

# LC1D253ML

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  V  
25 A - 220 V DC coil



⚠ Discontinued

LC1D253ML has not been replaced. Please contact your customer care center for more information.

## Main

Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-1 AC-3
Poles description	3P
Power 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	25 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit 25 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit
Motor power kW	11 kW at 380...400 V AC 50/60 Hz 15 kW at 500 V AC 50/60 Hz 15 kW at 660...690 V AC 50/60 Hz 5.5 kW at 220...230 V AC 50/60 Hz 11 kW at 415...440 V AC 50/60 Hz
Motor power HP (UL / CSA)	2 hp at 115 V AC 50/60 Hz for 1 phase motors 7.5 hp at 200/208 V AC 50/60 Hz for 3 phases motors 3 hp at 230/240 V AC 50/60 Hz for 1 phase motors 7.5 hp at 230/240 V AC 50/60 Hz for 3 phases motors 15 hp at 460/480 V AC 50/60 Hz for 3 phases motors 20 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	DC low consumption
[Uc] control circuit voltage	220 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	25 A at $\leq 60$ °C for power circuit 10 A at $\leq 60$ °C for signalling circuit
Irms rated making capacity	450 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	450 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	120 A $\leq 40$ °C 1 min power circuit

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

	240 A <= 40 °C 10 s power circuit 380 A <= 40 °C 1 s power circuit 50 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	40 A gG at <= 690 V coordination type 2 for power circuit 63 A gG at <= 690 V coordination type 1 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
Average impedance	2 mOhm at 50 Hz - Ith 25 A for power circuit
[Ui] 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	1.65 Mcycles 25 A AC-3 at Ue <= 440 V 1.4 Mcycles 40 A AC-1 at Ue <= 440 V
Power dissipation per pole	3.2 W AC-1 1.25 W AC-3
Safety 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	BV CCC CSA DNV GL GOST LROS (Lloyds register of shipping) RINA UL
Connections - terminals	Control circuit : spring terminals 1 cable(s) 2.5 mm <sup>2</sup> - cable stiffness: flexible - without cable end Control circuit : spring terminals 2 cable(s) 2.5 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit : spring terminals 1 cable(s) 4 mm <sup>2</sup> - cable stiffness: flexible - without cable end Power circuit : spring terminals 2 cable(s) 4 mm <sup>2</sup> - cable stiffness: flexible - without cable end
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 Uc drop-out at 60 °C, DC 0.8...1.25 Uc 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 energisation between NC and NO contact 1.5 ms on de-energisation between NC and NO contact

Insulation resistance	> 10 MOhm for signalling circuit
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## 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 in temperature
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	99 mm
Width	45 mm
Depth	101 mm
Product weight	0.53 kg

## Contractual warranty

Warranty period	18 months
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