

# Product datasheet

Specifications



## TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 50 A - 24 V DC standard coil

LC1D50ABD

### Main

<b>Range</b>	TeSys TeSys Deca
<b>Range Of Product</b>	TeSys Deca
<b>Product Or Component Type</b>	Contactor
<b>Device Short Name</b>	LC1D
<b>Contactor Application</b>	Resistive load Motor control
<b>Utilisation Category</b>	AC-4 AC-1 AC-3 AC-3e
<b>Poles Description</b>	3P
<b>[Ue] Rated Operational Voltage</b>	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC
<b>[Ie] Rated Operational Current</b>	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 50 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
<b>[Uc] Control Circuit Voltage</b>	24 V DC

### Complementary

<b>Motor Power Kw</b>	15 kW at 220...230 V AC 50/60 Hz (AC-3) 22 kW at 380...400 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) 25 kW at 415 V AC 50/60 Hz (AC-3) 30 kW at 440 V AC 50/60 Hz (AC-3) 11 kW at 400 V AC 50/60 Hz (AC-4) 15 kW at 220...230 V AC 50/60 Hz (AC-3e) 22 kW at 380...400 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) 25 kW at 415 V AC 50/60 Hz (AC-3e) 30 kW at 440 V AC 50/60 Hz (AC-3e)
<b>Motor Power Hp</b>	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
<b>Compatibility Code</b>	LC1D
<b>Pole Contact Composition</b>	3 NO
<b>Contact Compatibility</b>	M4
<b>Protective Cover</b>	With

<b>[Ith] Conventional Free Air Thermal Current</b>	10 A (at 60 °C) for signalling circuit 80 A (at 60 °C) for power circuit
<b>Irms Rated Making Capacity</b>	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
<b>Rated Breaking Capacity</b>	900 A at 440 V for power circuit conforming to IEC 60947
<b>[Icw] Rated Short-Time Withstand Current</b>	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
<b>Associated Fuse Rating</b>	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
<b>Average Impedance</b>	1.5 mOhm - Ith 80 A 50 Hz for power circuit
<b>Power Dissipation Per Pole</b>	3.7 W AC-3 9.6 W AC-1 3.7 W AC-3e
<b>[Ui] Rated Insulation Voltage</b>	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
<b>Overvoltage Category</b>	III
<b>Pollution Degree</b>	3
<b>[Uimp] Rated Impulse Withstand Voltage</b>	6 kV conforming to IEC 60947
<b>Safety Reliability Level</b>	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
<b>Mechanical Durability</b>	10 Mcycles
<b>Electrical Durability</b>	1.45 Mcycles 50 A AC-3 at Ue <= 440 V 0.5 Mcycles 80 A AC-1 at Ue <= 440 V 1.45 Mcycles 50 A AC-3e at Ue <= 440 V
<b>Control Circuit Type</b>	DC standard
<b>Coil Technology</b>	Built-in bidirectional peak limiting diode suppressor
<b>Control Circuit Voltage Limits</b>	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
<b>Inrush Power In W</b>	19 W (at 20 °C)
<b>Hold-In Power Consumption In W</b>	7.4 W at 20 °C
<b>Operating Time</b>	42.5...57.5 ms closing 16...24 ms opening
<b>Time Constant</b>	34 ms
<b>Maximum Operating Rate</b>	3600 cyc/h 60 °C

<b>Connections - Terminals</b>	<p>Control circuit: screw clamp terminals 2 1...2.5 mm<sup>2</sup> - cable stiffness: flexible with cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm<sup>2</sup> - cable stiffness: flexible without cable end</p> <p>Control circuit: screw clamp terminals 2 1...4 mm<sup>2</sup> - cable stiffness: flexible without cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm<sup>2</sup> - cable stiffness: flexible with cable end</p> <p>Control circuit: screw clamp terminals 1 1...4 mm<sup>2</sup> - cable stiffness: solid without cable end</p> <p>Control circuit: screw clamp terminals 2 1...4 mm<sup>2</sup> - cable stiffness: solid without cable end</p> <p>Power circuit: screw connection 1 1...35 mm<sup>2</sup> - cable stiffness: flexible without cable end</p> <p>Power circuit: screw connection 2 1...25 mm<sup>2</sup> - cable stiffness: flexible without cable end</p> <p>Power circuit: screw connection 1 1...35 mm<sup>2</sup> - cable stiffness: flexible with cable end</p> <p>Power circuit: screw connection 2 1...25 mm<sup>2</sup> - cable stiffness: flexible with cable end</p> <p>Power circuit: screw connection 1 1...35 mm<sup>2</sup> - cable stiffness: solid without cable end</p> <p>Power circuit: screw connection 2 1...25 mm<sup>2</sup> - cable stiffness: solid without cable end</p>
<b>Tightening Torque</b>	<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>Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm<sup>2</sup> hexagonal screw head 4 mm</p> <p>Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm<sup>2</sup> hexagonal screw head 4 mm</p> <p>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2</p> <p>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver pozidriv No 2</p>
<b>Auxiliary Contact Composition</b>	1 NO + 1 NC
<b>Auxiliary Contacts Type</b>	<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>
<b>Signalling Circuit Frequency</b>	25...400 Hz
<b>Minimum Switching Voltage</b>	17 V for signalling circuit
<b>Minimum Switching Current</b>	5 mA for signalling circuit
<b>Insulation Resistance</b>	> 10 MOhm for signalling circuit
<b>Non-Overlap Time</b>	<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>
<b>Mounting Support</b>	<p>Plate</p> <p>Rail</p>

## Environment

<b>Standards</b>	<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 508</p> <p>IEC 60335-1</p>
<b>Product Certifications</b>	<p>UL</p> <p>GOST</p> <p>DNV</p> <p>LROS (Lloyds register of shipping)</p> <p>CCC</p> <p>GL</p> <p>CSA</p> <p>RINA</p> <p>BV</p>
<b>Ip Degree Of Protection</b>	IP20 front face conforming to IEC 60529
<b>Protective Treatment</b>	TH conforming to IEC 60068-2-30
<b>Climatic Withstand</b>	<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>

<b>Permissible Ambient Air Temperature Around The Device</b>	-40...60 °C 60...70 °C with derating
<b>Operating Altitude</b>	0...3000 m
<b>Fire Resistance</b>	850 °C conforming to IEC 60695-2-1
<b>Flame Retardance</b>	V1 conforming to UL 94
<b>Mechanical Robustness</b>	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)
<b>Height</b>	122 mm
<b>Width</b>	55 mm
<b>Depth</b>	120 mm
<b>Net Weight</b>	0.93 kg

## Packing Units

<b>Unit Type Of Package 1</b>	PCE
<b>Number Of Units In Package 1</b>	1
<b>Package 1 Height</b>	6.200 cm
<b>Package 1 Width</b>	13.700 cm
<b>Package 1 Length</b>	15.200 cm
<b>Package 1 Weight</b>	999.000 g
<b>Unit Type Of Package 2</b>	S02
<b>Number Of Units In Package 2</b>	10
<b>Package 2 Height</b>	15.000 cm
<b>Package 2 Width</b>	30.000 cm
<b>Package 2 Length</b>	40.000 cm
<b>Package 2 Weight</b>	10.260 kg

## Contractual warranty

<b>Warranty</b>	12 months
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## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

## Well-being performance

Reach Free Of Svhc

Mercury Free

Rohs Exemption Information Yes

Pvc Free

## Certifications & Standards

**Reach Regulation**

[REACH Declaration](#)

**Eu Rohs Directive**

Compliant

[EU RoHS Declaration](#)

**China Rohs Regulation**

[China RoHS declaration](#)

Pro-active China RoHS declaration (out of China RoHS legal scope)

**Environmental Disclosure**

[Product Environmental Profile](#)

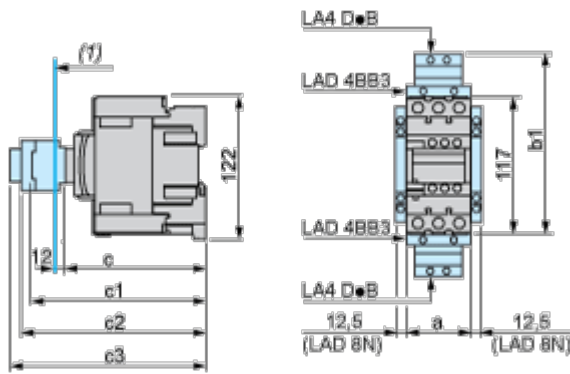
**Weee**

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

**Circularity Profile**

[End of Life Information](#)

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

Wiring

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