



### Commercial status

End of Commercialisation :

⚠ End of Commercialisation

### Main

Range of product	TeSys D
Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Device short name	LC1D38
Contactor application	Resistive load Motor control
Utilisation category	AC-1 AC-3
Poles description	3P
Pole contact composition	3 NO
[Ue] rated operational voltage	$\leq 300$ V DC for power circuit $\leq 690$ V AC 25...400 Hz for power circuit
[Ie] rated operational current	38 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit 50 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit
Motor power kW	18.5 kW at 380...400 V AC 50/60 Hz 18.5 kW at 500 V AC 50/60 Hz 18.5 kW at 660...690 V AC 50/60 Hz 18.5 kW at 415...440 V AC 50/60 Hz 9 kW at 220...230 V AC 50/60 Hz
Motor power hp	10 hp at 230/240 V AC 50/60 Hz for 3 phases motors 10 hp at 200/208 V AC 50/60 Hz for 3 phases motors 5 hp at 240 V AC 50/60 Hz for 1 phase motors 20 hp at 480 V AC 50/60 Hz for 3 phases motors 25 hp at 600 V AC 50/60 Hz for 3 phases motors
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	Conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	50 A at $\leq 60$ °C for power circuit 10 A at $\leq 60$ °C for signalling circuit
Irms rated making capacity	550 A at 440 V for power circuit conforming to IEC 60947 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	550 A at 440 V for power circuit conforming to IEC 60947

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[I <sub>cw</sub> ] rated short-time withstand current	150 A ≤ 40 °C 1 min power circuit 310 A ≤ 40 °C 10 s power circuit 430 A ≤ 40 °C 1 s power circuit 60 A ≤ 40 °C 10 min power circuit 100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit
Associated fuse rating	63 A gG at ≤ 690 V coordination type 1 for power circuit 63 A gG at ≤ 690 V coordination type 2 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
Average impedance	2 mOhm at 50 Hz - I <sub>th</sub> 50 A for power circuit
[U <sub>i</sub> ] rated insulation voltage	600 V for power circuit certifications CSA 600 V for power circuit certifications UL 690 V for power circuit conforming to IEC 60947-4-1 690 V for signalling circuit conforming to IEC 60947-1 600 V for signalling circuit certifications CSA 600 V for signalling circuit certifications UL
Electrical durability	1.4 Mcycles 50 A AC-1 at U <sub>e</sub> ≤ 440 V 1.4 Mcycles 38 A AC-3 at U <sub>e</sub> ≤ 440 V
Power dissipation per pole	3 W AC-3 5 W AC-1
Protective cover	Without
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	GL LROS (Lloyds register of shipping) RINA BV DNV UL CCC CSA GOST
Connections - terminals	Control circuit : lugs-ring terminals - external diameter: 8 mm Power circuit : lugs-ring terminals - external diameter: 10 mm
Tightening torque	Control circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm-screw : M3.5 Control circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 screw : M3.5 Power circuit : 2.5 N.m - on lugs-ring terminals - with screwdriver flat Ø 8 mm-screw : M4 Power circuit : 2.5 N.m - on lugs-ring terminals - with screwdriver Philips No 2 screw : M4
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
Operating rate	3600 cyc/h at ≤ 60 °C

## Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.3 U <sub>c</sub> drop-out at 60 °C, DC 0.8...1.25 U <sub>c</sub> operational at 60 °C, 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
Contact compatibility	M5
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	-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 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 8 Gn for 11 ms
Height	85 mm
Width	45 mm
Depth	99 mm
Product weight	0.54 kg

## Contractual warranty

Warranty period	18 months
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Product Life Status :	<b>End of commercialisation</b>
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