Product data sheet
Characteristics

LC1D65AED
TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 65 A - 48 V DC coil

Main

Range of product	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-1 AC-3
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	<= 690 V AC 25...400 Hz for power circuit <= 690 V DC for power circuit
[Ie] rated operational current	80 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit 65 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit
Motor power kW	18.5 kW at 220...230 V AC 50/60 Hz 30 kW at 380...400 V AC 50/60 Hz 37 kW at 500 V AC 50/60 Hz 37 kW at 660...690 V AC 50/60 Hz
Motor power HP (according to UL / CSA)	40 hp at 460/480 V AC 50/60 Hz for 3 phases motors 5 hp at 115 V AC 50/60 Hz for 1 phase motors 10 hp at 230/240 V AC 50/60 Hz for 1 phase motors 20 hp at 200/208 V AC 50/60 Hz for 3 phases motors 20 hp at 230/240 V AC 50/60 Hz for 3 phases motors 50 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	DC standard
Control circuit voltage	48 V DC
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	10 A at <= 60 °C for signalling circuit 80 A at <= 60 °C for power circuit
Irms rated making capacity	140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1 1000 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	1000 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit 520 A <= 40 °C 10 s power circuit 900 A <= 40 °C 1 s power circuit 110 A <= 40 °C 10 min power circuit 260 A <= 40 °C 1 min power circuit

Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 125 A gG at <= 690 V coordination type 1 for power circuit 125 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	1.5 mOhm at 50 Hz - Ith 80 A for power circuit
[Ui] rated insulation voltage	690 V for power circuit conforming to IEC 60947-4-1 600 V for power circuit certifications CSA 600 V for power circuit certifications UL 690 V for signalling circuit conforming to IEC 60947-1 600 V for signalling circuit certifications CSA 600 V for signalling circuit certifications UL
Power dissipation per pole	9.6 W AC-1 6.3 W AC-3
Safety cover	With
Mounting support	Plate Rail
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 CSA C22.2 n°14
Product certifications	CCC CSA GOST UL
Connections - terminals	Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm² - cable stiffness: flexible - with cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: flexible - with cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 1...35 mm² - cable stiffness: solid - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: solid - without cable end
Tightening torque	Power circuit: 5 N.m - on EverLink BTR screw connectors - cable <= 25 mm² hexagonal 4 mm Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm² hexagonal 4 mm 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
Operating time	42.5...57.5 ms closing 16...24 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 (millions)	10 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.3 Uc at 60 °C drop-out 0.75...1.25 Uc at 60 °C operational
Time constant	34 ms
Inrush power in W	19 W at 20 °C
Hold-in power consumption in W	7.4 W at 20 °C
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
Signalling circuit frequency	25...400 Hz
Minimum switching current	5 mA for signalling circuit
Minimum switching voltage	17 V for signalling circuit
Non-overlap time	1.5 ms on de-energisation (between NC and NO contact) 1.5 ms on energisation (between NC and NO contact)
Insulation resistance	> 10 MOhm for signalling circuit

Environment

IP degree of protection	IP2x front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Pollution degree	3
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 Uc
Operating altitude	3000 m without derating in temperature
Fire resistance	850 °C conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	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
Height	122 mm
Width	55 mm
Depth	120 mm
Product weight	0.935 kg