

# LC1D12BD

IEC contactor, TeSys Deca, nonreversing, 12A, 7.5HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 24VDC coil, open style



## Main

Range of Product	TeSys Deca
Product or Component Type	Contactors
Device short name	LC1D
Contactors application	Resistive load Motor control
Utilisation category	AC-1 AC-4 AC-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit <= 690 V AC 25...400 Hz Power circuit <= 300 V DC
[Ie] rated operational current	25 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit 12 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit 12 A (at <140 °F (60 °C)) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	24 V DC

## Complementary

Motor power kW	3 kW at 220...230 V AC 50/60 Hz (AC-3) 5.5 kW at 380...400 V AC 50/60 Hz (AC-3) 5.5 kW at 415...440 V AC 50/60 Hz (AC-3) 7.5 kW at 500 V AC 50/60 Hz (AC-3) 7.5 kW at 660...690 V AC 50/60 Hz (AC-3) 3.7 kW at 400 V AC 50/60 Hz (AC-4) 3 kW at 220...230 V AC 50/60 Hz (AC-3e) 5.5 kW at 380...400 V AC 50/60 Hz (AC-3e) 5.5 kW at 415...440 V AC 50/60 Hz (AC-3e) 7.5 kW at 500 V AC 50/60 Hz (AC-3e) 7.5 kW at 660...690 V AC 50/60 Hz (AC-3e)
Maximum Horse Power Rating	0.5 Hp at 115 V AC 50/60 Hz for 1 phase motors 2 Hp at 230/240 V AC 50/60 Hz for 1 phase motors 3 Hp at 200/208 V AC 50/60 Hz for 3 phase motors 3 Hp at 230/240 V AC 50/60 Hz for 3 phase motors 7.5 Hp at 460/480 V AC 50/60 Hz for 3 phase motors 10 hp at 575/600 V AC 50/60 Hz for 3 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[Ith] conventional free air thermal current	25 A (at 140 °F (60 °C)) for power circuit 10 A (at 140 °F (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

The information provided in this documentation contains general descriptions and/or technical characteristics of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

[Icw] rated short-time withstand current	105 A 104 °F (40 °C) - 10 s for power circuit 210 A 104 °F (40 °C) - 1 s for power circuit 30 A 104 °F (40 °C) - 10 min for power circuit 61 A 104 °F (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 40 A gG at ≤ 690 V coordination type 1 for power circuit 25 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	0.36 W AC-3 1.56 W AC-1 0.36 W AC-3e
[Ui] rated insulation voltage	Power circuit 690 V IEC 60947-4-1 Power circuit 600 V CSA Power circuit 600 V UL Signalling circuit 690 V IEC 60947-1 Signalling circuit 600 V CSA Signalling circuit 600 V UL
Overvoltage category	III
Pollution degree	3
[Uimp] rated impulse withstand voltage	6 kV IEC 60947
Safety reliability level	B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1 B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1
Mechanical durability	30 Mcycles
Electrical durability	2 Mcycles 12 A AC-3 ≤ 440 V 0.8 Mcycles 25 A AC-1 ≤ 440 V 2 Mcycles 12 A AC-3e ≤ 440 V
Control circuit type	DC standard
Coil technology	With integral suppression device
Control circuit voltage limits	0.1...0.25 Uc -40...158 °F (-40...70 °C) drop-out DC 0.7...1.25 Uc -40...140 °F (-40...60 °C) operational DC 1...1.25 Uc 140...158 °F (60...70 °C) operational DC
Inrush power in W	5.4 W 68 °F (20 °C))
Hold-in power consumption in W	5.4 W 68 °F (20 °C)
Operating time	63 ±15 % ms closing 20 ±20 % ms opening
Time constant	28 ms
Maximum operating rate	3600 cyc/h 140 °F (60 °C)
Connections - terminals	Power circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 0.002...0.004 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid without cable end Control circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 0.002...0.004 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 0.002...0.006 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid without cable end
Tightening torque	Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2 Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2 Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2 Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2
Auxiliary contact composition	1 NO + 1 NC

Auxiliary contacts type	Mechanically linked 1 NO + 1 NC IEC 60947-5-1 Mirror contact 1 NC 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	Plate Rail

## 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[RETURN]BV[RETURN]DNV[RETURN]LR[RETURN]OS (Lloyds register of shipping) [RETURN]RINA[RETURN]UL[RETURN]CCC[RETURN]CSA[RETURN]GOST[RETURN]UKCA
IP degree of protection	IP20 front face IEC 60529
Protective treatment	THIEC 60068-2-30
Climatic withstand	IACS E10 exposure to damp heat IEC 60947-1 Annex Q category D exposure to damp heat
Permissible ambient air temperature around the device	-40...140 °F (-40...60 °C) 140...158 °F (60...70 °C) with derating
Operating altitude	0...9842.52 ft (0...3000 m)
Fire resistance	1562 °F (850 °C) 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	3.03 in (77 mm)
Width	1.8 in (45 mm)
Depth	3.7 in (95 mm)
Net Weight	1.069 lb(US) (0.485 kg)

## Ordering and shipping details

Category	US101222355
Discount Schedule	0I12
GTIN	3389110353716
Returnability	Yes
Country of origin	US

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.969 in (5.000 cm)
Package 1 Width	3.543 in (9.000 cm)
Package 1 Length	4.331 in (11.000 cm)
Package 1 Weight	18.353 oz (520.300 g)
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Height	5.906 in (15.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	17.809 lb(US) (8.078 kg)
Unit Type of Package 3	P06

Number of Units in Package 3	240
Package 3 Height	29.528 in (75.000 cm)
Package 3 Width	23.622 in (60.000 cm)
Package 3 Length	31.496 in (80.000 cm)
Package 3 Weight	301.196 lb(US) (136.620 kg)

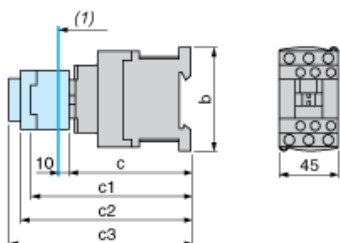
### Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Compliant with Exemptions
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
PVC free	Yes

### Contractual warranty

Warranty	18 months
----------	-----------

Dimensions



(1) Minimum electrical clearance

LC1		D09...D18	D093...D123	D099...D129
b		77	99	80
c	without cover or add-on blocks	93	93	93
with cover, without add-on blocks	95	95	95	
c1	with LAD N or C (2 or 4 contacts)	126	126	126
c2	with LA6 DK10	138	138	138
c3	with LAD T, R, S	146	146	146
with LAD T, R, S and sealing cover	150	150	150	

## Wiring

