

# Product datasheet

Specifications



## CONTACTOR 600VAC 40AMP IEC +OPTIONS

LC1D40M7

### Main

Range	TeSys
Range of product	TeSys Deca
Product or component type	Contactors
Device short name	LC1D
Contactors application	Motor control Resistive load
Utilisation category	AC-1 AC-4 AC-2 AC-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: $\leq 690$ V AC 25...400 Hz
[Ie] rated operational current	40 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit 60 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit 40 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-3e for power circuit
[Uc] control circuit voltage	220 V AC 50/60 Hz

### Complementary

Motor power kW	18.5 kW at 380...400 V AC 50 Hz (AC-3) 22 kW at 500 V AC 50 Hz (AC-3) 30 kW at 660...690 V AC 50 Hz (AC-3) 22 kW at 1000 V AC 50 Hz (AC-3) 22 kW at 415 V AC 50 Hz (AC-3) 22 kW at 440 V AC 50 Hz (AC-3) 11 kW at 220...230 V AC 50 Hz (AC-3) 9 kW at 400 V AC 50 Hz (AC-4) 18.5 kW at 380...400 V AC 50 Hz (AC-3e) 22 kW at 500 V AC 50 Hz (AC-3e) 30 kW at 660...690 V AC 50 Hz (AC-3e) 22 kW at 1000 V AC 50 Hz (AC-3e) 22 kW at 415 V AC 50 Hz (AC-3e) 22 kW at 440 V AC 50 Hz (AC-3e) 11 kW at 220...230 V AC 50 Hz (AC-3e)
Motor power hp	3 hp at 115 V AC 60 Hz for 1 phase motors 5 hp at 230/240 V AC 60 Hz for 1 phase motors 10 hp at 200/208 V AC 60 Hz for 3 phases motors 10 hp at 230/240 V AC 60 Hz for 3 phases motors 30 hp at 460/480 V AC 60 Hz for 3 phases motors 30 hp at 575/600 V AC 60 Hz for 3 phases motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With

<b>[I<sub>th</sub>] conventional free air thermal current</b>	10 A (at 60 °C) for control circuit 60 A (at 60 °C) for power circuit
<b>I<sub>rms</sub> rated making capacity</b>	800 A at 440 V for power circuit conforming to IEC 60947 140 A AC for control circuit conforming to IEC 60947-5-1
<b>Rated breaking capacity</b>	800 A at 440 V for power circuit conforming to IEC 60947
<b>Associated fuse rating</b>	10 A gG for control circuit conforming to IEC 60947-5-1 80 A gG at ≤ 690 V coordination type 1 for power circuit 80 A gG at ≤ 690 V coordination type 2 for power circuit
<b>Power dissipation per pole</b>	5.4 W AC-1 2.4 W AC-3 2.4 W AC-3e
<b>[U<sub>i</sub>] rated insulation voltage</b>	Control circuit: 600 V CSA certified Control circuit: 600 V UL certified Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Control circuit: 690 V conforming to IEC 60947-1 Power circuit: 690 V conforming to IEC 60947-1
<b>Overvoltage category</b>	III
<b>[U<sub>imp</sub>] rated impulse withstand voltage</b>	8 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>	6000000 cycles
<b>Control circuit type</b>	AC at 50/60 Hz
<b>Coil technology</b>	Without built-in bidirectional peak limiting diode suppressor
<b>Control circuit voltage limits</b>	0.3...0.6 U <sub>c</sub> (-40...70 °C):drop-out AC 50/60 Hz 0.8...1.1 U <sub>c</sub> (-40...60 °C):operational AC 50 Hz 0.85...1.1 U <sub>c</sub> (-40...60 °C):operational AC 60 Hz 1...1.1 U <sub>c</sub> (60...70 °C):operational AC 50/60 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>	4...19 ms opening 12...26 ms closing
<b>Maximum operating rate</b>	3600 cyc/h 60 °C
<b>Connections - terminals</b>	Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: rigid 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: 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 1 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 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
<b>Tightening torque</b>	Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver flat Ø 6 mm 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 lugs - 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>Terminals description ISO n°1</b>	(21-22)NC (13-14)NO (A1-A2)CO
<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 de-energisation between NC and NO contacts

<b>Mounting support</b>	Plate Rail
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## Environment

<b>Standards</b>	EN 60947-4-1 IEC 60947-5-1 CSA C22.2 No 14 EN 60947-5-1 IEC 60947-4-1 UL 508
<b>Product certifications</b>	LROS (Lloyds register of shipping) DNV GL BV CCC RINA CSA UL GOST UKCA
<b>IP degree of protection</b>	IP2X conforming to IEC 60529 IP2X conforming to VDE 0106
<b>Climatic withstand</b>	conforming to IACS E10 exposure to damp heat
<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 opened (10 Gn for 11 ms) Shocks contactor closed (15 Gn for 11 ms) Vibrations contactor opened (2 Gn, 5...300 Hz) Vibrations contactor closed (4 Gn, 5...300 Hz)
<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
<b>Package 1 Height</b>	9.5 cm
<b>Package 1 Width</b>	13.2 cm
<b>Package 1 Length</b>	14.0 cm
<b>Package 1 Weight</b>	1.45 kg
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	5
<b>Package 2 Height</b>	15.0 cm
<b>Package 2 Width</b>	30.0 cm
<b>Package 2 Length</b>	40.0 cm
<b>Package 2 Weight</b>	7.555 kg

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>REACH free of SVHC</b>	Yes
<b>EU RoHS Directive</b>	Compliant

[EU RoHS Declaration](#)

<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

**Contractual warranty**

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