Product data sheet
Characteristics

LC1D50SW
contactor TeSys Deca - 3 poles - AC-3 440V 50 A - coil 72 V DC

Main

Range	TeSys
Range of product	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-2 AC-4 AC-1 AC-3
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz
[Ie] rated operational current	50 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
[Uc] control circuit voltage	72 V DC

Complementary

Motor power kW	22 KW at 380...400 V AC 50 Hz 25 KW at 415 V AC 50 Hz 30 KW at 440 V AC 50 Hz 30 KW at 500 V AC 50 Hz 33 KW at 660...690 V AC 50 Hz 15 KW at 220...230 V AC 50 Hz 30 kW at 1000 V AC 50 Hz
Motor power hp	3 Hp at 115 V AC 60 Hz for 1 phase motors 7.5 Hp at 230/240 V AC 60 Hz for 1 phase motors 15 Hp at 200/208 V AC 60 Hz for 3 phases motors 15 Hp at 230/240 V AC 60 Hz for 3 phases motors 40 Hp at 460/480 V AC 60 Hz for 3 phases motors 40 hp at 575/600 V AC 60 Hz for 3 phases motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[Ith] conventional free air thermal current	10 A (at 60 °C) for control circuit 80 A (at 60 °C) for power circuit
Irms rated making capacity	250 A DC for control circuit conforming to IEC 60947-5-1 900 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	900 A at 440 V for power circuit conforming to IEC 60947
Associated fuse rating	10 A gG for control circuit conforming to IEC 60947-5-1 100 A gG at <= 690 V coordination type 1 for power circuit 100 A gG at <= 690 V coordination type 2 for power circuit
Power dissipation per pole	3.7 W AC-3 9.6 W AC-1
[Ui] rated insulation voltage	Control circuit: 600 V CSA certified Control circuit: 600 V UL certified Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Control circuit: 690 V conforming to IEC 60947-1 Power circuit: 690 V conforming to IEC 60947-1

Overvoltage category	III
[Uimp] rated impulse withstand voltage	8 kV conforming to IEC 60947
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	10000000 cycles
Control circuit type	DC wide range
Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.3 Uc (-40…70 °C):drop-out DC 0.75...1.25 Uc (-40…60 °C):operational DC 1...1.25 Uc (60…70 °C):operational DC
Inrush power in W	19 W (at 20 °C)
Hold-in power consumption in W	7.4 W at 20 °C
Operating time	20 ms opening 50 ms closing
Time constant	34 ms
Maximum operating rate	3600 cyc/h 60 °C
Connections - terminals	Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: rigid Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: rigid Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1…2.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with cable end Power circuit: screw terminals 1 2.5…25 mm² - cable stiffness: rigid Power circuit: screw terminals 2 2.5…16 mm² - cable stiffness: rigid Power circuit: screw terminals 1 2.5…25 mm² - cable stiffness: flexible without cable end Power circuit: screw terminals 2 2.5…16 mm² - cable stiffness: flexible without cable end Power circuit: screw terminals 1 2.5…25 mm² - cable stiffness: flexible with cable end Power circuit: screw terminals 2 2.5…10 mm² - cable stiffness: flexible with cable end
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 Power circuit: 5 N.m - on screw terminal - with screwdriver flat Ø 6 to Ø 8 mm Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver pozidriv No 2
Auxiliary contact composition	1 NO + 1 NC
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
Minimum switching voltage	17 V for control circuit
Minimum switching current	5 mA for control circuit
Insulation resistance	> 10 MOhm 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
Mounting support	Plate Rail

Environment

Standards	CSA C22.2 No 14 IEC 60947-5-1 EN 60947-4-1 UL 508 EN 60947-5-1 IEC 60947-4-1
Product certifications	UL[RETURN]GL[RETURN]CCC[RETURN]CSA[RETURN]LROS (Lloyds register of shipping)[RETURN]BV[RETURN]RINA[RETURN]GOST[RETURN]DNV
IP degree of protection	IP2X conforming to IEC 60529 IP2X conforming to VDE 0106
Climatic withstand	Conforming to IACS E10 exposure to damp heat
Permissible ambient air temperature around the device	-60…80 °C storage -40…60 °C operation 60…70 °C with derating

Operating altitude	0...3000 m
Fire resistance	850 °C conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	Shocks contactor opened (10 Gn) Shocks contactor closed (15 gn) Vibrations contactor opened (2 Gn, 5...300 Hz) Vibrations contactor closed (4 Gn, 5...300 Hz)
Height	127 mm
Width	85 mm
Depth	176 mm
Net weight	2.185 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1

Contractual warranty

Warranty	18 months