



### 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-4 AC-1
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit: $\leq 1000$ V AC 25...400 Hz Power circuit: $\leq 300$ V DC
[Ie] rated operational current	200 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit 150 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit
Motor power kW	40 kW at 220...230 V AC 50/60 Hz (AC-3) 75 kW at 380...400 V AC 50/60 Hz (AC-3) 80 kW at 415...440 V AC 50/60 Hz (AC-3) 90 kW at 500 V AC 50/60 Hz (AC-3) 100 kW at 660...690 V AC 50/60 Hz (AC-3) 75 kW at 1000 V AC 50/60 Hz (AC-3) 22 kW at 400 V AC 50/60 Hz (AC-4)
Motor power hp	40 Hp at 200/208 V AC 50/60 Hz for 3 phases motors 50 Hp at 230/240 V AC 50/60 Hz for 3 phases motors 100 Hp at 460/480 V AC 50/60 Hz for 3 phases motors 125 Hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	AC at 50/60 Hz
[Uc] control circuit voltage	24 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	8 kV conforming to IEC 60947
Oversoltage category	III
[Ith] conventional free air thermal current	200 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 1660 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	1400 A at 440 V for power circuit conforming to IEC 60947

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[I <sub>cw</sub> ] rated short-time withstand current	250 A 40 °C - 10 min for power circuit 580 A 40 °C - 1 min for power circuit 1200 A 40 °C - 10 s for power circuit 1400 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 60947-5-1 315 A gG at ≤ 690 V coordination type 1 for power circuit 250 A gG at ≤ 690 V coordination type 2 for power circuit
Average impedance	0.6 MOhm - I <sub>th</sub> 200 A 50 Hz for power circuit
[U <sub>i</sub> ] 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	0.85 Mcycles 150 A AC-3 at U <sub>e</sub> ≤ 440 V 1 Mcycles 200 A AC-1 at U <sub>e</sub> ≤ 440 V
Power dissipation per pole	24 W AC-1 13.5 W AC-3
Protective 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	UL GOST CCC GL BV RINA 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...2.5 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> solid without cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> solid without cable end Power circuit: connector 1 cable(s) 10...120 mm <sup>2</sup> flexible without cable end Power circuit: connector 2 cable(s) 10...50 mm <sup>2</sup> flexible without cable end Power circuit: connector 1 cable(s) 10...120 mm <sup>2</sup> flexible with cable end Power circuit: connector 2 cable(s) 10...50 mm <sup>2</sup> flexible with cable end Power circuit: connector 1 cable(s) 10...120 mm <sup>2</sup> solid without cable end Power circuit: connector 2 cable(s) 10...50 mm <sup>2</sup> 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 hexagonal screw head 4 mm
Operating time	20...35 ms closing 40...75 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	8 Mcycles
Maximum operating rate	1200 Cyc/H 60 °C

## Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.3...0.5 U <sub>c</sub> (-40...70 °C):drop-out AC 50/60 Hz 0.8...1.15 U <sub>c</sub> (-40...55 °C):operational AC 50/60 Hz 1...1.15 U <sub>c</sub> (55...70 °C):operational AC 50/60 Hz
Inrush power in VA	280...350 VA 60 Hz cos phi 0.9 (at 20 °C) 280...350 VA 50 Hz cos phi 0.9 (at 20 °C)
Hold-in power consumption in VA	2...18 VA 60 Hz cos phi 0.9 (at 20 °C) 2...18 VA 50 Hz cos phi 0.9 (at 20 °C)
Heat dissipation	3...4.5 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	-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: 6 Gn for 11 ms
Height	158 Mm
Width	120 Mm
Depth	136 Mm
Net weight	2.5 Kg

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	2.454 Kg
Package 1 Height	17.2 Cm
Package 1 width	18.8 Cm
Package 1 Length	20.6 Cm
Unit Type of Package 2	CAR
Number of Units in Package 2	1
Package 2 Weight	2.454 Kg
Package 2 Height	19 Cm
Package 2 width	18 Cm
Package 2 Length	21 Cm
Unit Type of Package 3	S04
Number of Units in Package 3	4
Package 3 Weight	10 Kg
Package 3 Height	30 Cm
Package 3 width	40 Cm
Package 3 Length	60 Cm

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
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>
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
PVC free	Yes

## Contractual warranty

Warranty	18 months
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Product Life Status : **Commercialised**