

# Product data sheet

Specifications



## Contactors, TeSys Deca, 4P(2NO +2NC), AC-1, 0 to 440V, 20A, 48VAC 50/60Hz coil

LC1D098E7

### Main

Range of product	TeSys Deca
Product or component type	Contactors
Device short name	LC1D
Contactors application	Resistive load
Utilisation category	AC-1 AC-3 AC-3e AC-4
Poles description	4P
[Ue] rated operational voltage	Power circuit: $\leq 690$ V AC 25...400 Hz Power circuit: $\leq 250$ V DC
[Ie] rated operational current	20 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit
[Uc] control circuit voltage	48 V AC 50/60 Hz

### Complementary

Compatibility code	LC1D
Pole contact composition	2 NO + 2 NC
Contact compatibility	M6
Protective cover	With
[Ith] conventional free air thermal current	20 A (at 60 °C) for power circuit 10 A (at 60 °C) for signalling circuit
Irms rated making capacity	250 A at 440 V for power circuit conforming to IEC 60947 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	250 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	105 A 40 °C - 10 s for power circuit 210 A 40 °C - 1 s for power circuit 30 A 40 °C - 10 min for power circuit 61 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 25 A gG at $\leq 690$ V coordination type 1 for power circuit 20 A gG at $\leq 690$ V coordination type 2 for power circuit
Average impedance	2.5 mOhm - Ith 25 A 50 Hz for power circuit
Power dissipation per pole	1.56 W AC-1

<b>[Ui] rated insulation voltage</b>	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
<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>	15 Mcycles
<b>Electrical durability</b>	0.3 Mcycles 20 A AC-1 at $U_e \leq 690$ V
<b>Control circuit type</b>	AC at 50/60 Hz
<b>Coil technology</b>	Without built-in suppressor module
<b>Control circuit voltage limits</b>	0.3...0.6 $U_c$ (-40...60 °C):drop-out AC 50/60 Hz 0.8...1.1 $U_c$ (-40...60 °C):operational AC 50 Hz 0.85...1.1 $U_c$ (-40...60 °C):operational AC 60 Hz
<b>Inrush power in VA</b>	70 VA 60 Hz cos phi 0.75 (at 20 °C) 70 VA 50 Hz cos phi 0.75 (at 20 °C)
<b>Hold-in power consumption in VA</b>	7.5 VA 60 Hz cos phi 0.3 (at 20 °C) 7 VA 50 Hz cos phi 0.3 (at 20 °C)
<b>Heat dissipation</b>	2...3 W at 50/60 Hz
<b>Operating time</b>	12...22 ms closing 4...19 ms opening
<b>Maximum operating rate</b>	3600 cyc/h 60 °C
<b>Connections - terminals</b>	Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid 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...4 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 Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end
<b>Tightening torque</b>	Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Power 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 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: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
<b>Auxiliary contact composition</b>	1 NO + 1 NC
<b>Auxiliary contacts type</b>	type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 type mirror contact 1 NC conforming to IEC 60947-4-1
<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>	1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact
<b>Mounting support</b>	Plate Rail

## Environment

<b>Standards</b>	CSA C22.2 No 60947-4-1 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1
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IEC 60947-5-1  
 UL 60947-5-1  
 UL 60947-4-1  
 CSA C22.2 No 60947-5-1  
 GB/T 14048.4

<b>Product certifications</b>	UL CCC CSA UKCA EAC CB EU-RO-MR by DNV-GL
<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>	conforming to IACS E10 exposure to damp heat conforming to IEC 60947-1 Annex Q category D exposure to damp heat
<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 open (10 Gn for 11 ms) Shocks contactor closed (15 Gn for 11 ms)
<b>Height</b>	85 mm
<b>Width</b>	45 mm
<b>Depth</b>	92 mm
<b>Net weight</b>	0.365 kg

## Packing Units

<b>Unit Type of Package 1</b>	Db
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	5.8 cm
<b>Package 1 Width</b>	9.5 cm
<b>Package 1 Length</b>	12 cm
<b>Package 1 Weight</b>	389 g
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	16
<b>Package 2 Height</b>	15 cm
<b>Package 2 Width</b>	30 cm
<b>Package 2 Length</b>	40 cm
<b>Package 2 Weight</b>	6.798 kg
<b>Unit Type of Package 3</b>	P06
<b>Number of Units in Package 3</b>	256
<b>Package 3 Height</b>	75 cm
<b>Package 3 Width</b>	60 cm
<b>Package 3 Length</b>	80 cm
<b>Package 3 Weight</b>	116.768 kg

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
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<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<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>	Yes
<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
<b>California proposition 65</b>	WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

## Contractual warranty

<b>Warranty</b>	18 months
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## Recommended replacement(s)