

## Product data sheet

### Characteristics

# LC1DT80AED

TeSys D contactor - 4P(4 NO) - AC-1 -  $\leq 440$   
V 80 A - 48 V DC standard coil





## 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	80 A (at <60 °C) at ≤ 440 V AC AC-1 for power circuit
Control circuit type	DC standard
[Uc] control circuit voltage	48 V DC
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overtoltage category	III
[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 80 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 1000 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	1000 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	520 A 40 °C - 10 s for power circuit 900 A 40 °C - 1 s for power circuit 110 A 40 °C - 10 min for power circuit 260 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 60947-5-1 125 A gG at ≤ 690 V coordination type 1 for power circuit 125 A gG at ≤ 690 V coordination type 2 for power circuit
Average impedance	1.6 mOhm - Ith 80 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
Electrical durability	0.5 Mcycles 80 A AC-1 at Ue ≤ 440 V
Power dissipation per pole	10.2 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	GOST BV GL UL RINA CCC CSA LROS (Lloyds register of shipping) DNV
Connections - terminals	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> 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 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: screw connection 1 cable(s) 1... 35 mm <sup>2</sup> flexible without cable end Power circuit: screw connection 2 cable(s) 1... 25 mm <sup>2</sup> flexible without cable end Power circuit: screw connection 1 cable(s) 1... 35 mm <sup>2</sup> flexible with cable end Power circuit: screw connection 2 cable(s) 1... 25 mm <sup>2</sup> flexible with cable end Power circuit: screw connection 1 cable(s) 1... 35 mm <sup>2</sup> solid without cable end Power circuit: screw connection 2 cable(s) 1... 25 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: 8 N.m - on screw clamp terminals - cable 25...35 mm <sup>2</sup> hexagonal screw head 4 mm Power circuit: 5 N.m - on screw clamp terminals - cable 1...25 mm <sup>2</sup> hexagonal screw head 4 mm
Operating time	42.5...57.5 ms closing 16...24 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	Built-in bidirectional peak limiting diode suppressor
Time constant	34 ms
Inrush power in W	19 W (at 20 °C)
Hold-in power consumption in W	7.4 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
Contact compatibility	M7
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 storage	-60...80 °C
Operating altitude	3000 m without derating
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	122 mm
Width	70 mm
Depth	120 mm
Net weight	1.225 kg

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	1.152 kg
Package 1 Height	7.5 cm
Package 1 width	13.8 cm
Package 1 Length	15.3 cm

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH free of SVHC	Yes
EU RoHS Directive	Compliant <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="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
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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