



### Main

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
Power pole contact composition	2 NO + 2 NC
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC
[Ie] rated operational current	32 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
Control circuit type	AC at 50/60 Hz
[Uc] 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	10 A (at 60 °C) for signalling circuit 32 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 60947-5-1 300 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	300 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	145 A 40 °C - 10 s for power circuit 240 A 40 °C - 1 s for power circuit 40 A 40 °C - 10 min for power circuit 84 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

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

	50 A gG at <= 690 V coordination type 1 for power circuit 35 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2.5 mOhm - lth 32 A 50 Hz for power circuit
[Ui] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
Electrical durability	1 Mcycles 32 A AC-1 at Ue <= 440 V
Power dissipation per pole	2.5 W AC-1
Safety cover	With
Mounting support	Rail Plate
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	GOST GL LROS (Lloyds register of shipping) DNV CCC UL BV CSA RINA
Connections - terminals	Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> solid without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> solid without cable end Power circuit: connector 1 cable(s) 2.5...10 mm <sup>2</sup> flexible without cable end Power circuit: connector 2 cable(s) 2.5...10 mm <sup>2</sup> flexible without cable end Power circuit: connector 1 cable(s) 2.5...10 mm <sup>2</sup> flexible with cable end Power circuit: connector 2 cable(s) 2.5...10 mm <sup>2</sup> flexible with cable end Power circuit: connector 1 cable(s) 2.5...16 mm <sup>2</sup> solid without cable end Power circuit: connector 2 cable(s) 2.5...16 mm <sup>2</sup> solid without cable end
Tightening torque	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: 1.7 N.m - on connector - with screwdriver flat Ø 6 mm Power circuit: 1.7 N.m - on connector - with screwdriver Philips No 2
Operating time	12...22 ms closing 4...19 ms opening
Safety reliability level	B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1 B10d = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1
Mechanical durability	15 Mcycles
Maximum operating rate	3600 cyc/h 60 °C

## Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	Drop-out: 0.3...0.6 Uc AC 50/60 Hz (at 60 °C) Operational: 0.8...1.1 Uc AC 50 Hz (at 60 °C) Operational: 0.85...1.1 Uc AC 60 Hz (at 60 °C)
Inrush power in VA	70 VA 60 Hz cos phi 0.75 (at 20 °C) 70 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	7.5 VA 60 Hz cos phi 0.3 (at 20 °C) 7 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	2...3 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 de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact
Insulation resistance	> 10 MOhm for signalling circuit

## 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	-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
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 Vibrations contactor closed: 4 Gn, 5...300 Hz Shocks contactor open: 10 Gn for 11 ms Shocks contactor closed: 15 Gn for 11 ms
Height	105 mm
Width	45 mm
Depth	99 mm
Net weight	0.425 kg

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Under investigation <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">Download RoHS China Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

## Contractual warranty

Warranty	18 months
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