



ⓘ Discontinued

LC1D255R7 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-3 AC-1
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-3 for power circuit 40 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 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	AC 50/60 Hz
[Uc] control circuit voltage	440 V AC 50/60 Hz
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	40 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

	<p>240 A &lt;= 40 °C 10 s power circuit  380 A &lt;= 40 °C 1 s power circuit  50 A &lt;= 40 °C 10 min power circuit  100 A 1 s signalling circuit  120 A 500 ms signalling circuit  140 A 100 ms signalling circuit</p>
Associated fuse rating	<p>40 A gG at &lt;= 690 V coordination type 2 for power circuit  63 A gG at &lt;= 690 V coordination type 1 for power circuit  10 A gG for signalling circuit conforming to IEC 60947-5-1</p>
Average impedance	2 mOhm at 50 Hz - lth 40 A for power circuit
[Ui] rated insulation voltage	<p>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</p>
Electrical durability	<p>1.65 Mcycles 25 A AC-3 at Ue &lt;= 440 V  1.4 Mcycles 40 A AC-1 at Ue &lt;= 440 V</p>
Power dissipation per pole	<p>3.2 W AC-1  1.25 W AC-3</p>
Safety cover	Without
Mounting support	<p>Plate  Rail</p>
Standards	<p>CSA C22.2 No 14  EN 60947-4-1  EN 60947-5-1  IEC 60947-4-1  IEC 60947-5-1  UL 508</p>
Product certifications	<p>BV  GL  RINA  CCC  DNV  UL  CSA  LROS (Lloyds register of shipping)  GOST</p>
Connections - terminals	<p>Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm<sup>2</sup> - cable stiffness: flexible - with cable end  Power circuit : screw clamp terminals 1 cable(s) 1.5...10 mm<sup>2</sup> - cable stiffness: solid - without cable end  Control circuit : screw clamp terminals 1 cable(s) 1...4 mm<sup>2</sup> - cable stiffness: flexible - without cable end  Control circuit : screw clamp terminals 2 cable(s) 1...4 mm<sup>2</sup> - cable stiffness: flexible - without cable end  Control circuit : screw clamp terminals 1 cable(s) 1...4 mm<sup>2</sup> - cable stiffness: flexible - with cable end  Control circuit : screw clamp terminals 1 cable(s) 1...4 mm<sup>2</sup> - cable stiffness: solid - without cable end  Control circuit : screw clamp terminals 2 cable(s) 1...4 mm<sup>2</sup> - cable stiffness: solid - without cable end  Power circuit : screw clamp terminals 1 cable(s) 2.5...10 mm<sup>2</sup> - cable stiffness: flexible - without cable end  Power circuit : screw clamp terminals 2 cable(s) 2.5...10 mm<sup>2</sup> - cable stiffness: flexible - without cable end  Power circuit : screw clamp terminals 1 cable(s) 1...10 mm<sup>2</sup> - cable stiffness: flexible - with cable end  Power circuit : screw clamp terminals 2 cable(s) 1.5...6 mm<sup>2</sup> - cable stiffness: flexible - with cable end  Power circuit : screw clamp terminals 2 cable(s) 2.5...10 mm<sup>2</sup> - cable stiffness: solid - without cable end</p>
Tightening torque	<p>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 : 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm  Power circuit : 2.5 N.m - on screw clamp terminals - with screwdriver Philips No 2</p>
Operating time	<p>4...19 ms opening  12...22 ms closing</p>
Safety reliability level	<p>B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1  B10d = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1</p>
Mechanical durability	15 Mcycles
Operating rate	3600 cyc/h at <= 60 °C

## Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc drop-out at 60 °C, AC 50/60 Hz 0.8...1.1 Uc operational at 60 °C, AC 50 Hz 0.85...1.1 Uc operational at 60 °C, AC 60 Hz
Inrush power in VA	70 VA at 20 °C (cos $\phi$ 0.75) 60 Hz 70 VA at 20 °C (cos $\phi$ 0.75) 50 Hz
Hold-in power consumption in VA	7.5 VA at 20 °C (cos $\phi$ 0.3) 60 Hz 7 VA at 20 °C (cos $\phi$ 0.3) 50 Hz
Heat dissipation	2...3 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 energisation between NC and NO contact 1.5 ms on de-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	-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	90 mm
Product weight	0.37 kg

## Contractual warranty

Warranty period	18 months
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