 50 Hz
Operating time	4...19 ms opening 12...26 ms closing
Maximum operating rate	3600 cyc/h at 60 °C

Connections - terminals	Control circuit: screw clamp terminals 2 1...2.5 mm ² - cable stiffness: flexible with cable end
	Control circuit: screw clamp terminals 1 1...4 mm ² - cable stiffness: flexible without cable end
	Control circuit: screw clamp terminals 2 1...4 mm ² - cable stiffness: flexible without cable end
	Control circuit: screw clamp terminals 1 1...4 mm ² - cable stiffness: flexible with cable end
	Control circuit: screw clamp terminals 1 1...4 mm ² - cable stiffness: solid without cable end
	Control circuit: screw clamp terminals 2 1...4 mm ² - cable stiffness: solid without cable end
	Power circuit: screw clamp terminals 1 1...35 mm ² - cable stiffness: flexible without cable end
	Power circuit: screw clamp terminals 2 1...25 mm ² - cable stiffness: flexible without cable end
	Power circuit: screw clamp terminals 1 1...35 mm ² - cable stiffness: flexible with cable end
	Power circuit: screw clamp terminals 2 1...25 mm ² - cable stiffness: flexible with cable end
	Power circuit: screw clamp terminals 1 1...35 mm ² - cable stiffness: solid without cable end
	Power circuit: screw clamp terminals 2 1...25 mm ² - cable stiffness: solid without cable end

Tightening torque	Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm ² hexagonal screw head 4 mm
	Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm ² hexagonal screw head 4 mm
	Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm
	Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2
	Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver pozidriv No 2	

Auxiliary contact composition	1 NO + 1 NC
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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
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Signalling circuit frequency	25...400 Hz
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Minimum switching voltage	17 V for signalling circuit
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Minimum switching current	5 mA for signalling circuit
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Insulation resistance	> 10 MOhm for signalling circuit
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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
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Protective treatment	TH conforming to IEC 60068-2-30
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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
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 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	0.855 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.500 cm
Package 1 Width	14.000 cm
Package 1 Length	15.500 cm
Package 1 Weight	923.000 g
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	9.326 kg
Unit Type of Package 3	P06
Number of Units in Package 3	160
Package 3 Height	75.000 cm
Package 3 Width	60.000 cm
Package 3 Length	80.000 cm
Package 3 Weight	159.680 kg

Contractual warranty

Warranty (in months)	18
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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

Total lifecycle Carbon footprint	69 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	5 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	61 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	2 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
SCIP Number	3d0a4f45-d28c-4c3d-bee1-c14ec8c34bee
EU RoHS Directive	Compliant
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
PVC free	Yes

Use Longer




Lifetime extension

Repair	No
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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

Technical Illustration

Assembly's dimensions

