





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	4 NO
[Ue] rated operational voltage	Power circuit: ≤ 690 V AC 25...400 Hz Power circuit: ≤ 300 V DC
[Ie] rated operational current	20 A (at ≤60 °C) at ≤ 440 V AC AC-1 for power circuit
Control circuit type	DC low consumption
[Uc] control circuit voltage	24 V DC
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 20 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 60947-5-1 250 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	250 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	30 A 40 °C - 10 min for power circuit 61 A 40 °C - 1 min for power circuit 105 A 40 °C - 10 s for power circuit 210 A 40 °C - 1 s 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 25 A gG at ≤ 690 V coordination type 1 for power circuit 20 A gG at ≤ 690 V coordination type 2 for power circuit
Average impedance	2.5 mOhm - Ith 20 A 50 Hz for power circuit
[Ui] rated insulation voltage	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 Power circuit: 690 V conforming to IEC 60947-4-1
Power dissipation per pole	1.56 W AC-1
Front 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	BV CSA GOST GL CCC UL DNV LROS (Lloyds register of shipping) RINA
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... 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 flexible with 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: screw clamp terminals 1 cable(s) 1... 4 mm ² flexible without cable end Power circuit: screw clamp terminals 2 cable(s) 1... 4 mm ² flexible without cable end Power circuit: screw clamp terminals 1 cable(s) 1... 4 mm ² flexible with cable end Power circuit: screw clamp terminals 2 cable(s) 1... 2.5 mm ² flexible with cable end Power circuit: screw clamp terminals 1 cable(s) 1... 4 mm ² solid without cable end Power circuit: screw clamp terminals 2 cable(s) 1... 4 mm ² 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 screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2
Operating time	65.45...88.55 ms closing 20...30 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	30 Mcycles
Maximum operating rate	3600 cyc/h 60 °C

Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.3 U _c (-40...70 °C):drop-out DC 0.8...1.25 U _c (-40...60 °C):operational DC 1...1.25 U _c (60...70 °C):operational DC
Time constant	40 ms
Inrush power in W	2.4 W (at 20 °C)
Hold-in power consumption in W	2.4 W at 20 °C
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	-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 Vibrations contactor closed: 4 Gn, 5...300 Hz Shocks contactor closed: 15 Gn for 11 ms Shocks contactor open: 10 Gn for 11 ms
Height	85 mm
Width	45 mm
Depth	99 mm
Net weight	0.365 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	552 g
Package 1 Height	5.5 cm
Package 1 width	9.5 cm
Package 1 Length	11.8 cm

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
Circularity Profile	 End Of Life Information
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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