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Product data sheet
Characteristics

LC2D09BD
TeSys D reversing contactor - 3P(3 NO) - AC-3 - <= 440 V 9 A - 24 V DC coil

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Main

Range	TeSys
Product name	TeSys D
Product or component type	Reversing contactor
Device short name	LC2D
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-1
Device presentation	Preassembled with reversing power busbar
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit <= 690 V AC 25...400 Hz Power circuit <= 300 V DC
[Ie] rated operational current	9 A 140 °F (60 °C)) <= 440 V AC AC-3 power circuit 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	2.2 KW 220...230 V AC 50 Hz 4 KW 380...400 V AC 50 Hz 4 KW 415...440 V AC 50 Hz 5.5 KW 500 V AC 50 Hz 5.5 kW 660...690 V AC 50 Hz
Motor power HP (UL / CSA)	0.5 Hp 115 V AC 60 Hz 1 phase 1 Hp 230/240 V AC 60 Hz 1 phase 2 Hp 200/208 V AC 60 Hz 3 phase 2 Hp 230/240 V AC 60 Hz 3 phase 5 Hp 460/480 V AC 60 Hz 3 phase 7.5 hp 575/600 V AC 60 Hz 3 phase
Control circuit type	DC standard
[Uc] control circuit voltage	24 V DC
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	10 A 140 °F (60 °C) signalling circuit 25 A 140 °F (60 °C) power circuit
Irms rated making capacity	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
Rated breaking capacity	250 A 440 V power circuit IEC 60947
[Icw] rated short-time withstand current	30 A 104 °F (40 °C) - 10 min power circuit 61 A 104 °F (40 °C) - 1 min power circuit 105 A 104 °F (40 °C) - 10 s power circuit 210 A 104 °F (40 °C) - 1 s power circuit 100 A - 1 s signalling circuit 120 A - 500 ms signalling circuit 140 A - 100 ms signalling circuit
Associated fuse rating	25 A gG <= 690 V type 1 power circuit 20 A gG <= 690 V type 2 power circuit 10 A gG signalling circuit IEC 60947-5-1
Average impedance	2.5 mOhm - Ith 25 A 50 Hz for power circuit
[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
Electrical durability	0.6 Mcycles 25 A AC-1 <= 440 V 2 Mcycles 9 A AC-3 <= 440 V
Power dissipation per pole	0.2 W AC-3 1.56 W AC-1

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Front cover	With
Interlocking type	Mechanical
Mounting support	Rail Plate
Standards	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508
Product certifications	RINA UL CCC DNV LROS (Lloyds register of shipping) GL GOST BV CSA
Connections - terminals	Power circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)flexible without cable end Power circuit screw clamp terminals 2 0.00…0.01 in² (1…4 mm²)flexible without cable end Power circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)flexible with cable end Power circuit screw clamp terminals 2 0.00…0.00 in² (1…2.5 mm²)flexible with cable end Power circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)solid Power circuit screw clamp terminals 2 0.00…0.01 in² (1…4 mm²)solid Control circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)flexible without cable end Control circuit screw clamp terminals 2 0.00…0.01 in² (1…4 mm²)flexible without cable end Control circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)flexible with cable end Control circuit screw clamp terminals 2 0.00…0.00 in² (1…2.5 mm²)flexible with cable end Control circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)solid Control circuit screw clamp terminals 2 0.00…0.01 in² (1…4 mm²)solid
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
Operating time	53.55...72.45 ms closing 16...24 ms opening
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
Maximum operating rate	3600 cyc/h 140 °F (60 °C)

Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
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
Time constant	28 ms
Inrush power in W	5.4 W 68 °F (20 °C))
Hold-in power consumption in W	5.4 W 68 °F (20 °C)
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 current	5 mA signalling circuit
Minimum switching voltage	17 V 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 signalling circuit
Contact compatibility	M4
Compatibility code	LC2D
Motor power range	1.1…2 KW 200…240 V 3 phase 2.2…3 KW 380…440 V 3 phase 4…6 KW 380…440 V 3 phase 4…6 kW 480…500 V 3 phase
Motor starter type	Reversing contactor
Contactor coil voltage	24 V DC standard

Environment

IP degree of protection	IP20 front face IEC 60529
Protective treatment	TH IEC 60068-2-30
Pollution degree	3
Ambient air temperature for operation	-40…140 °F (-40…60 °C) 140…158 °F (60…70 °C) with derating
Ambient air temperature for storage	-76…176 °F (-60…80 °C)
Operating altitude	0...9842.52 ft (0...3000 m)
Fire resistance	1562 °F (850 °C) IEC 60695-2-1
Flame retardance	V1 UL 94
Mechanical robustness	Vibrations contactor open: 2 Gn, 5...300 Hz Vibrations contactor closed4 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)
Maximum Width	3.54 in (90 mm)
Depth	3.74 in (95 mm)
Net Weight	2.24 lb(US) (1.017 kg)

Ordering and shipping details

Category	22355 - CTR,TESYS D,OPEN,9-38A DC
Discount Schedule	I12
GTIN	00785901207580
Nbr. of units in pkg.	1
Package weight(Lbs)	2.5 lb(US) (1.13 kg)
Returnability	Yes
Country of origin	FR

Packing Units

Unit Type of Package 1	PCE
Package 1 Height	5.43 in (13.8 cm)
Package 1 width	3.70 in (9.4 cm)
Package 1 Length	4.57 in (11.6 cm)
Unit Type of Package 2	S02
Number of Units in Package 2	6
Package 2 Weight	15.72 lb(US) (7.13 kg)
Package 2 Height	5.91 in (15 cm)
Package 2 width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)
Unit Type of Package 3	P06
Number of Units in Package 3	96
Package 3 Weight	274.16 lb(US) (124.356 kg)
Package 3 Height	31.50 in (80 cm)

Package 3 width	31.50 in (80 cm)
Package 3 Length	23.62 in (60 cm)

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
REACh free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
PVC free	Yes

Contractual warranty

Warranty	18 months

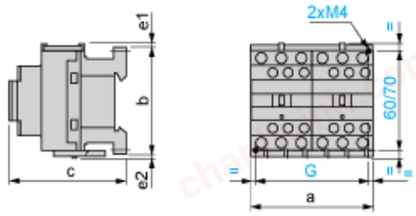
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Product data sheet
Dimensions Drawings

LC2D09BD

Dimensions



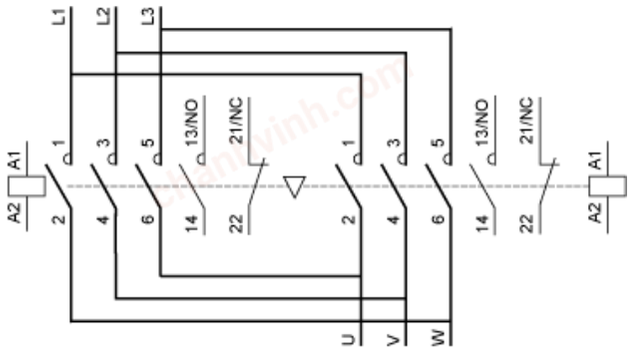
LC2 or 2 x LC1	a	b	c(1)	e1	e2	G
D09 to D18 (AC)	90	77	86	4	1.5	80
D093 to D123 (AC)	90	99	86	–	–	80
D09 to D18 (DC)	90	77	95	4	1.5	80
D093 to D123 (DC)	90	99	95	–	–	80
D25 to D38 (AC)	90	85	92	9	5	80
D183 to D383 (AC)	90	99	92	–	–	80
D25 to D32 (DC)	90	85	101	9	5	80
D183 to D383 (DC)	90	99	101	–	–	80
e1 and e2: including cabling.						
(1) With safety cover, without add-on block.						

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Product data sheet
Connections and Schema

LC2D09BD

Wiring



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