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Main

Range of product	TeSys D
Product or component type	Contactator
Device short name	LC1D
Contactator application	Motor control Resistive load
Utilisation category	AC-1 AC-3
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	<= 690 V DC for power circuit <= 690 V AC 25...400 Hz for power circuit
[Ie] rated operational current	80 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit 50 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit
Motor power kW	30 kW at 440 V AC 50/60 Hz 25 kW at 415 V AC 50/60 Hz 33 kW at 660...690 V AC 50/60 Hz 30 kW at 500 V AC 50/60 Hz 22 kW at 380...400 V AC 50/60 Hz 15 kW at 220...230 V AC 50/60 Hz
Motor power HP (UL / CSA)	40 hp at 575/600 V AC 50/60 Hz for 3 phases motors 40 hp at 460/480 V AC 50/60 Hz for 3 phases motors 15 hp at 230/240 V AC 50/60 Hz for 3 phases motors 15 hp at 200/208 V AC 50/60 Hz for 3 phases motors 7.5 hp at 230/240 V AC 50/60 Hz for 1 phase motors 3 hp at 115 V AC 50/60 Hz for 1 phase motors
Control circuit type	AC 50/60 Hz
Control circuit voltage	120 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	80 A at <= 60 °C for power circuit 10 A at <= 60 °C for signalling circuit
Irms rated making capacity	900 A at 440 V for power circuit conforming to IEC 60947 250 A DC for signalling circuit conforming to IEC 60947-5-1 140 A AC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	900 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	208 A <= 40 °C 1 min power circuit 84 A <= 40 °C 10 min power circuit 810 A <= 40 °C 1 s power circuit 400 A <= 40 °C 10 s power circuit 140 A 100 ms signalling circuit 120 A 500 ms signalling circuit 100 A 1 s signalling circuit
Associated fuse rating	100 A gG at <= 690 V coordination type 2 for power circuit 100 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	1.5 mOhm at 50 Hz - Ith 80 A for power circuit

[Ui] rated insulation voltage	600 V for signalling circuit certifications UL 600 V for signalling circuit certifications CSA 690 V for signalling circuit conforming to IEC 60947-1 600 V for power circuit certifications UL 600 V for power circuit certifications CSA 690 V for power circuit conforming to IEC 60947-4-1
Electrical durability	1.1 Mcycles 80 A AC-1 at $U_e \leq 440$ V 1.45 Mcycles 50 A AC-3 at $U_e \leq 440$ V
Power dissipation per pole	9.6 W AC-1 3.7 W AC-3
Safety cover	With
Mounting support	Plate Rail
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 CSA C22.2 n°14
Product certifications	BV CCC CSA DNV GL GOST RINA UL LROS
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 Philips No 2 screw : M3.5 Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm 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 = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 B10d = 1369863 cycles contactor with nominal 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	0.85...1.1 U_c at 60 °C operational 60 Hz 0.8...1.1 U_c at 60 °C operational 50 Hz 0.3...0.6 U_c at 60 °C drop-out 50/60 Hz
Inrush power in VA	160 VA at 20 °C (cos ϕ 0.75) 50 Hz 140 VA at 20 °C (cos ϕ 0.75) 60 Hz
Hold-in power consumption in VA	15 VA at 20 °C (cos ϕ 0.3) 50 Hz 13 VA at 20 °C (cos ϕ 0.3) 60 Hz
Heat dissipation	4...5 W at 50/60 Hz
Auxiliary contacts type	Type mirror contact (1 NC) conforming to IEC 60947-4-1 Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1
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	IP2x 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	Shocks contactor closed 15 Gn for 11 ms Shocks contactor open 10 Gn for 11 ms Vibrations contactor closed 4 Gn, 5...300 Hz Vibrations contactor open 2 Gn, 5...300 Hz
Height	122 mm
Width	55 mm
Depth	120 mm
Product weight	0.855 kg

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS	Compliant - since 0001 - download declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available Download Product Environmental
Product end of life instruction	Need no specific recycling operations Download Product environmental