Product data sheet
Characteristics

LC2D09P7
Reversing Contactor, TeSys Deca, 3P(3NO), AC-3, <=440V, 9A, 230V AC 50/60Hz coil, screw clamp terminals



Main

Range	TeSys TeSys Deca
Product name	TeSys D TeSys Deca
Product or component type	Reversing contactor
Device short name	LC2D
Contactor application	Resistive load Motor control
Utilisation category	AC-1 AC-3 AC-3e
Device presentation	Preassembled with reversing power busbar
Poles description	3P
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...60 Hz 4 KW at 380...400 V AC 50...60 Hz 4 KW at 415 V AC 50...60 Hz 4 KW at 440 V AC 50...60 Hz 5.5 KW at 500 V AC 50...60 Hz 5.5 KW at 660...690 V AC 50...60 Hz
Motor power hp	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	AC at 50/60 Hz
[Uc] control circuit voltage	230 V AC 50/60 Hz
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 2 Mcycles 9 A AC-3e at Ue <= 440 V
Power dissipation per pole	0.2 W AC-3 1.56 W AC-1 0.2 W AC-3e
Protective cover	With
Interlocking type	Mechanical
Mounting support	Plate Rail
Standards	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 60335-2-40:Annex JJ IEC 60335-1
Product certifications	DNV[RETURN]CSA[RETURN]CCC[RETURN]UL[RETURN]GL[RETURN]LROS (Lloyds register of
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	12...22 ms closing 4...19 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	15 Mcycles
Maximum operating rate	3600 Cyc/H 60 °C

Complementary

Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc (-40…70 °C):drop-out AC 50/60 Hz 0.8...1.1 Uc (-40…60 °C):operational AC 50 Hz 0.85...1.1 Uc (-40…60 °C):operational AC 60 Hz 1...1.1 Uc (60…70 °C):operational AC 50/60 Hz
Inrush power in VA	70 VA 60 Hz cos phi 0.75 (at 20 °C) 70 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	7.5 VA 60 Hz cos phi 0.3 (at 20 °C) 7 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	2…3 W at 50/60 Hz
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	86 Mm
Net weight	0.687 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	9.500 Cm
Package 1 Width	11.300 Cm
Package 1 Length	14.000 Cm
Package 1 Weight	805.000 G
Unit Type of Package 2	S02
Number of Units in Package 2	6
Package 2 Height	15.000 Cm
Package 2 Width	30.000 Cm
Package 2 Length	40.000 Cm
Package 2 Weight	5.009 Kg
Unit Type of Package 3	P06
Number of Units in Package 3	96
Package 3 Height	75.000 Cm
Package 3 Width	60.000 Cm

Package 3 Length	80.000 Cm
Package 3 Weight	88.000 Kg

Offer Sustainability

Recyclability potential, in %	66
Total lifecycle Carbon footprint	45 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	2.8490333533820227
Carbon footprint of the manufacturing phase [A1 to A3]	3 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.31842114248346615
Carbon footprint of the distribution phase [A4]	0.3 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.11221252432803858
Carbon footprint of the installation phase [A5]	0.1 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	41.75906334591097
REACh free of SVHC	Yes
Carbon footprint of the use phase [B2, B3, B4, B6]	42 kg CO2 eq.
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	Yes
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	45
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
REACh Regulation	Free of Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant
PVC free	Yes
End of life manual availability	End Of Life Information
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised