Product datasheet

Specification





TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 18 A - 110 V AC coil

LC1D18F7

Main

Range of product	TeSys Deca
product or component type	Contactor
Device short name	LC1D
contactor application	Motor control Resistive load
Utilisation category	AC-1 AC-4 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	18 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 32 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 18 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	110 V AC 50/60 Hz

Complementary

Motor power kW	4 kW at 220230 V AC 50/60 Hz (AC-3) 7.5 kW at 380400 V AC 50/60 Hz (AC-3) 9 kW at 415440 V AC 50/60 Hz (AC-3) 10 kW at 500 V AC 50/60 Hz (AC-3) 10 kW at 660690 V AC 50/60 Hz (AC-3)	
	4 kW at 400 V AC 50/60 Hz (AC-4) 4 kW at 220230 V AC 50/60 Hz (AC-3e) 7.5 kW at 380400 V AC 50/60 Hz (AC-3e) 9 kW at 415440 V AC 50/60 Hz (AC-3e) 10 kW at 500 V AC 50/60 Hz (AC-3e) 10 kW at 660690 V AC 50/60 Hz (AC-3e)	
Motor power hp	1 hp at 115 V AC 50/60 Hz for 1 phase motors 3 hp at 230/240 V AC 50/60 Hz for 1 phase motors 5 hp at 200/208 V AC 50/60 Hz for 3 phases motors 5 hp at 230/240 V AC 50/60 Hz for 3 phases motors 10 hp at 460/480 V AC 50/60 Hz for 3 phases motors 15 hp at 575/600 V AC 50/60 Hz for 3 phases motors	
Compatibility code	LC1D	
Pole contact composition	3 NO	
Protective cover	With	
[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 32 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 60947-5-1 300 A at 440 V for power circuit conforming to IEC 60947	
Rated breaking capacity	300 A at 440 V for power circuit conforming to IEC 60947	

[Icw] rated short-time withstand	145 A 40 °C - 10 s for power circuit
current	240 A 40 °C - 1 s for power circuit
	40 A 40 °C - 10 min for power circuit
	84 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
	50 A gG at <= 690 V coordination type 1 for power circuit
	35 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2.5 mOhm - Ith 32 A 50 Hz for power circuit
Power dissipation per pole	2.5 W AC-1
	0.8 W AC-3
	0.8 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	1.65 Mcycles 18 A AC-3 at Ue <= 440 V
-	1 Mcycles 32 A AC-1 at Ue <= 440 V
	1.65 Mcycles 18 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	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	23 W at 50/60 Hz
Operating time	1222 ms closing
	419 ms opening
Maximum operating rate	3600 cyc/h 60 °C
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P degree of protection	UKCA CB IP20 front face conforming to IEC 60529	
	DNV LROS (Lloyds register of shipping) RINA UL CCC CSA GOST	
Product certifications	GL BV DNV	
	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 IEC 60335-1	
Environment Standards	CSA C22.2 No 14	
mounting support	Plate Rail	
Non-overlap time	1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact	
Insulation resistance	> 10 MOhm for signalling circuit	
Minimum switching current	5 mA for signalling circuit	
Minimum switching voltage	17 V for signalling circuit	
Signalling circuit frequency	type metranically linked 1 NO + 1 NC conforming to IEC 60947-3-1 type mirror contact 1 NC conforming to IEC 60947-4-1	
Auxiliary contacts type	type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1	
Auxiliary contact composition	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 1 NO + 1 NC	
Fightening 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	
	end Power circuit: screw clamp terminals 1 1.56 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 1.56 mm² - cable stiffness: solid without cable end	
	Power circuit: screw clamp terminals 1 16 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 14 mm² - cable stiffness: flexible with cable	
	cable end Power circuit: screw clamp terminals 2 1.56 mm² - cable stiffness: flexible without cable end	
	Control circuit: screw clamp terminals 2 14 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 1 1.56 mm² - cable stiffness: flexible without	
	Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: solid without cable end	
	Control circuit: screw clamp terminals 2 12.5 mm ² - cable stiffness: flexible with cable end	
	cable end Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: flexible with cable end	

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	
Operating altitude	03000 m	
Fire resistance	850 °C conforming to IEC 60695-2-1	
Flame retardance	V1 conforming to UL 94	
Vibrations contactor open (2 Gn, 5300 Hz) Vibrations contactor closed (4 Gn, 5300 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	0.33 kg	

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.2 cm
Package 1 Width	9.2 cm
Package 1 Length	11.2 cm
Package 1 Weight	356.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	20
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	7.52 kg
Unit Type of Package 3	P06
Number of Units in Package 3	320
Package 3 Height	80.0 cm
Package 3 Width	80.0 cm
Package 3 Length	60.0 cm
Package 3 Weight	129.3 kg

Contractual warranty

Warranty 18 months



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Transparency RoHS/REACh

Well-being performance

⊘	Reach Free Of Svhc
⊘	Toxic Heavy Metal Free
⊘	Mercury Free
⊘	Rohs Exemption Information Yes
⊘	Pvc Free

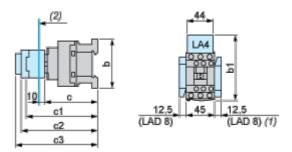
Certifications & Standards

Reach Regulation	REACh Declaration
Eu Rohs Directive	Compliant EU RoHS Declaration
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Pro-active China RoHS declaration (out of China RoHS legal scope) Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information

LC1D18F7

Dimensions Drawings

Dimensions



- (1) Including LAD 4BB
- (2) Minimum electrical clearance

LC1		D09D18	D093D123	D099D129
b	without add-on blocks	77	99	80
	with LAD 4BB	94	107	95.5
	with LA4 D●2	110 ⁽¹⁾	123 ⁽¹⁾	111.5 ⁽¹⁾
b1	with LA4 DF, DT	₁₁₉ (1)	₁₃₂ (1)	120.5 ⁽¹⁾
	with LA4 DW, DL	₁₂₆ (1)	139 ⁽¹⁾	_{127.5} (1)
С	without cover or add-on blocks	84	84	84
	with cover, without add-on blocks	86	86	86
с1	with LAD N or C (2 or 4 contacts)	117	117	117
c2	with LA6 DK10, LAD 6K10	129	129	129
с3	with LAD T, R, S	137	137	137
	with LAD T, R, S and sealing cover	141	141	141
(1)	Including LAD 4BB.			

Connections and Schema

Wiring

