Product datasheet
Characteristics

LC1DT80AF7
TeSys D contactor - 4P(4 NO) - AC-1 - <= 440 V 80 A - 110 V AC 50/60 Hz coil

Main

Range of product	TeSys D
Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load
Utilisation category	AC-1
Poles description	4P
Pole contact composition	4 NO
[Ue] rated operational voltage	<= 300 V DC for power circuit <= 690 V AC 25...400 Hz for power circuit
[Ie] rated operational current	80 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit
Control circuit type	AC 50/60 Hz
Control circuit voltage	110 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	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 1000 A at 440 V for power circuit conforming to IEC 60947 250 A DC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	1000 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	900 A <= 40 °C 1 s power circuit 120 A 500 ms signalling circuit 110 A <= 40 °C 10 min power circuit 100 A 1 s signalling circuit 260 A <= 40 °C 1 min power circuit 520 A <= 40 °C 10 s power circuit 140 A 100 ms signalling circuit
Associated fuse rating	125 A gG at <= 690 V coordination type 2 for power circuit

	10 A gG for signalling circuit conforming to IEC 60947-5-1 125 A gG at <= 690 V coordination type 1 for power circuit
Average impedance	1.6 mOhm at 50 Hz - Ith 80 A for power circuit
[Ui] rated insulation voltage	690 V for signalling circuit conforming to IEC 60947-1 600 V for power circuit certifications CSA 600 V for power circuit certifications UL 600 V for signalling circuit certifications CSA 600 V for signalling circuit certifications UL 690 V for power circuit conforming to IEC 60947-4-1
Electrical durability	1.4 Mcycles 80 A AC-1 at Ue <= 440 V
Power dissipation per pole	10.2 W AC-1
Protective cover	With
Mounting support	Plate Rail
Standards	CSA C22.2 No 14 EN 60947-5-1 EN 60947-4-1 IEC 60947-4-1 UL 508 IEC 60947-5-1
Product certifications	DNV GOST RINA BV CCC UL LROS CSA GL
Connections - terminals	Control circuit : screw clamp terminals 2 cable(s) 1...4 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 1 cable(s) 1...4 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: solid - without cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 1...35 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 Power circuit : EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 1...25 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 1...35 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm² - cable stiffness: solid - without cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 1...35 mm² - cable stiffness: flexible - without cable end
Tightening torque	Power circuit : 8 N.m - on screw clamp terminals - 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 Power circuit : 5 N.m - on screw clamp terminals - cable <= 25 mm² hexagonal 4 mm
Operating time	12...26 ms closing 4...19 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	6 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.85...1.1 Uc operational at 60 °C, AC 60 Hz 0.3...0.6 Uc drop-out at 60 °C, AC 50/60 Hz 0.8...1.1 Uc operational at 60 °C, AC 50 Hz
Inrush power in VA	140 VA at 20 °C (cos ϕ 0.75) 60 Hz

	160 VA at 20 °C (cos ϕ 0.75) 50 Hz
Hold-in power consumption in VA	13 VA at 20 °C (cos ϕ 0.3) 60 Hz 15 VA at 20 °C (cos ϕ 0.3) 50 Hz
Heat dissipation	4...5 W at 50/60 Hz
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 energisation (between NC and NO contact) 1.5 ms on de-energisation (between NC and NO contact)
Insulation resistance	> 10 MOhm for signalling circuit
Contact compatibility	M6
Compatibility code	LC1D

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 closed 4 Gn, 5...300 Hz Shocks contactor open 10 Gn for 11 ms Shocks contactor closed 15 Gn for 11 ms Vibrations contactor open 2 Gn, 5...300 Hz
Height	122 mm
Width	70 mm
Depth	120 mm
Product weight	1.15 kg

Contractual warranty

Warranty period	18 months