

LC1D12BD

contactor TeSys LC1-D - 3 poles - AC-3 440V
12 A - coil 24 V DC



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-3
Control circuit type	DC
Coil type	Standard
Poles description	3P
Pole contact composition	3 NO
[Ie] rated operational current	12 A ($\leq 60\text{ }^{\circ}\text{C}$) AC AC-3 for power circuit 25 A ($\leq 60\text{ }^{\circ}\text{C}$) AC AC-1 for power circuit
Motor power kW	3 kW at 220...240 V AC 50/60 Hz 5.5 kW at 440 V AC 50/60 Hz 5.5 kW at 415 V AC 50/60 Hz 5.5 kW at 380...400 V AC 50/60 Hz 7.5 kW at 660...690 V AC 50/60 Hz 7.5 kW at 500 V AC 50/60 Hz
Motor power hp	1 hp at 115 V AC 60 Hz for 1P motors conforming to UL 1 hp at 115 V AC 60 Hz for 1P motors conforming to CSA 2 hp at 230/240 V AC 60 Hz for 1P motors conforming to UL 2 hp at 230/240 V AC 60 Hz for 1P motors conforming to CSA 3 hp at 230/240 V AC 60 Hz for 3P motors conforming to CSA 3 hp at 230/240 V AC 60 Hz for 3P motors conforming to UL 3 hp at 200/208 V AC 60 Hz for 3P motors conforming to CSA 3 hp at 200/208 V AC 60 Hz for 3P motors conforming to UL 7.5 hp at 460/480 V AC 60 Hz for 3P motors conforming to CSA 7.5 hp at 460/480 V AC 60 Hz for 3P motors conforming to UL 10 hp at 575/600 V AC 60 Hz for 3P motors conforming to CSA 10 hp at 575/600 V AC 60 Hz for 3P motors conforming to UL

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[Uc] control circuit voltage	24 V DC
Connections - terminals	Control circuit: screw clamp terminal 2 cable 1...4 mm ² - cable stiffness: solid - without 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...2.5 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminal 1 cable 1...4 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminal 2 cable 1...4 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminal 1 cable 1...4 mm ² - cable stiffness: flexible - without cable end Power circuit: screw clamp terminal 2 cable 1...4 mm ² - cable stiffness: solid - without cable end Power circuit: screw clamp terminal 1 cable 1...4 mm ² - cable stiffness: solid - without cable end Power circuit: screw clamp terminal 2 cable 1...2.5 mm ² - cable stiffness: flexible - with cable end Power circuit: screw clamp terminal 1 cable 1...4 mm ² - cable stiffness: flexible - with cable end Power circuit: screw clamp terminal 2 cable 1...4 mm ² - cable stiffness: flexible - without cable end Power circuit: screw clamp terminal 1 cable 1...4 mm ² - cable stiffness: flexible - without cable end

Complementary

Coil technology	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	0.1...0.25 Uc at 60 °C drop-out 0.7...1.25 Uc at 60 °C operational
Time constant	28 ms
[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
Flame retardance	V1 conforming to UL 94
Tightening torque	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 2 mm Power circuit: 1.7 N.m - on screw clamp terminal - with screwdriver flat Ø 6 mm Power circuit: 1.7 N.m - on screw clamp terminal - with screwdriver Philips No 2 2 mm
[Ue] rated operational voltage	<= 690 V AC 25...400 Hz for power circuit
[Ith] conventional free air thermal current	10 A at ≤ 60 °C for control circuit 25 A at ≤ 60 °C for power circuit
Irms rated making capacity	250 A at 440 V for power circuit conforming to IEC 60947 250 A DC for control circuit conforming to IEC 60947-5-1
Rated breaking capacity	250 A at 440 V for power circuit conforming to IEC 60947
Permissible short-time rating	30 A (≤ 40 °C) - short time current duration: 10 min - for power circuit 61 A (≤ 40 °C) - short time current duration: 1 min - for power circuit 100 A - short time current duration: 1 s - for control circuit 105 A (≤ 40 °C) - short time current duration: 10 s - for power circuit 120 A - short time current duration: 500 ms - for control circuit 140 A - short time current duration: 100 ms - for control circuit 210 A (≤ 40 °C) - short time current duration: 1 s - for power circuit
Associated fuse rating	10 A gG for control circuit conforming to IEC 60947-5-1 25 A gG at <= 690 V coordination type 2 for power circuit 40 A gG at <= 690 V coordination type 1 for power circuit
Average impedance	2.5 mOhm at 50 Hz - Ith 25 A for power circuit

Power dissipation per pole	0.36 W AC-3 1.56 W AC-1
Inrush power in W	5.4 W at 20 °C
Hold-in power consumption in W	5.4 W at 20 °C
Operating time	20 ms opening 63 ms closing
Mechanical durability	30000000 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
Rated operational power in W	14 W at 24 V DC-13 - electrical durability: 10000000 cycles - for control circuit 48 W at 24 V DC-13 - electrical durability: 3000000 cycles - for control circuit 96 W at 24 V DC-13 - electrical durability: 1000000 cycles - for control circuit
Height	77 mm
Width	45 mm
Depth	95 mm
Product weight	0.485 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 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 _c
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
RoHS EUR conformity date	0914
RoHS EUR status	Compliant