

Product data sheet

Characteristics

LC1D18BD

IEC contactor, TeSys Deca, nonreversing, 18A, 10HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 24VDC coil, open



Main

Range of Product	TeSys Deca
Product or Component Type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-4 AC-1 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	18 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit 32 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit 18 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	4 kW at 220...230 V AC 50/60 Hz (AC-3) 7.5 kW at 380...400 V AC 50/60 Hz (AC-3) 9 kW at 415...440 V AC 50/60 Hz (AC-3) 10 kW at 500 V AC 50/60 Hz (AC-3) 10 kW at 660...690 V AC 50/60 Hz (AC-3) 4 kW at 400 V AC 50/60 Hz (AC-4) 4 kW at 220...230 V AC 50/60 Hz (AC-3e) 7.5 kW at 380...400 V AC 50/60 Hz (AC-3e) 9 kW at 415...440 V AC 50/60 Hz (AC-3e) 10 kW at 500 V AC 50/60 Hz (AC-3e) 10 kW at 660...690 V AC 50/60 Hz (AC-3e)
Maximum Horse Power Rating	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 phase motors 5 Hp at 230/240 V AC 50/60 Hz for 3 phase motors 10 Hp at 460/480 V AC 50/60 Hz for 3 phase motors 15 hp at 575/600 V AC 50/60 Hz for 3 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Contact compatibility	M4
Protective cover	With
[Ith] conventional free air thermal current	10 A (at 140 °F (60 °C)) for signalling circuit 32 A (at 140 °F (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

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[Icw] rated short-time withstand current	145 A 104 °F (40 °C) - 10 s for power circuit 240 A 104 °F (40 °C) - 1 s for power circuit 40 A 104 °F (40 °C) - 10 min for power circuit 84 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 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 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	1.65 Mcycles 18 A AC-3 <= 440 V 1 Mcycles 32 A AC-1 <= 440 V 1.65 Mcycles 18 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	53.55...72.45 ms closing 16...24 ms opening
Time constant	28 ms
Maximum operating rate	3600 cyc/h 140 °F (60 °C)
Connections - terminals	Control circuit: screw clamp terminals 1 0.00...0.01 in ² (1...4 mm ²) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 0.00...0.01 in ² (1...4 mm ²) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 0.00...0.01 in ² (1...4 mm ²) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 0.00...0.00 in ² (1...2.5 mm ²) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 0.00...0.01 in ² (1...4 mm ²) - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 0.00...0.01 in ² (1...4 mm ²) - cable stiffness: solid without cable end Power circuit: screw clamp terminals 1 0.00...0.01 in ² (1.5...6 mm ²) - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 0.00...0.01 in ² (1.5...6 mm ²) - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 0.00...0.01 in ² (1...6 mm ²) - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 0.00...0.01 in ² (1...4 mm ²) - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 0.00...0.01 in ² (1.5...6 mm ²) - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 0.00...0.01 in ² (1.5...6 mm ²) - 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	LROS (Lloyds register of shipping) [RETURN]DNV[RETURN]GL[RETURN]RINA[RETURN]BV[RETURN]CCC[RETURN]UL[RETURN]
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	1.77 in (45 mm)
Depth	3.74 in (95 mm)
Net Weight	1.08 lb(US) (0.49 kg)

Ordering and shipping details

Category	22355-CTR, TESYS D, OPEN, 9-38A DC
Discount Schedule	I12
GTIN	3389110354775
Returnability	Yes
Country of origin	ID

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.97 in (5.000 cm)
Package 1 Width	3.54 in (9.000 cm)
Package 1 Length	4.33 in (11.000 cm)
Package 1 Weight	18.43 oz (522.500 g)
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Height	5.91 in (15.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	17.79 lb(US) (8.068 kg)
Unit Type of Package 3	P06

Number of Units in Package 3	240
Package 3 Height	29.53 in (75.000 cm)
Package 3 Width	31.50 in (80.000 cm)
Package 3 Length	23.62 in (60.000 cm)
Package 3 Weight	302.21 lb(US) (137.080 kg)

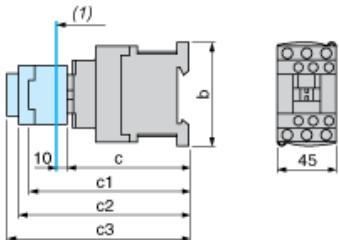
Offer Sustainability

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 www.P65Warnings.ca.gov
REACH Regulation	 REACH Declaration
EU RoHS Directive	Compliant  EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	 China RoHS Declaration
RoHS exemption information	 Yes
Environmental Disclosure	 Product Environmental Profile
Circularity Profile	 End Of Life Information
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		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

