

# LC1D40AE7

contactor TeSys LC1-D - 3 poles - AC-3 440V  
40 A - coil 48 V AC

## Main

Range of product	TeSys D
Product or component type	Contacteur
Device short name	LC1D
Contacteur application	Motor control Resistive load
Utilisation category	AC-1 AC-2 AC-3 AC-4
Control circuit type	AC
Coil type	Standard
Poles description	3P
Pole contact composition	3 NO
[Uc] control circuit voltage	48 V AC 50/60 Hz

## Complementary

Coil technology	Without built-in bidirectional peak limiting diode suppressor
Protective cover	With
[Ie] rated operational current	40 A ( $\leq 60^\circ\text{C}$ ) AC AC-3 for power circuit 60 A ( $\leq 60^\circ\text{C}$ ) AC AC-1 for power circuit
Motor power kW	11 kW at 220...240 V AC 50/60 Hz 18.5 kW at 380...400 V AC 50/60 Hz 22 kW at 415 V AC 50/60 Hz 22 kW at 440 V AC 50/60 Hz 22 kW at 500 V AC 50/60 Hz 30 kW at 660...690 V AC 50/60 Hz
Motor power hp	3 hp at 115 V AC 60 Hz for 1P motors conforming to UL 3 hp at 115 V AC 60 Hz for 1P motors conforming to CSA 5 hp at 230/240 V AC 60 Hz for 1P motors conforming to UL 5 hp at 230/240 V AC 60 Hz for 1P motors conforming to CSA 10 hp at 230/240 V AC 60 Hz for 3P motors conforming to CSA 10 hp at 230/240 V AC 60 Hz for 3P motors conforming to UL 10 hp at 200/208 V AC 60 Hz for 3P motors conforming to CSA 10 hp at 200/208 V AC 60 Hz for 3P motors conforming to UL 30 hp at 575/600 V AC 60 Hz for 3P motors conforming to CSA 30 hp at 575/600 V AC 60 Hz for 3P motors conforming to UL 30 hp at 460/480 V AC 60 Hz for 3P motors conforming to CSA 30 hp at 460/480 V AC 60 Hz for 3P motors conforming to UL
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
Auxiliary contact composition	1 NO + 1 NC
Control circuit voltage limits	0.3...0.6 Uc at $60^\circ\text{C}$ drop-out 50/60 Hz 0.8...1.1 Uc at $60^\circ\text{C}$ operational 50 Hz 0.85...1.1 Uc at $60^\circ\text{C}$ operational 60 Hz
[Ui] rated insulation voltage	600 V for power circuit certifications UL 600 V for power circuit certifications CSA 600 V for control circuit certifications UL 600 V for control circuit certifications CSA 690 V for power circuit conforming to IEC 60947-1 690 V for control circuit conforming to IEC 60947-1
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overvoltage category	III
Mounting support	Plate rail

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Flame retardance	V1 conforming to UL 94
Connections - terminals	<p>Control circuit: screw clamp terminal 1 cable 1...4 mm<sup>2</sup> - cable stiffness: flexible - without cable end</p> <p>Control circuit: screw clamp terminal 2 cable 1...4 mm<sup>2</sup> - cable stiffness: flexible - without cable end</p> <p>Control circuit: screw clamp terminal 1 cable 1...4 mm<sup>2</sup> - cable stiffness: flexible - with cable end</p> <p>Control circuit: screw clamp terminal 2 cable 1...2.5 mm<sup>2</sup> - cable stiffness: flexible - with cable end</p> <p>Control circuit: screw clamp terminal 1 cable 1...4 mm<sup>2</sup> - cable stiffness: solid - without cable end</p> <p>Control circuit: screw clamp terminal 2 cable 1...4 mm<sup>2</sup> - cable stiffness: solid - without cable end</p> <p>Power circuit: EverLink BTR screw connectors 2 cable 1...25 mm<sup>2</sup> - cable stiffness: flexible - with cable end</p> <p>Power circuit: EverLink BTR screw connectors 2 cable 1...25 mm<sup>2</sup> - cable stiffness: flexible - without cable end</p> <p>Power circuit: EverLink BTR screw connectors 2 cable 1...25 mm<sup>2</sup> - cable stiffness: solid - without cable end</p> <p>Power circuit: EverLink BTR screw connectors 1 cable 1...35 mm<sup>2</sup> - cable stiffness: solid - without cable end</p> <p>Power circuit: EverLink BTR screw connectors 1 cable 1...35 mm<sup>2</sup> - cable stiffness: flexible - with cable end</p> <p>Power circuit: EverLink BTR screw connectors 1 cable 1...35 mm<sup>2</sup> - cable stiffness: flexible - without cable end</p>
Tightening torque	<p>Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver flat Ø 6 mm</p> <p>Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver Philips No 2 2 mm</p> <p>Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm<sup>2</sup> hexagonal 4 mm</p> <p>Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 35 mm<sup>2</sup> hexagonal 4 mm</p>
[Ue] rated operational voltage	<= 690 V AC 25...400 Hz for power circuit
[Ith] conventional free air thermal current	<p>10 A at ≤ 60 °C for control circuit</p> <p>60 A at ≤ 60 °C for power circuit</p>
Irms rated making capacity	<p>140 A AC for control circuit conforming to IEC 60947-5-1</p> <p>800 A at 440 V for power circuit conforming to IEC 60947</p>
Rated breaking capacity	800 A at 440 V for power circuit conforming to IEC 60947
Associated fuse rating	<p>10 A gG for control circuit conforming to IEC 60947-5-1</p> <p>80 A gG at &lt;= 690 V coordination type 1 for power circuit</p> <p>80 A gG at &lt;= 690 V coordination type 2 for power circuit</p>
Average impedance	1.5 mOhm at 50 Hz - Ith 60 A for power circuit
Power dissipation per pole	<p>2.4 W AC-3</p> <p>5.4 W AC-1</p>
Inrush power in VA	<p>140 VA at 20 °C (cos φ 0.75)</p> <p>160 VA at 20 °C (cos φ 0.75)</p>
Hold-in power consumption in VA	<p>13 VA at 20 °C (cos φ 0.3) 60 Hz</p> <p>15 VA at 20 °C (cos φ 0.3) 50 Hz</p>
Operating time	<p>4...19 ms opening</p> <p>12...26 ms closing</p>
Safety reliability level	<p>B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1</p> <p>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1</p>
Mechanical durability	6000000 cycles
Operating rate	3600 cyc/h at ≤ 60 °C
Minimum switching current	5 mA for control circuit
Minimum switching voltage	17 V for control circuit
Non-overlap time	<p>1.5 ms on de-energisation between NC and NO contacts</p> <p>1.5 ms on energisation between NC and NO contacts</p>
Insulation resistance	> 10 MOhm for control circuit
Height	122 mm
Width	55 mm
Depth	120 mm
Product weight	1.4 kg

## Environment

Standards	CSA C22-2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508
Product certifications	BV CCC CSA DNV (Det Norske Veritas) GL GOST LROS (pending) RINA UL
IP degree of protection	IP2x conforming to VDE 0106 IP2x conforming to IEC 60529
Protective treatment	TH (pollution degree: 3) conforming to IEC 60068
Ambient air temperature for operation	-5...60 °C
Ambient air temperature for storage	-60...80 °C
Permissible ambient air temperature around the device	-40...70 °C at U <sub>c</sub>
Operating altitude	3000 m without derating in temperature
Fire resistance	850 °C conforming to IEC 60695-2-1
Shock resistance	10 gn contactor opened 15 gn contactor closed
Vibration resistance	2 gn 5...300 Hz contactor opened 4 gn 5...300 Hz contactor closed
Heat dissipation	4...5 W at 50/60 Hz for control circuit
RoHS EUR conformity date	0001
RoHS EUR status	Compliant