Product data sheet
Characteristics

LC1DT20F7
TeSys D contactor - 4P(4 NO) - AC-1 - <= 440 V 20 A - 110 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	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	20 A (<= 140 °F (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	6 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	20 A at <= 140 °F (60 °C) for power circuit 10 A at <= 140 °F (60 °C) for signalling circuit
Irms rated making capacity	250 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	250 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	210 A <= 104 °F (40 °C) 1 s power circuit 105 A <= 104 °F (40 °C) 10 s power circuit 61 A <= 104 °F (40 °C) 1 min power circuit 30 A <= 104 °F (40 °C) 10 min power circuit 140 A 100 ms signalling circuit 120 A 500 ms signalling circuit 100 A 1 s signalling circuit
Associated fuse rating	20 A gG at <= 690 V coordination type 2 for power circuit 25 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	2.5 mOhm at 50 Hz - Ith 20 A for power circuit
[Ui] rated insulation voltage	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 690 V for power circuit conforming to IEC 60947-4-1
Power dissipation per pole	1.56 W AC-1
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: screw clamp terminals 2 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: solid - without cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: solid - without cable end Power circuit: screw clamp terminals 2 cable(s) 0...0 in² (1...2.5 mm²) - cable stiffness: flexible - with cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: flexible - with cable end Power circuit: screw clamp terminals 2 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: flexible - without cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: flexible - without 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 1 cable(s) 0...0.01 in² (1...4 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: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver Philips No 2 Power circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver Philips No 2 Control circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver flat Ø 6 mm
Operating time	12...22 ms closing 4...19 ms opening
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	15 Mcycles
Operating rate	3600 cyc/h at <= 140 °F (60 °C)

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.85...1.1 Uc at 140 °F (60 °C) operational 60 Hz 0.8...1.1 Uc at 140 °F (60 °C) operational 50 Hz 0.3...0.6 Uc at 140 °F (60 °C) drop-out 50/60 Hz
Inrush power in VA	70 VA at 20 °C (cos ? 0.75) 50 Hz 70 VA at 20 °C (cos ? 0.75) 60 Hz
Hold-in power consumption in VA	7 VA at 20 °C (cos ? 0.3) 50 Hz 7.5 VA at 20 °C (cos ? 0.3) 60 Hz
Heat dissipation	2...3 W at 50/60 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 15 Gn for 11 ms Shocks contactor open 10 Gn for 11 ms Vibrations contactor closed 4 Gn, 5...300 Hz Vibrations contactor open 2 Gn, 5...300 Hz
Height	3.35 in (85 mm)
Width	1.77 in (45 mm)
Depth	3.62 in (92 mm)
Product weight	0.8 lb(US) (0.365 kg)

Ordering and shipping details

Category	22345 - CTR,D-LINE,OPEN,NONREV-NEW
Discount Schedule	I12
GTIN	00785901494263
Nbr. of units in pkg.	1
Package weight(Lbs)	0.78
Product availability	Non-Stock - Not normally stocked in distribution facility
Returnability	N
Country of origin	FR

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS	Compliant - since 0702 - 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