



Main

Range	TeSys
Product name	TeSys D
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load
Utilisation category	AC-1
Poles description	4P
Power pole contact composition	4 NO
[Ue] rated operational voltage	≤ 300 V DC for power circuit ≤ 690 V AC 25...400 Hz for power circuit
[Ie] rated operational current	60 A (≤ 60 °C) at ≤ 440 V AC AC-1 for power circuit
Control circuit type	AC 50/60 Hz
[Uc] control circuit voltage	100 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	60 A at ≤ 60 °C for power circuit 10 A at ≤ 60 °C for signalling circuit
Rms rated making capacity	800 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	800 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit 320 A ≤ 40 °C 10 s power circuit 720 A ≤ 40 °C 1 s power circuit 72 A ≤ 40 °C 10 min power circuit 165 A ≤ 40 °C 1 min power circuit
Associated fuse rating	80 A gG at ≤ 690 V coordination type 1 for power circuit 80 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	1.6 mOhm at 50 Hz - Ith 60 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

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

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 60 A AC-1 at $U_e \leq 440$ V
Power dissipation per pole	5.8 W AC-1
Safety 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	CSA LROS (Lloyds register of shipping) UL RINA BV DNV GOST CCC GL
Connections - terminals	Control circuit : lugs-ring terminals - external diameter: 8 mm Power circuit : lugs-ring terminals - external diameter: 16.5 mm
Tightening torque	Control circuit : 1.7 N.m - on lugs-ring terminals - with screwdriver flat \varnothing 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 : 6 N.m - on lugs-ring terminals hexagonal 10 mm screw : M6
Operating time	12...26 ms closing 4...19 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	6 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	140 VA at 20 °C ($\cos \phi$ 0.75) 60 Hz 160 VA at 20 °C ($\cos \phi$ 0.75) 50 Hz
Hold-in power consumption in VA	13 VA at 20 °C ($\cos \phi$ 0.3) 60 Hz 15 VA at 20 °C ($\cos \phi$ 0.3) 50 Hz
Heat dissipation	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 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 open 10 Gn for 11 ms Shocks contactor closed 15 Gn for 11 ms
Height	122 mm
Width	70 mm
Depth	120 mm
Product weight	1.09 kg

Contractual warranty

Warranty period	18 months
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