Product data sheet
Characteristics

LC1D09Y7
Contactor, TeSys Deca, 3P(3NO), AC-3/3e, <=440V, 9A, 690V AC 50/60Hz coil, screw clamp terminals



Main

Range of product	TeSys Deca Advanced
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-3e AC-1 AC-4
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC
[Ie] rated operational current	9 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 9 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	690 V AC 50/60 Hz

Complementary

Motor power kW	2.2 KW at 220/230 V AC 50/60 Hz (AC-3) 4 KW at 380/400 V AC 50/60 Hz (AC-3) 4 KW at 415/440 V AC 50/60 Hz (AC-3) 5.5 KW at 500 V AC 50/60 Hz (AC-3) 5.5 KW at 660/690 V AC 50/60 Hz (AC-3) 2.2 KW at 220/230 V AC 50/60 Hz (AC-3e) 4 KW at 380/400 V AC 50/60 Hz (AC-3e) 4 KW at 415/440 V AC 50/60 Hz (AC-3e) 5.5 KW at 500 V AC 50/60 Hz (AC-3e) 5.5 KW at 660/690 V AC 50/60 Hz (AC-3e) 2.2 KW at 400 V AC 50/60 Hz (AC-4)
Motor power hp	1 Hp at 230/240 V AC 50/60 Hz for 1 phase motors 2 Hp at 200/208 V AC 50/60 Hz for 3 phases motors 2 Hp at 230/240 V AC 50/60 Hz for 3 phases motors 5 Hp at 460/480 V AC 50/60 Hz for 3 phases motors 7.5 Hp at 575/600 V AC 50/60 Hz for 3 phases motors 0.33 Hp at 115 V AC 50/60 Hz for 1 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[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
[Icw] rated short-time withstand current	105 A 40 °C - 10 s for power circuit 210 A 40 °C - 1 s for power circuit 30 A 40 °C - 10 min for power circuit 61 A 40 °C - 1 min for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit
Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 25 A gG at <= 690 V coordination type 1 for power circuit 20 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2.5 MOhm - Ith 25 A 50 Hz for power circuit
Power dissipation per pole	1.56 W AC-1 0.2 W AC-3 0.2 W AC-3e
[Ui] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
Overvoltage category	III
Pollution degree	3
[Uimp] rated impulse withstand voltage	6 KV conforming to IEC 60947
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	15 Mcycles
Electrical durability	0.6 Mcycles 25 A AC-1 at Ue <= 440 V 2 Mcycles 9 A AC-3 at Ue <= 440 V 2 Mcycles 9 A AC-3e at Ue <= 440 V
Control circuit type	AC at 50/60 Hz
Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc (-40…70 °C):drop-out AC 50/60 Hz 0.8...1.1 Uc (-40…60 °C):operational AC 50 Hz 0.85...1.1 Uc (-40…60 °C):operational AC 60 Hz 1...1.1 Uc (60…70 °C):operational AC 50/60 Hz
Inrush power in VA	70 VA 60 Hz cos phi 0.75 (at 20 °C) 70 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	7.5 VA 60 Hz cos phi 0.3 (at 20 °C) 7 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	2…3 W at 50/60 Hz
Operating time	12...22 ms closing 4...19 ms opening
Maximum operating rate	3600 Cyc/H at 60 °C
Connections - terminals	Power circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without cable end
Tightening torque	Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2 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 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
Auxiliary contact composition	1 NO + 1 NC
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 voltage	17 V for signalling circuit
Minimum switching current	5 MA for signalling circuit
Insulation resistance	> 10 MOhm for signalling circuit

Non-overlap time	1.5 Ms on de-energisation between NC and NO contact 1.5 Ms on energisation between NC and NO contact
Mounting support	Rail Plate

Environment

Standards	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 60947-4-1 IEC 60335-1:Clause 30.2 IEC 60335-2-40:Annex JJ UL 60335-2-40:Annex JJ CSA C22.2 No 60947-4-1
Product certifications	UL[RETURN]CCC[RETURN]CSA[RETURN]Marine[RETURN]UKCA[RETURN]EAC[RETURN]C
IP degree of protection	IP20 front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Climatic withstand	Conforming to IACS E10 exposure to damp heat conforming to IEC 60947-1 Annex Q category D exposure to damp heat
Permissible ambient air temperature around the device	-40…60 °C 60…70 °C with derating
Operating altitude	0...3000 m
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	77 Mm
Width	45 Mm
Depth	86 Mm
Net weight	0.32 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.600 Cm
Package 1 Width	9.500 Cm
Package 1 Length	11.900 Cm
Package 1 Weight	356.000 G

Offer Sustainability

Recyclability potential, in %	66
Total lifecycle Carbon footprint	22 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	1.3270606595083658
Carbon footprint of the manufacturing phase [A1 to A3]	1 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.14831843609127973
Carbon footprint of the distribution phase [A4]	0.1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.05226784248176469
Carbon footprint of the installation phase [A5]	0.1 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	20.879531672955483
REACh free of SVHC	Yes
Carbon footprint of the use phase [B2, B3, B4, B6]	21 kg CO2 eq.
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	Yes
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	22

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
REACh Regulation	Free of Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant
California proposition 65	WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxi
PVC free	Yes
End of life manual availability	End Of Life Information
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised