

# Product data sheet

Specifications



## contactor TeSys Deca - 3 poles - AC-3 440V 50 A - coil 48 V DC

LC1D50FD

⚠ Discontinued

### Main

Range	TeSys
Range of product	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load Motor control
Utilisation category	AC-4 AC-2 AC-3 AC-2
Poles description	3P
[Ue] rated operational voltage	Power circuit: $\leq 690$ V AC 25...400 Hz
[Ie] rated operational current	80 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit 50 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit
[Uc] control circuit voltage	115 V AC 50 Hz

### Complementary

Motor power kW	25 kW at 415 V AC 50 Hz 30 kW at 440 V AC 50 Hz 30 kW at 500 V AC 50 Hz 33 kW at 660...690 V AC 50 Hz 15 kW at 220...230 V AC 50 Hz 30 kW at 1000 V AC 50 Hz 22 kW at 380...400 V AC 50 Hz
Motor power hp	7.5 hp at 230/240 V AC 60 Hz for 1 phase motors 15 hp at 200/208 V AC 60 Hz for 3 phases motors 15 hp at 230/240 V AC 60 Hz for 3 phases motors 40 hp at 460/480 V AC 60 Hz for 3 phases motors 40 hp at 575/600 V AC 60 Hz for 3 phases motors 3 hp at 115 V AC 60 Hz for 1 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[Ith] conventional free air thermal current	80 A (at 60 °C) for power circuit 10 A (at 60 °C) for control circuit
Irms rated making capacity	900 A at 440 V for power circuit conforming to IEC 60947 140 A AC for control circuit conforming to IEC 60947-5-1
Rated breaking capacity	900 A at 440 V for power circuit conforming to IEC 60947

<b>Associated fuse rating</b>	100 A gG at ≤ 690 V coordination type 1 for power circuit 100 A gG at ≤ 690 V coordination type 2 for power circuit conforming to IEC 60947-5-1 10 A gG for control circuit conforming to IEC 60947-5-1
<b>Power dissipation per pole</b>	9.6 W AC-1 3.7 W AC-3
<b>[Ui] rated insulation voltage</b>	Control circuit: 600 V UL certified Power circuit: 600 V CSA certified Power circuit: 600 V UL certified conforming to IEC 60947-1 Control circuit: 690 V conforming to IEC 60947-1 Power circuit: 690 V CSA certified conforming to IEC 60947-1 Control circuit: 600 V CSA certified
<b>Overvoltage category</b>	III
<b>[Uimp] rated impulse withstand voltage</b>	8 kV conforming to IEC 60947
<b>Safety reliability level</b>	B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1
<b>Mechanical durability</b>	6000000 cycles
<b>Control circuit type</b>	AC at 50 Hz
<b>Coil technology</b>	Without built-in bidirectional peak limiting diode suppressor
<b>Control circuit voltage limits</b>	0.75...1.25 U <sub>c</sub> (-40...60 °C):operational DC 1...1.25 U <sub>c</sub> (60...70 °C):operational DC 50 Hz 0.8...1.1 U <sub>c</sub> (-40...55 °C):operational AC 50 Hz 0.3...0.6 U <sub>c</sub> (-40...70 °C):drop-out AC 50 Hz
<b>Inrush power in VA</b>	140 VA cos phi 0.75 (at 20 °C) 160 VA cos phi 0.75 (at 20 °C)
<b>Hold-in power consumption in VA</b>	13 VA 60 Hz cos phi 0.3 (at 20 °C) 15 VA 50 Hz cos phi 0.3 (at 20 °C)
<b>Heat dissipation</b>	4...5 W at 50/60 Hz for control circuit
<b>Operating time</b>	50 ms closing 12...26 ms closing 4...19 ms opening
<b>Maximum operating rate</b>	3600 cyc/h 60 °C
<b>Connections - terminals</b>	Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: rigid without cable end Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end Power circuit: screw terminals 2 2.5...25 mm <sup>2</sup> - cable stiffness: rigid Power circuit: screw terminals 2 2.5...16 mm <sup>2</sup> - cable stiffness: rigid without cable end Power circuit: screw terminals 1 2.5...25 mm <sup>2</sup> - cable stiffness: flexible without cable end Power circuit: screw terminals 2 2.5...16 mm <sup>2</sup> - cable stiffness: flexible without cable end Power circuit: screw terminals 1 2.5...25 mm <sup>2</sup> - cable stiffness: flexible with cable end Power circuit: screw terminals 2 2.5...10 mm <sup>2</sup> - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: rigid Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: rigid
<b>Tightening torque</b>	Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver Philips No 2 Power circuit: 5 N.m - on screw terminal - with screwdriver flat Ø 6 to Ø 8 mm Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver pozidriv No 2 Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver flat Ø 6 mm
<b>Auxiliary contact composition</b>	1 NO + 1 NC
<b>Auxiliary contacts type</b>	type mirror contact 1 NC conforming to IEC 60947-4-1 type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1
<b>Terminals description ISO n°1</b>	(13-14)NO
<b>Minimum switching voltage</b>	17 V for control circuit
<b>Minimum switching current</b>	5 mA for control circuit
<b>Insulation resistance</b>	> 10 MOhm for control circuit
<b>Non-overlap time</b>	1.5 ms on energisation between NC and NO contacts 1.5 ms on de-energisation between NC and NO contacts
<b>Mounting support</b>	Plate Rail

## Environment

<b>Standards</b>	IEC 60947-5-1 EN 60947-4-1 CSA C22.2 No 14 EN 60947-5-1 UL 508 IEC 60947-4-1
<b>Product certifications</b>	DNV UL CSA BV LROS (Lloyds register of shipping) CCC GOST RINA DNV
<b>IP degree of protection</b>	IP2X conforming to VDE 0106 IP2X conforming to IEC 60529
<b>Climatic withstand</b>	conforming to IACS E10 exposure to damp heat
<b>Permissible ambient air temperature around the device</b>	-60...80 °C storage -40...60 °C operation 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>	Shocks contactor closed (15 gn) Vibrations contactor opened (2 Gn, 5...300 Hz) Vibrations contactor closed (4 Gn, 5...300 Hz) Shocks contactor opened (10 Gn)
<b>Height</b>	127 mm
<b>Width</b>	75 mm
<b>Depth</b>	119 mm
<b>Net weight</b>	1.4 kg

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH free of SVHC</b>	Yes
<b>EU RoHS Directive</b>	Compliant <a href="#">EU RoHS Declaration</a>
<b>Toxic heavy metal free</b>	Yes
<b>Mercury free</b>	Yes
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a> Pro-active China RoHS declaration (out of China RoHS legal scope)
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>
<b>WEEE</b>	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
<b>PVC free</b>	Yes

## Contractual warranty

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Warranty

18 months

## Recommended replacement(s)

LC1D50FD is replaced by:

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1x



Contactor, TeSys Deca, 3P(3 NO), AC-3/AC-3e, 0 to 440V, 50A, 110VDC standard coil  
LC1D50AFD

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