



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	≤ 300 V DC for power circuit ≤ 690 V AC 25...400 Hz for power circuit
[Ie] rated operational current	12 A (≤ 60 °C) at ≤ 440 V AC AC-3 for power circuit 25 A (≤ 60 °C) at ≤ 440 V AC AC-1 for power circuit
Motor power kW	3 kW at 220...230 V AC 50/60 Hz 7.5 kW at 500 V AC 50/60 Hz 7.5 kW at 660...690 V AC 50/60 Hz 5.5 kW at 380...400 V AC 50/60 Hz 5.5 kW at 415...440 V AC 50/60 Hz
Motor power HP (UL / CSA)	2 hp at 230/240 V AC 50/60 Hz for 1 phase motors 3 hp at 200/208 V AC 50/60 Hz for 3 phases motors 3 hp at 230/240 V AC 50/60 Hz for 3 phases motors 7.5 hp at 460/480 V AC 50/60 Hz for 3 phases motors 10 hp at 575/600 V AC 50/60 Hz for 3 phases motors 0.5 hp at 115 V AC 50/60 Hz for 1 phase motors
Control circuit type	AC 50/60 Hz
[Uc] control circuit voltage	480 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	25 A at ≤ 60 °C for power circuit 10 A at ≤ 60 °C for signalling circuit
Irms rated making capacity	250 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	250 A at 440 V for power circuit conforming to IEC 60947

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

[I _{cw}] rated short-time withstand current	105 A ≤ 40 °C 10 s power circuit 210 A ≤ 40 °C 1 s power circuit 30 A ≤ 40 °C 10 min power circuit 61 A ≤ 40 °C 1 min power circuit 100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit
Associated fuse rating	25 A gG at ≤ 690 V coordination type 2 for power circuit 40 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	2.5 mΩ at 50 Hz - I _{th} 25 A for power circuit
[U _i] 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	2 Mcycles 12 A AC-3 at U _e ≤ 440 V 0.8 Mcycles 25 A AC-1 at U _e ≤ 440 V
Power dissipation per pole	0.36 W AC-3 1.56 W AC-1
Safety 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	BV CCC CSA DNV GL GOST LROS (Lloyds register of shipping) RINA UL
Connections - terminals	Power circuit : Faston terminals 2 Control circuit : Faston terminals 1
Operating time	4...19 ms opening 12...22 ms closing
Safety reliability level	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
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 U _c drop-out at 60 °C, AC 50/60 Hz 0.8...1.1 U _c operational at 60 °C, AC 50 Hz 0.85...1.1 U _c operational at 60 °C, AC 60 Hz
Inrush power in VA	70 VA at 20 °C (cos φ 0.75) 60 Hz 70 VA at 20 °C (cos φ 0.75) 50 Hz
Hold-in power consumption in VA	7.5 VA at 20 °C (cos φ 0.3) 60 Hz 7 VA at 20 °C (cos φ 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 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 open 10 Gn for 11 ms
Shocks contactor closed 15 Gn for 11 ms

Height 80 mm

Width 45 mm

Depth 84 mm

Product weight 0.325 kg

Contractual warranty

Warranty period 18 months