

LC1D80E7

contactor TeSys LC1-D - 3 poles - AC-3 440V
80 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	AC 50/60 Hz
Poles description	3P
Pole contact composition	3 NO
[Ie] rated operational current	125 A ($\leq 60\text{ }^{\circ}\text{C}$) at $\leq 440\text{ V AC AC-1}$ for power circuit 80 A ($\leq 60\text{ }^{\circ}\text{C}$) at $\leq 440\text{ V AC AC-3}$ for power circuit
Motor power kW	22 kW at 220...230 V AC 50/60 Hz 37 kW at 380...400 V AC 50/60 Hz 45 kW at 1000 V AC 50/60 Hz 45 kW at 660...690 V AC 50/60 Hz 55 kW at 500 V AC 50/60 Hz 45 kW at 415...440 V AC 50/60 Hz
Motor power hp	15 hp at 230/240 V AC 60 Hz for 1P motors conforming to CSA 15 hp at 230/240 V AC 60 Hz for 1P motors conforming to UL 20 hp at 200/208 V AC 60 Hz for 3P motors conforming to CSA 20 hp at 200/208 V AC 60 Hz for 3P motors conforming to UL 25 hp at 230/240 V AC 60 Hz for 3P motors conforming to CSA 25 hp at 230/240 V AC 60 Hz for 3P motors conforming to UL 60 hp at 460/480 V AC 60 Hz for 3P motors conforming to CSA 60 hp at 460/480 V AC 60 Hz for 3P motors conforming to UL 60 hp at 575/600 V AC 60 Hz for 3P motors conforming to CSA 60 hp at 575/600 V AC 60 Hz for 3P motors conforming to UL 7.5 hp at 115 V AC 60 Hz for 1P motors conforming to CSA 7.5 hp at 115 V AC 60 Hz for 1P motors conforming to UL

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[Uc] control circuit voltage	48 V AC 50/60 Hz
Connections - terminals	Control circuit: ring lugs - external diameter: 8 mm Control circuit: screw clamp terminal 1 cable 1...4 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminal 2 cable 1...4 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminal 2 cable 1...2.5 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminal 1 cable 1...4 mm ² - cable stiffness: solid - without cable end Control circuit: screw clamp terminal 2 cable 1...4 mm ² - cable stiffness: solid - without cable end Power circuit: screw clamp terminal 1 cable 4...50 mm ² - cable stiffness: flexible - without cable end Power circuit: screw clamp terminal 2 cable 4...25 mm ² - cable stiffness: flexible - without cable end Power circuit: screw clamp terminal 1 cable 4...50 mm ² - cable stiffness: flexible - with cable end Power circuit: screw clamp terminal 2 cable 4...16 mm ² - cable stiffness: flexible - with cable end Power circuit: screw clamp terminal 1 cable 4...50 mm ² - cable stiffness: solid - without cable end Power circuit: screw clamp terminal 2 cable 4...25 mm ² - cable stiffness: solid - without cable end Control circuit: screw clamp terminal 1 cable 1...2.5 mm ² - cable stiffness: flexible - with cable end Power circuit: ring lugs - external diameter: 17 mm

Complementary

Coil technology	Without built-in bidirectional peak limiting diode suppressor
Protective cover	With
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 U _c at 55 °C drop-out 50/60 Hz 0.8...1.1 U _c at 55 °C operational 50 Hz 0.85...1.1 U _c at 55 °C operational 60 Hz
[Ui] rated insulation voltage	1000 V for power circuit conforming to IEC 60947-1 600 V for control circuit certifications CSA 600 V for control circuit certifications UL 600 V for power circuit certifications CSA 600 V for power circuit certifications UL 690 V for control circuit conforming to IEC 60947-1
[Uimp] rated impulse withstand voltage	8 kV conforming to IEC 60947
Overvoltage category	III
Mounting support	Plate Rail
Flame retardance	V1 conforming to UL 94
Tightening torque	Control circuit: 1.2 nm - on screw clamp terminal - with screwdriver flat Ø 6 mm Control circuit: 1.2 N.m - on screw clamp terminal - with screwdriver Philips No 2 Power circuit: 9 nm - on 1 entry connector - with screwdriver flat Ø 6 to Ø 8 mm hexagonal
[Ue] rated operational voltage	<= 1000 V AC 25...400 Hz for power circuit
[Ith] conventional free air thermal current	10 A at <= 60 °C for control circuit 125 A at <= 60 °C for power circuit
Irms rated making capacity	1100 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	1100 A at 440 V for power circuit conforming to IEC 60947
Associated fuse rating	10 A gG for control circuit conforming to IEC 60947-5-1 160 A gG at <= 690 V coordination type 2 for power circuit 200 A gG at <= 690 V coordination type 1 for power circuit
Average impedance	0.8 mOhm at 50 Hz - I _{th} 125 A for power circuit
Power dissipation per pole	5.1 W AC-3 12.5 W AC-1
Inrush power in VA	245 VA at 20 °C (cos φ 0.75)
Hold-in power consumption in VA	26 VA at 20 °C (cos φ 0.3) 50 Hz 26 VA at 20 °C (cos φ 0.3) 60 Hz

Operating time	20...35 ms closing 6...20 ms opening
Safety reliability level	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
Mechanical durability	4000000 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	1.5 ms on de-energisation between NC and NO contacts 1.5 ms on energisation between NC and NO contacts
Insulation resistance	> 10 MOhm for control circuit
Height	127 mm
Width	85 mm
Depth	130 mm
Product weight	1.59 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 (Lloyds register of shipping) RINA UL
IP degree of protection	IP2x conforming to IEC 60529 IP2x conforming to VDE 0106
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 _c
Operating altitude	3000 m without derating in temperature
Fire resistance	850 °C conforming to IEC 60695-2-1
Shock resistance	10 gn contactor closed 8 gn contactor opened
Vibration resistance	2 gn 5...300 Hz contactor opened 3 gn 5...300 Hz contactor closed
Heat dissipation	6...10 W at 50/60 Hz for control circuit