

# Product data sheet

Specifications



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

LC1D12BD

Product availability : Stock - Normally stocked in distribution facility

Price\* : 149.00 USD

## 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 140 °F (60 °C) <= 440 V AC AC-1 power circuit 12 A 140 °F (60 °C) <= 440 V AC AC-3 power circuit 12 A 140 °F (60 °C) <= 440 V AC AC-3e power circuit
[Uc] control circuit voltage	24 V DC

## Complementary

Motor power kW	3 kW 220...230 V AC 50/60 Hz AC-3) 5.5 kW 380...400 V AC 50/60 Hz AC-3) 5.5 kW 415...440 V AC 50/60 Hz AC-3) 7.5 kW 500 V AC 50/60 Hz AC-3) 7.5 kW 660...690 V AC 50/60 Hz AC-3) 3.7 kW 400 V AC 50/60 Hz AC-4) 3 kW 220...230 V AC 50/60 Hz AC-3e) 5.5 kW 380...400 V AC 50/60 Hz AC-3e) 5.5 kW 415...440 V AC 50/60 Hz AC-3e) 7.5 kW 500 V AC 50/60 Hz AC-3e) 7.5 kW 660...690 V AC 50/60 Hz AC-3e)
Maximum Horse Power Rating	0.5 hp 115 V at AC 50/60 Hz for 1 phase 2 hp 230/240 V at AC 50/60 Hz for 1 phase 3 hp 200/208 V at AC 50/60 Hz for 3 phase 3 hp 230/240 V at AC 50/60 Hz for 3 phase 7.5 hp 460/480 V at AC 50/60 Hz for 3 phase 10 hp 575/600 V at AC 50/60 Hz for 3 phase
Compatibility code	LC1D
Pole contact composition	3 NO
Contact compatibility	M4
Protective cover	With

\* Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

<b>[Ith] conventional free air thermal current</b>	25 A 140 °F (60 °C) power circuit 10 A 140 °F (60 °C) signalling circuit
<b>Irms rated making capacity</b>	250 A 440 V power circuit IEC 60947 140 A AC signalling circuit IEC 60947-5-1 250 A DC signalling circuit IEC 60947-5-1
<b>Rated breaking capacity</b>	250 A 440 V power circuit IEC 60947
<b>[Icw] rated short-time withstand current</b>	105 A 104 °F (40 °C) - 10 s power circuit 210 A 104 °F (40 °C) - 1 s power circuit 30 A 104 °F (40 °C) - 10 min power circuit 61 A 104 °F (40 °C) - 1 min power circuit 100 A - 1 s signalling circuit 120 A - 500 ms signalling circuit 140 A - 100 ms signalling circuit
<b>Associated fuse rating</b>	10 A gG signalling circuit IEC 60947-5-1 40 A gG ≤ 690 V type 1 power circuit 25 A gG ≤ 690 V type 2 power circuit
<b>Average impedance</b>	2.5 mOhm - Ith 25 A 50 Hz power circuit
<b>Power dissipation per pole</b>	0.36 W AC-3 1.56 W AC-1 0.36 W AC-3e
<b>[Ui] rated insulation voltage</b>	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
<b>Overvoltage category</b>	III
<b>Pollution degree</b>	3
<b>[Uimp] rated impulse withstand voltage</b>	6 kV IEC 60947
<b>Safety reliability level</b>	B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1 B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1
<b>Mechanical durability</b>	30 Mcycles
<b>Electrical durability</b>	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
<b>Control circuit type</b>	DC standard
<b>Coil technology</b>	With integral suppression device
<b>Control circuit voltage limits</b>	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
<b>Inrush power in W</b>	5.4 W 68 °F (20 °C))
<b>Hold-in power consumption in W</b>	5.4 W 68 °F (20 °C)
<b>Operating time</b>	53.55...72.45 ms closing 16...24 ms opening
<b>Time constant</b>	28 ms
<b>Maximum operating rate</b>	3600 cyc/h 140 °F (60 °C)
<b>Connections - terminals</b>	Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end Power circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible with cable end Power circuit screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) flexible with cable end Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end Power circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible with cable end Control circuit screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) flexible with cable end Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end
<b>Tightening torque</b>	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

<b>Auxiliary contact composition</b>	1 NO + 1 NC
<b>Auxiliary contacts type</b>	Mechanically linked 1 NO + 1 NC IEC 60947-5-1 Mirror contact 1 NC IEC 60947-4-1
<b>Signalling circuit frequency</b>	25...400 Hz
<b>Minimum switching voltage</b>	17 V signalling circuit
<b>Minimum switching current</b>	5 mA signalling circuit
<b>Insulation resistance</b>	> 10 MOhm signalling circuit
<b>Non-overlap time</b>	1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact
<b>Mounting Support</b>	Plate Rail

## Environment

<b>Standards</b>	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
<b>Product Certifications</b>	BV CSA DNV RINA GL GOST LROS (Lloyds register of shipping) CCC UL UKCA
<b>IP degree of protection</b>	IP20 front face IEC 60529
<b>Protective treatment</b>	THIEC 60068-2-30
<b>Climatic withstand</b>	IACS E10 exposure to damp heat IEC 60947-1 Annex Q category D exposure to damp heat
<b>Permissible ambient air temperature around the device</b>	-40...140 °F (-40...60 °C) 140...158 °F (60...70 °C) with derating
<b>Operating altitude</b>	0...9842.52 ft (0...3000 m)
<b>Fire resistance</b>	1562 °F (850 °C) IEC 60695-2-1
<b>Flame retardance</b>	V1 conforming to UL 94
<b>Mechanical robustness</b>	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)
<b>Height</b>	3.03 in (77 mm)
<b>Width</b>	1.77 in (45 mm)
<b>Depth</b>	3.74 in (95 mm)
<b>Net Weight</b>	1.07 lb(US) (0.485 kg)

## Ordering and shipping details

<b>Category</b>	22355-CTR, TESYS D, OPEN, 9-38A DC
<b>Discount Schedule</b>	I12
<b>GTIN</b>	3389110353716
<b>Returnability</b>	Yes
<b>Country of origin</b>	ID

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.97 in (5.0 cm)
Package 1 Width	3.54 in (9.0 cm)
Package 1 Length	4.33 in (11.0 cm)
Package 1 Weight	18.35 oz (520.3 g)
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Height	5.91 in (15.0 cm)
Package 2 Width	11.81 in (30.0 cm)
Package 2 Length	15.75 in (40.0 cm)
Package 2 Weight	17.72 lb(US) (8.039 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	240
Package 3 Height	29.53 in (75.0 cm)
Package 3 Width	31.50 in (80.0 cm)
Package 3 Length	23.62 in (60.0 cm)
Package 3 Weight	301.20 lb(US) (136.62 kg)

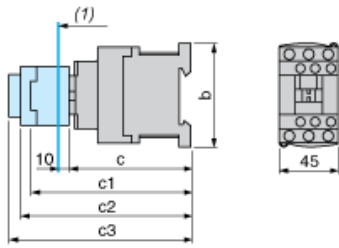
## Offer Sustainability

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 <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS declaration</a> Product out of China RoHS scope. Substance declaration for your information.
RoHS exemption information	Yes
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
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**Dimensions**



(1) Minimum electrical clearance

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

**Wiring**

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**Recommended replacement(s)**