





Main

Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load Motor control
Utilisation category	AC-3 AC-1
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit: ≤ 300 V DC 25...400 Hz Power circuit: ≤ 690 V AC
[Ie] rated operational current	125 A (at ≤60 °C) at ≤ 440 V AC AC-1 for power circuit 80 A (at ≤60 °C) at ≤ 440 V AC AC-3 for power circuit
Motor power kW	22 kW at 220...230 V AC 50/60 Hz 37 kW at 380...400 V AC 50/60 Hz 45 kW at 415...440 V AC 50/60 Hz 55 kW at 500 V AC 50/60 Hz 45 kW at 660...690 V AC 50/60 Hz 45 kW at 1000 V AC 50/60 Hz
Motor power HP (UL / CSA)	20 Hp at 200/208 V AC 50/60 Hz for 3 phases motors 7.5 Hp at 115 V AC 50/60 Hz for 1 phase motors 15 Hp at 230/240 V AC 50/60 Hz for 1 phase motors 25 Hp at 230/240 V AC 50/60 Hz for 3 phases motors 60 Hp at 460/480 V AC 50/60 Hz for 3 phases motors 60 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	AC at 50 Hz
[Uc] control circuit voltage	110 V AC 50 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	10 A (at 60 °C) for signalling circuit 125 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 1100 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	640 A 40 °C - 10 s for power circuit 990 A 40 °C - 1 s for power circuit 135 A 40 °C - 10 min for power circuit 320 A 40 °C - 1 min for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit
Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 200 A gG at ≤ 690 V coordination type 1 for power circuit 160 A gG at ≤ 690 V coordination type 2 for power circuit
Average impedance	0.8 mOhm - Ith 125 A 50 Hz for power circuit

[Ui] rated insulation voltage	Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Power circuit: 1000 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
Electrical durability	0.8 Mcycles 125 A AC-1 at Ue ≤ 440 V 1.5 Mcycles 80 A AC-3 at Ue ≤ 440 V
Power dissipation per pole	5.1 W AC-3 12.5 W AC-1
Front cover	With
Mounting support	Plate Rail
Standards	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508
Product certifications	LROS (Lloyds register of shipping) CSA CCC DNV RINA GL UL GOST BV
Connections - terminals	Control circuit: screw clamp terminals 2 cable(s) 1... 2.5 mm ² flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1... 2.5 mm ² flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1... 4 mm ² flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1... 4 mm ² flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1... 4 mm ² solid without cable end Control circuit: screw clamp terminals 2 cable(s) 1... 4 mm ² solid without cable end Power circuit: connector 1 cable(s) 4... 50 mm ² flexible without cable end Power circuit: connector 2 cable(s) 4... 25 mm ² flexible without cable end Power circuit: connector 1 cable(s) 4... 50 mm ² flexible with cable end Power circuit: connector 2 cable(s) 4... 16 mm ² flexible with cable end Power circuit: connector 1 cable(s) 4...50 mm ² solid without cable end Power circuit: connector 2 cable(s) 4...25 mm ² solid without cable end
Tightening torque	Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit: 12 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm Power circuit: 12 N.m - on connector hexagonal screw head 4 mm
Operating time	20...35 ms closing 6...20 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	10 Mcycles
Maximum operating rate	3600 cyc/h 60 °C

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc (-40...70 °C):drop-out AC 50 Hz 0.85...1.1 Uc (-40...55 °C):operational AC 50 Hz 1...1.1 Uc (55...70 °C):operational AC 50 Hz
Inrush power in VA	200 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	20 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	6...10 W at 50 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 de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact
Insulation resistance	> 10 MOhm for signalling circuit
Contact compatibility	M12
Compatibility code	LC1D

Environment

IP degree of protection	IP20 front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Pollution degree	3
Ambient air temperature for operation	-40...60 °C 60...70 °C with derating
Ambient air temperature for storage	-60...80 °C
Operating altitude	0...3000 m
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 Shocks contactor open: 8 Gn for 11 ms Vibrations contactor closed: 3 Gn, 5...300 Hz Shocks contactor closed: 10 Gn for 11 ms
Height	127 mm
Width	85 mm
Depth	130 mm
Net weight	1.59 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Compliant  EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	 Yes
China RoHS Regulation	 China RoHS Declaration
Environmental Disclosure	 Product Environmental Profile
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes

Contractual warranty

Warranty	18 months
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