

Product data sheet

Specifications



Reversing contactor, TeSys Deca, 3P(3 NO), AC-3, 0 to 440V, 9A, 24VDC coil, with electrical interlocking

LC2D09BD

Main

Range	TeSys TeSys Deca
Product name	TeSys D TeSys Deca
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 (at <60 °C) at <= 440 V AC AC-3 for power circuit 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	2.2 kW at 220...230 V AC 50 Hz 4 kW at 380...400 V AC 50 Hz 4 kW at 415...440 V AC 50 Hz 5.5 kW at 500 V AC 50 Hz 5.5 kW at 660...690 V AC 50 Hz
Motor power HP (UL / CSA)	0.5 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
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 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	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 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit
Associated fuse rating	25 A gG at <= 690 V coordination type 1 for power circuit 20 A gG at <= 690 V coordination type 2 for power circuit 10 A gG for signalling circuit conforming to 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 conforming to IEC 60947-4-1 Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
Electrical durability	0.6 Mcycles 25 A AC-1 at Ue <= 440 V 2 Mcycles 9 A AC-3 at Ue <= 440 V
Power dissipation per pole	0.2 W AC-3 1.56 W AC-1
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 IEC 60335-1
Product certifications	DNV CSA CCC UL GL LROS (Lloyds register of shipping) BV RINA GOST UKCA
Connections - terminals	Power circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible without cable end Power circuit: screw clamp terminals 2 cable(s) 1...4 mm²flexible without cable end Power circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible with cable end Power circuit: screw clamp terminals 2 cable(s) 1...2.5 mm²flexible with cable end Power circuit: screw clamp terminals 1 cable(s) 1...4 mm²solid Power circuit: screw clamp terminals 2 cable(s) 1...4 mm²solid Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm²flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²solid Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²solid
Tightening torque	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 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 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
Operating time	53.55...72.45 ms closing 16...24 ms opening
Safety reliability level	B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1 B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1
Mechanical durability	30 Mcycles
Maximum operating rate	3600 cyc/h 60 °C
Complementary	
Coil technology	Built-in bidirectional peak limiting diode suppressor

Control circuit voltage limits	0.1...0.25 Uc (-40...70 °C):drop-out DC 0.7...1.25 Uc (-40...60 °C):operational DC 1...1.25 Uc (60...70 °C):operational DC
Time constant	28 ms
Inrush power in W	5.4 W (at 20 °C)
Hold-in power consumption in W	5.4 W at 20 °C
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
Protective treatment	TH conforming to IEC 60068-2-30
Pollution degree	3
Ambient air temperature for operation	-40...60 °C 60...70 °C with derating
Ambient air temperature for storage	-60...80 °C
Operating altitude	0...3000 m
Fire resistance	850 °C conforming to 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	77 mm
Width	90 mm
Depth	95 mm
Net weight	1.017 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	9.5 cm
Package 1 Width	11.5 cm
Package 1 Length	13.8 cm
Package 1 Weight	1.133 kg
Unit Type of Package 2	S02
Number of Units in Package 2	6
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm

Package 2 Length	40.0 cm
Package 2 Weight	7.098 kg
Unit Type of Package 3	P06
Number of Units in Package 3	96
Package 3 Height	80.0 cm
Package 3 Width	80.0 cm
Package 3 Length	60.0 cm
Package 3 Weight	122.58 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Compliant EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS declaration Product out of China RoHS scope. Substance declaration for your information
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
PVC free	Yes
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

Contractual warranty

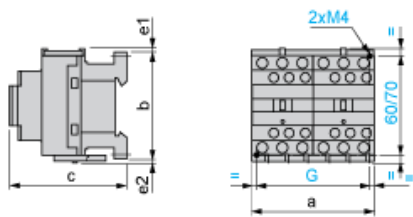
Warranty	18 months
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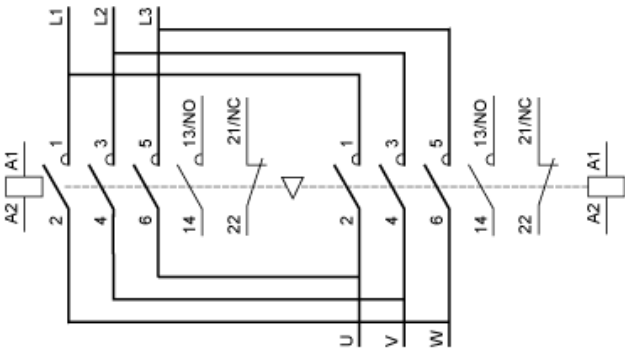
Dimensions Drawings

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.						

Wiring



Recommended replacement(s)