Product data sheet
Characteristics

LC1D80G6
TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 80 A - 120 V AC coil

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Main

Commercial Status	Commercialised
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
Pole contact composition	3 NO
[Ue] rated operational voltage	<= 300 V DC 25...400 Hz for power circuit <= 690 V AC for power circuit
[Ie] rated operational current	125 A (<= 140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit 80 A (<= 140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit
Motor power kW	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 37 kW at 380...400 V AC 50/60 Hz 22 kW at 220...230 V AC 50/60 Hz
Motor power hp	60 hp at 575/600 V AC 50/60 Hz for 3 phases motors 60 hp at 460/480 V AC 50/60 Hz for 3 phases motors 25 hp at 230/240 V AC 50/60 Hz for 3 phases motors 15 hp at 230/240 V AC 50/60 Hz for 1 phase motors 7.5 hp at 115 V AC 50/60 Hz for 1 phase motors 20 hp at 200/208 V AC 50/60 Hz for 3 phases motors
Control circuit type	AC 60 Hz
Control circuit voltage	120 V AC 60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	8 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	125 A at <= 140 °F (60 °C) for power circuit 10 A at <= 140 °F (60 °C) for signalling circuit
Irms rated making capacity	1100 A at 440 V for power circuit conforming to IEC 60947 250 A DC for signalling circuit conforming to IEC 60947-5-1 140 A AC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	320 A <= 104 °F (40 °C) 1 min power circuit 135 A <= 104 °F (40 °C) 10 min power circuit 990 A <= 104 °F (40 °C) 1 s power circuit 640 A <= 104 °F (40 °C) 10 s power circuit 140 A 100 ms signalling circuit 120 A 500 ms signalling circuit 100 A 1 s signalling circuit
Associated fuse rating	160 A gG at <= 690 V coordination type 2 for power circuit 200 A gG at <= 690 V coordination type 1 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
Average impedance	0.80 mOhm at 50 Hz - Ith 125 A for power circuit

[Ui] rated insulation voltage	1000 V for power circuit conforming to IEC 60947-4-1 600 V for signalling circuit certifications UL 600 V for signalling circuit certifications CSA 690 V for signalling circuit conforming to IEC 60947-1 600 V for power circuit certifications UL 600 V for power circuit certifications CSA
Electrical durability	1.5 Mcycles 80 A AC-3 at Ue <= 440 V 0.8 Mcycles 125 A AC-1 at Ue <= 440 V
Power dissipation per pole	12.5 W AC-1 AC-3
Protective 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 No 14
Product certifications	BV CCC CSA DNV GL GOST RINA UL LROS
Connections - terminals	Power circuit: connector 2 cable(s) 0.01...0.04 in² (4...25 mm²) - cable stiffness: solid - without cable end Power circuit: connector 1 cable(s) 0.01...0.08 in² (4...50 mm²) - cable stiffness: solid - without cable end Power circuit: connector 2 cable(s) 0.01...0.02 in² (4...16 mm²) - cable stiffness: flexible - with cable end Power circuit: connector 1 cable(s) 0.01...0.08 in² (4...50 mm²) - cable stiffness: flexible - with cable end Power circuit: connector 2 cable(s) 0.01...0.04 in² (4...25 mm²) - cable stiffness: flexible - without cable end Power circuit: connector 1 cable(s) 0.01...0.08 in² (4...50 mm²) - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 0...0 in² (1...2.5 mm²) - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 2 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 1 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 0...0 in² (1...2.5 mm²) - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 2 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: flexible - without cable end
Tightening torque	Power circuit: 79.65 lbf.in (9 N.m) - on connector hexagonal 0.16 in (4 mm) Power circuit: 79.65 lbf.in (9 N.m) - on connector - with screwdriver flat Ø 6 to Ø 8 mm Control circuit: 10.62 lbf.in (1.2 N.m) - on screw clamp terminals - with screwdriver Philips No 2 Control circuit: 10.62 lbf.in (1.2 N.m) - on screw clamp terminals - with screwdriver flat Ø 6 mm
Operating time	6...20 ms opening 20...35 ms closing

Safety reliability level	B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1
Mechanical durability	10 Mcycles
Operating rate	3600 cyc/h at <= 140 °F (60 °C)

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc at 131 °F (55 °C) drop-out 60 Hz 0.85...1.1 Uc at 131 °F (55 °C) operational 60 Hz
Inrush power in VA	220 VA at 68 °F (20 °C) (cos ϕ 0.75) 60 Hz
Hold-in power consumption in VA	22 VA at 20 °C (cos ? 0.3) 60 Hz
Heat dissipation	6...10 W at 60 Hz
Auxiliary contacts type	Type mirror contact (1 NC) conforming to IEC 60947-4-1 Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1
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 energisation (between NC and NO contact) 1.5 ms on de-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	23...140 °F (-5...60 °C)
Ambient air temperature for storage	-76...176 °F (-60...80 °C)
Permissible ambient air temperature around the device	-40...158 °F (-40...70 °C) at Uc
Operating altitude	9842.52 ft (3000 m) without derating in temperature
Fire resistance	1562 °F (850 °C) conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	Shocks contactor closed 10 Gn for 11 ms Shocks contactor open 8 Gn for 11 ms Vibrations contactor closed 3 Gn, 5...300 Hz Vibrations contactor open 2 Gn, 5...300 Hz
Height	5 in (127 mm)
Width	3.35 in (85 mm)
Depth	5.12 in (130 mm)
Product weight	3.51 lb(US) (1.59 kg)

Ordering and shipping details

Category	22345 - CTR,D-LINE,OPEN,NONREV-NEW
Discount Schedule	I12
GTIN	00785901440826
Nbr. of units in pkg.	1
Package weight(Lbs)	3.44
Product availability	Stock - Normally stocked in distribution facility
Returnability	Y
Country of origin	CZ

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS	Compliant - since 0701 - Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available Download Product Environmental
Product end of life instructions	Need no specific recycling operations

Contractual warranty

Period	18 months