## **Product datasheet**

Specification





# Contactor, TeSys D, 3P(3 NO), AC-3/AC-3e, 0 to 440V, 25A, 415VAC 50/60Hz coil

LC1D25N7

#### Main

Range of product	TeSys Deca	
Product or component type	Contactor	
Device short name	LC1D	
contactor application	Motor control Resistive load	
Utilisation category	AC-3 AC-4 AC-1 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	25 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 40 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 25 A (at <60 °C) at <= 440 V AC AC-3e for power circuit	
[Uc] control circuit voltage	415 V AC 50/60 Hz	

#### Complementary

Motor power kW	5.5 kW at 220230 V AC 50/60 Hz (AC-3)	
-	11 kW at 380400 V AC 50/60 Hz (AC-3)	
	11 kW at 415440 V AC 50/60 Hz (AC-3)	
	15 kW at 500 V AC 50/60 Hz (AC-3)	
	15 kW at 660690 V AC 50/60 Hz (AC-3)	
	5.5 kW at 400 V AC 50/60 Hz (AC-4)	
	5.5 kW at 220230 V AC 50/60 Hz (AC-3e)	
	11 kW at 380400 V AC 50/60 Hz (AC-3e)	
	11 kW at 415440 V AC 50/60 Hz (AC-3e)	
	15 kW at 500 V AC 50/60 Hz (AC-3e)	
	15 kW at 660690 V AC 50/60 Hz (AC-3e)	
Motor power hp	3 hp at 230/240 V AC 50/60 Hz for 1 phase motors	
	2 hp at 115 V AC 50/60 Hz for 1 phase motors	
	7.5 hp at 230/240 V AC 50/60 Hz for 3 phases motors	
	15 hp at 460/480 V AC 50/60 Hz for 3 phases motors	
	20 hp at 575/600 V AC 50/60 Hz for 3 phases motors	
	7.5 hp at 200/208 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	10 A (at 60 °C) for signalling circuit	
current	40 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	
	450 A at 440 V for power circuit conforming to IEC 60947	
Rated breaking capacity	450 A at 440 V for power circuit conforming to IEC 60947	

[Icw] rated short-time withstand current	240 A 40 °C - 10 s for power circuit 380 A 40 °C - 1 s for power circuit
<b>54.</b> 1.5.1.2	50 A 40 °C - 10 min for power circuit
	120 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
	63 A gG at <= 690 V coordination type 1 for power circuit
	40 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2 mOhm - Ith 40 A 50 Hz for power circuit
Power dissipation per pole	3.2 W AC-1
	1.25 W AC-3
	1.25 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
	Orginaling Groun. 600 V OE Cortined
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 25 A AC-3 at Ue <= 440 V
	1.4 Mcycles 40 A AC-1 at Ue <= 440 V
	1.65 Mcycles 25 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	0.30.6 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)
III pottor condumption III VA	7.5 VA 60 Hz cos phi 0.3 (at 20 °C) 7 VA 50 Hz cos phi 0.3 (at 20 °C)
	7 W Coo Fiz Goo pin G.O (dc 20 G)
Heat dissipation	23 W at 50/60 Hz
Operating time	1222 ms closing
	419 ms opening
Maximum operating rate	3600 cyc/h 60 °C
-	•

Connections - terminals	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 2 12.5 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 clamp terminals 1 2.510 mm² - cable stiffness: flexible without
	cable end
	Power circuit: screw clamp terminals 2 2.510 mm² - cable stiffness: flexible without cable end
	Power circuit: screw clamp terminals 1 110 mm <sup>2</sup> - cable stiffness: flexible with cable end
	Power circuit: screw clamp terminals 2 1.56 mm <sup>2</sup> - cable stiffness: flexible with cable end
	Power circuit: screw clamp terminals 1 1.510 mm² - cable stiffness: solid without cable end
	Power circuit: screw clamp terminals 2 2.510 mm² - cable stiffness: solid without cable end
Tightening torque	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 Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm
	Power circuit: 2.5 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: 2.5 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	25400 Hz
Minimum switching voltage	17 V for signalling circuit
Minimum switching current	5 mA for signalling circuit
nsulation 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 508
	IEC 60335-1
Product certifications	GL BV
	DNV
	LROS (Lloyds register of shipping)
	RINA UL
	CCC
	CSA
	GOST UKCA
	CB
P 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	
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 (8 Gn for 11 ms)	
Height	85 mm	
Width	45 mm	
Depth	92 mm	
Net weight	0.37 kg	

## **Packing Units**

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5 cm
Package 1 Width	9.2 cm
Package 1 Length	11.2 cm
Package 1 Weight	414 g
Unit Type of Package 2	S02
Number of Units in Package 2	20
Package 2 Height	15 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	8.641 kg

### **Contractual warranty**

Warranty 18 months



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Transparency RoHS/REACh

#### Well-being performance



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 Pro-active China RoHS declaration (out of China RoHS legal scope)
Environmental Disclosure	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