

## Product data sheet

### Characteristics

# LC1D09BNE

## TeSys Deca contactor 3P 9A AC-3/AC-3e up to 440V coil 24-60V AC/DC





## Main

Range	TeSys TeSys Deca
Product name	TeSys D Green TeSys Deca
Product or component type	Contacteur
Device short name	LC1D
Contacteur application	Motor control Resistive load
Utilisation category	AC-1 AC-3 AC-3e
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit: $\leq 690$ V AC 25...400 Hz
[Ie] rated operational current	9 A (at $\leq 60$ °C) at $\leq 440$ V AC-3 for power circuit 25 A (at $\leq 60$ °C) at $\leq 440$ V AC-1 for power circuit 9 A (at $\leq 60$ °C) at $\leq 440$ V AC-3e for power circuit
Motor power kW	2.2 kW at 220...230 V AC 50 Hz (AC-3) 4 kW at 380...400 V AC 50 Hz (AC-3) 4 kW at 415 V AC 50 Hz (AC-3) 4 kW at 440 V AC 50 Hz (AC-3) 5.5 kW at 500 V AC 50 Hz (AC-3) 5.5 kW at 660...690 V AC 50 Hz (AC-3) 2.2 kW at 220...230 V AC 50 Hz (AC-3e) 4 kW at 380...400 V AC 50 Hz (AC-3e) 4 kW at 415 V AC 50 Hz (AC-3e) 4 kW at 440 V AC 50 Hz (AC-3e) 5.5 kW at 500 V AC 50 Hz (AC-3e) 5.5 kW at 660...690 V AC 50 Hz (AC-3e)
Motor power HP (UL / CSA)	0.33 Hp at 115 V AC 60 Hz for 1 phase motors 1 Hp at 230/240 V AC 60 Hz for 1 phase motors 2 Hp at 200/208 V AC 60 Hz for 3 phases motors 2 Hp at 230/240 V AC 60 Hz for 3 phases motors 5 Hp at 460/480 V AC 60 Hz for 3 phases motors 7.5 hp at 575/600 V AC 60 Hz for 3 phases motors
[Uc] control circuit voltage	24...60 V AC 50/60 Hz 24...60 V DC
Coil type	AC/DC electronic
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	10 A (at $60$ °C) for signalling circuit 25 A (at $60$ °C) for power 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	100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit 30 A $40$ °C - 10 min for power circuit 61 A $40$ °C - 1 min for power circuit 105 A $40$ °C - 10 s for power circuit 210 A $40$ °C - 1 s for power 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
[U <sub>i</sub> ] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1
Electrical durability	2.4 Mcycles 8 A AC-3 at U <sub>e</sub> ≤ 440 V 0.6 Mcycles 25 A AC-1 at U <sub>e</sub> ≤ 440 V 2.4 Mcycles 8 A AC-3e at U <sub>e</sub> ≤ 440 V
Power dissipation per pole	1.56 W AC-1 0.2 W AC-3 0.2 W AC-3e
Front cover	With
Mounting support	Rail Plate
Standards	EN/IEC 60947-4-1 EN/IEC 60947-5-1 UL 60947-4-1 CSA C22.2 No 60947-4-1 IEC 60335-1
Product certifications	CCC CSA EAC UL KC DNV-GL LROS (Lloyds register of shipping) UKCA
Connections - terminals	Control circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1... 4 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1... 2.5 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> solid Control circuit: screw clamp terminals 2 cable(s) 1... 4 mm <sup>2</sup> solid Power circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> flexible without cable end Power circuit: screw clamp terminals 2 cable(s) 1... 4 mm <sup>2</sup> flexible without cable end Power circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> flexible with cable end Power circuit: screw clamp terminals 2 cable(s) 1... 2.5 mm <sup>2</sup> flexible with cable end Power circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> solid Power circuit: screw clamp terminals 2 cable(s) 1... 4 mm <sup>2</sup> solid
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: 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 Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
Operating time	45...55 ms closing 20...90 ms opening
Safety reliability level	B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1 B10d = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1
Mechanical durability	15 Mcycles
Maximum operating rate	3600 cyc/h 60 °C

## Complementary

Coil technology	Built-in bidirectional peak limiting
Control circuit voltage limits	<= 0.1 Uc (-40...70 °C):drop-out AC/DC 0.85...1.1 Uc (-40...60 °C):operational AC 0.8...1.1 Uc (-40...60 °C):operational DC 1...1.1 Uc (60...70 °C):operational AC/DC
Inrush power in VA	15 VA 50/60 Hz (at 20 °C)
Inrush power in W	14 W at 20 °C
Hold-in power consumption in VA	0.9 VA (at 20 °C) 50/60 Hz
Hold-in power consumption in W	0.6 W at 20 °C
Heat dissipation	0.6 W at 50/60 Hz
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 current	5 mA for signalling circuit
Minimum switching voltage	17 V 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
Insulation resistance	> 10 MOhm for signalling circuit

## Environment

IP degree of protection	IP20 front face conforming to IEC 60529
Climatic withstand	Conforming to IACS E10 Conforming to IEC 60947-1 Annex Q category D
Pollution degree	3
Ambient air temperature for storage	-60...80 °C
Operating altitude	0...3000 m
Fire resistance	850 °C conforming to IEC 60695-2-1
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
Ambient air temperature for operation	-40...60 °C 60...70 °C with derating
Height	77 mm
Width	45 mm
Depth	86 mm
Net weight	0.368 kg
Colour	Grey (SE GREY 6) Green (SE GREEN 2)

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	399.0 g
Package 1 Height	5.6 cm
Package 1 width	9.6 cm
Package 1 Length	12 cm
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Weight	6.293 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm
Unit Type of Package 3	P06
Number of Units in Package 3	240
Package 3 Weight	111.06 kg

Package 3 Height	77 cm
Package 3 width	60 cm
Package 3 Length	80 cm

### Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Halogen content performance	Halogen free plastic parts & cables product

### Contractual warranty

Warranty	18 months
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