Product data sheet
Characteristics

LC2D80P7
Reversing Contactor, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V 80A, 230V AC 50/60Hz coil, screw clamp terminals



Main

Range	TeSys
Product name	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 AC-4
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	125 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3e for power circuit 55 A (at <60 °C) at <= 400 V AC AC-4 for power circuit
Motor power kW	22 KW at 220...230 V AC 50 Hz 37 KW at 380...400 V AC 50 Hz 45 KW at 415...440 V AC 50 Hz 55 KW at 500 V AC 50 Hz 45 KW at 660...690 V AC 50 Hz
Motor power hp	20 Hp at 200/208 V AC 60 Hz for 3 phases motors 7.5 Hp at 115 V AC 60 Hz for 1 phase motors 15 Hp at 230/240 V AC 60 Hz for 1 phase motors 25 Hp at 230/240 V AC 60 Hz for 3 phases motors 60 Hp at 460/480 V AC 60 Hz for 3 phases motors 60 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	8 KV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 125 A (at 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 1100 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	1100 A at 440 V for power circuit conforming to IEC 60947

[Icw] rated short-time withstand current	135 A 40 °C - 10 min for power circuit 320 A 40 °C - 1 min for power circuit 640 A 40 °C - 10 s for power circuit 990 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	10 A gG for signalling circuit conforming to IEC 60947-5-1 200 A gG at <= 690 V coordination type 1 for power circuit 160 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	0.8 MOhm - Ith 125 A 50 Hz for power circuit
[Ui] rated insulation voltage	Power circuit: 600 V CSA certified[RETURN]Power circuit: 600 V UL certified[RETURN]Signalling
Electrical durability	0.8 Mcycles 125 A AC-1 at Ue <= 440 V 1.5 Mcycles 80 A AC-3 at Ue <= 440 V 1.5 Mcycles 80 A AC-3e
Power dissipation per pole	12.5 W AC-1 5.1 W AC-3 5.1 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
Product certifications	UL[RETURN]CSA[RETURN]RINA[RETURN]GOST[RETURN]CCC[RETURN]DNV[RETURN]LRO
Connections - terminals	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 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 Control circuit: screw clamp terminals 1 cable(s) 1…2.5 mm²flexible with cable end Power circuit: connector 1 cable(s) 4…50 mm²flexible without cable end Power circuit: connector 2 cable(s) 4…25 mm²flexible without cable end Power circuit: connector 1 cable(s) 4…50 mm²flexible with cable end Power circuit: connector 2 cable(s) 4…16 mm²flexible with cable end Power circuit: connector 1 cable(s) 4…50 mm²solid Power circuit: connector 2 cable(s) 4…25 mm²solid
Tightening torque	Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit: 12 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm Power circuit: 12 N.m - on connector hexagonal screw head 4 mm Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
Operating time	20...35 ms closing 6...20 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	4 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…55 °C):operational AC 50 Hz 0.85...1.1 Uc (-40…55 °C):operational AC 60 Hz 1...1.1 Uc (55…70 °C):operational AC 50/60 Hz
Inrush power in VA	245 VA 60 Hz cos phi 0.75 (at 20 °C) 245 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	26 VA 60 Hz cos phi 0.3 (at 20 °C) 26 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	6…10 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
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 Shocks contactor open: 8 Gn for 11 ms Vibrations contactor closed: 3 Gn, 5...300 Hz Shocks contactor closed: 10 Gn for 11 ms
Height	127 Mm
Width	182 Mm
Depth	158 Mm
Net weight	3.2 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	19.0 Cm
Package 1 Width	19.0 Cm
Package 1 Length	25.5 Cm
Package 1 Weight	3.749 Kg
Unit Type of Package 2	S03
Number of Units in Package 2	2
Package 2 Height	30 Cm
Package 2 Width	30 Cm
Package 2 Length	40 Cm
Package 2 Weight	7.944 Kg

Offer Sustainability

Recyclability potential, in %	76
Total lifecycle Carbon footprint	193 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	22.07106103457479
Carbon footprint of the manufacturing phase [A1 to A3]	22 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.43540351509549746
Carbon footprint of the distribution phase [A4]	0.4 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.6242857846188733
Carbon footprint of the installation phase [A5]	0.6 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	161.83264492753617
REACh free of SVHC	Yes
Carbon footprint of the use phase [B2, B3, B4, B6]	162 kg CO2 eq.
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	8.233817789463416
Carbon footprint of the end-of-life phase [C1 to C4]	8 kg CO2 eq.

Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	193
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	No need of specific recycling operations
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