

Contactor, TeSys Deca, 3P(3 NO), AC-3/AC-3e, 0 to 440V, 50A, 230VAC 50/60Hz coil

LC1D50AP7

Range	TeSys TeSys Deca
Range of product	TeSys Deca
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-4 AC-1 AC-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25400 Hz Power circuit: <= 300 V DC
[le] rated operational current	50 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 50 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	230 V AC 50/60 Hz

Motor power kW	15 kW at 220230 V AC 50/60 Hz (AC-3)
	22 kW at 380400 V AC 50/60 Hz (AC-3)
	30 kW at 500 V AC 50/60 Hz (AC-3)
	33 kW at 660690 V AC 50/60 Hz (AC-3)
	25 kW at 415 V AC 50/60 Hz (AC-3)
	30 kW at 440 V AC 50/60 Hz (AC-3)
	11 kW at 400 V AC 50/60 Hz (AC-4)
	15 kW at 220230 V AC 50/60 Hz (AC-3e)
	22 kW at 380400 V AC 50/60 Hz (AC-3e)
	30 kW at 500 V AC 50/60 Hz (AC-3e)
	33 kW at 660690 V AC 50/60 Hz (AC-3e)
	25 kW at 415 V AC 50/60 Hz (AC-3e)
	30 kW at 440 V AC 50/60 Hz (AC-3e)
Motor power hp	3 hp at 115 V AC 50/60 Hz for 1 phase motors
	7.5 hp at 230/240 V AC 50/60 Hz for 1 phase motors
	15 hp at 200/208 V AC 50/60 Hz for 3 phases motors
	15 hp at 230/240 V AC 50/60 Hz for 3 phases motors
	40 hp at 460/480 V AC 50/60 Hz for 3 phases motors
	40 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Compatibility code	LC1D
Pole contact composition	3 NO
Contact compatibility	M2
Protective cover	With

[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 80 A (at 60 °C) for power circuit	
Irms rated making capacity	140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1 900 A at 440 V for power circuit conforming to IEC 60947	
Rated breaking capacity	900 A at 440 V for power circuit conforming to IEC 60947	
[lcw] rated short-time withstand current	400 A 40 °C - 10 s for power circuit 810 A 40 °C - 1 s for power circuit 84 A 40 °C - 10 min for power circuit 208 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 60947-5-1 100 A gG at <= 690 V coordination type 1 for power circuit 100 A gG at <= 690 V coordination type 2 for power circuit	
Average impedance	1.5 mOhm - Ith 80 A 50 Hz for power circuit	
Power dissipation per pole	3.7 W AC-3 9.6 W AC-1 3.7 W AC-3e	
[Ui] rated insulation voltage	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 Power circuit: 690 V conforming to IEC 60947-4-1	
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	6 Mcycles	
Electrical durability	1.45 Mcycles 50 A AC-3 at Ue <= 440 V 1.1 Mcycles 80 A AC-1 at Ue <= 440 V 1.45 Mcycles 50 A AC-3e at Ue <= 440 V	
Control circuit type	AC at 50/60 Hz standard	
Coil technology	Without built-in suppressor module	
Control circuit voltage limits	0.30.6 Uc (-4070 °C):drop-out AC 50/60 Hz 0.81.1 Uc (-4060 °C):operational AC 50 Hz 0.851.1 Uc (-4060 °C):operational AC 60 Hz 11.1 Uc (6070 °C):operational AC 50/60 Hz	
Inrush power in VA	140 VA 60 Hz cos phi 0.75 (at 20 °C) 160 VA 50 Hz cos phi 0.75 (at 20 °C)	
Hold-in power consumption in VA	13 VA 60 Hz cos phi 0.3 (at 20 °C) 15 VA 50 Hz cos phi 0.3 (at 20 °C)	
Heat dissipation	45 W at 50/60 Hz	
Operating time	419 ms opening 1226 ms closing	
Maximum operating rate	3600 cyc/h 60 °C	
Connections - terminals	Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 14 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 14 mm² - cable stiffness: solid without cable end Power circuit: screw connection 1 135 mm² - cable stiffness: flexible without cable end Power circuit: screw connection 2 125 mm² - cable stiffness: flexible without cable end Power circuit: screw connection 2 125 mm² - cable stiffness: flexible with cable end Power circuit: screw connection 2 125 mm² - cable stiffness: solid without cable end Power circuit: screw connection 1 135 mm² - cable stiffness: solid without cable end Power circuit: screw connection 2 125 mm² - cable stiffness: solid without cable end Power circuit: screw connection 2 125 mm² - cable stiffness: solid without cable end	
Tightening torque	Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver flat Ø 6 mm Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver Philips No 2 Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 2535 mm² hexagonal screw head 4 mm	

Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm² hexagonal screw head

4 mm

Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver pozidriv No 2

Power circuit: 2.5 N.m - on EverLink BTR screw connectors - with screwdriver pozidriv No 2

1 NO + 1 NC	
type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 type mirror contact 1 NC conforming to IEC 60947-4-1	
25400 Hz	
17 V for signalling circuit	
5 mA for signalling circuit	
> 10 MOhm for signalling circuit	
1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact	
Plate Rail	
	type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 type mirror contact 1 NC conforming to IEC 60947-4-1 25400 Hz 17 V for signalling circuit 5 mA for signalling circuit > 10 MOhm for signalling circuit 1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact 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 508 IEC 60335-1	
Product certifications	GL BV GOST CCC CSA UL RINA LROS (Lloyds register of shipping) DNV	
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	-4060 °C 6070 °C with derating	

	conforming to IEC 60947-1 Annex Q category D exposure to damp heat	
Permissible ambient air temperature around the device	-4060 °C 6070 °C with derating	
Operating altitude	03000 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, 5300 Hz) Vibrations contactor closed (4 Gn, 5300 Hz) Shocks contactor closed (15 Gn for 11 ms) Shocks contactor open (10 Gn for 11 ms)		
Height	122 mm	

Shocks contactor open (10 Gn for 11 ms)	
Height	122 mm
Width	55 mm
Depth	120 mm
Product weight	0.855 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.2 cm
Package 1 Width	13.5 cm
Package 1 Length	15.5 cm

Package 1 Weight	918.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	10
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	9.9 kg
Unit Type of Package 3	P06
Number of Units in Package 3	160
Package 3 Height	77.0 cm
Package 3 Width	80.0 cm
Package 3 Length	60.0 cm
Package 3 Weight	165.06 kg

Offer Sustainability

Sustainable offer status	Green Premium product	
REACh Regulation	REACh Declaration	
REACh free of SVHC	Yes	
EU RoHS Directive	Compliant EU RoHS Declaration	
Toxic heavy metal free	Yes	
Mercury free	Yes	
China RoHS Regulation	China RoHS declaration Pro-active China RoHS declaration (out of China RoHS legal scope)	
RoHS exemption information	Yes	
Environmental Disclosure	Product Environmental Profile	
Circularity Profile	End of Life Information	
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins	
PVC free	Yes	

Contractual warranty

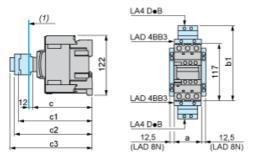
Warranty 18 months

Product datasheet

LC1D50AP7

Dimensions Drawings

Dimensions



(1) Minimum electrical clearance

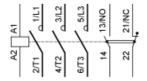
LC1		D40AD65A
а		55
b1	with LA4 D●2	-
	with LA4 DB3 or LAD 4BB3	136
	with LA4 DF, DT	157
	with LA4 DM, DW, DL	166
С	without cover or add-on blocks	118
	with cover, without add-on blocks	120
c1	with LAD N (1 contact)	-
	with LAD N or C (2 or 4 contacts)	150
c2	with LA6 DK10, LAD 6DK	163
с3	with LAD T, R, S	171
	with LAD T, R, S and sealing cover	175

Product datasheet

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Connections and Schema

Wiring



Recommended replacement(s)