Product data sheet
Characteristics

LC1D80E7C
Contactor, TeSys Deca, 3P(3 NO), AC-3/ AC-3e, 0 to 440V, 80A, 48V AC 50/60Hz coil, Screw terminal



⚠ End of Commercialisation

Commercial status
End of Commercialisation :

Main

Range	TeSys Deca
Range of product	TeSys Deca
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load Motor control
Utilisation category	AC-4 AC-1 AC-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 300 V DC 25...400 Hz Power circuit: 660 V AC
[Ie] rated operational current	80 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 125 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	48 V AC 50/60 Hz

Complementary

Motor power kW	55 KW at 500 V AC 50/60 Hz (AC-3) 45 KW at 1000 V AC 50/60 Hz (AC-3) 22 KW at 220/240 V AC 50/60 Hz (AC-3) 37 KW at 380/400 V AC 50/60 Hz (AC-3) 45 KW at 415/440 V AC 50/60 Hz (AC-3) 45 KW at 660/690 V AC 50/60 Hz (AC-3) 15 KW at 400 V AC 50/60 Hz (AC-4) 55 KW at 500 V AC 50/60 Hz (AC-3e) 45 KW at 1000 V AC 50/60 Hz (AC-3e) 22 KW at 220/240 V AC 50/60 Hz (AC-3e) 37 KW at 380/400 V AC 50/60 Hz (AC-3e) 45 KW at 415/440 V AC 50/60 Hz (AC-3e) 45 KW at 660/690 V AC 50/60 Hz (AC-3e)
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 125 A (at 60 °C) for power circuit

[Icw] rated short-time withstand current	640 A 40 °C - 10 s for power circuit 990 A 40 °C - 1 s for power circuit 135 A 40 °C - 10 min for power circuit 320 A 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 60947-5-1 200 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	Signalling circuit: 690 V conforming to IEC 60947-1 Power circuit: 690 V conforming to IEC 60947-4-1
Overvoltage category	III
Pollution degree	3
[Uimp] rated impulse withstand voltage	6 KV conforming to IEC 60947
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
Electrical durability	0.8 Mcycles 125 A AC-1 at Ue <= 440 V 1.5 Mcycles 80 A AC-3 at Ue <= 440 V 2.5 Mcycles 48 A AC-3 at Ue 660/690 V 1.5 Mcycles 80 A AC-3e at Ue <= 440 V 2.5 Mcycles 48 A AC-3e at Ue 660/690 V
Control circuit type	AC at 50/60 Hz
Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc (-40…55 °C):drop-out 50/60 Hz 0.8...1.1 Uc (-40…55 °C):operational 50 Hz 0.85...1.1 Uc (-40…55 °C):operational 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 50 Hz cos phi 0.3 (at 20 °C) 26 VA 60 Hz cos phi 0.3 (at 20 °C)
Operating time	20...35 ms closing 6...20 ms opening
Connections - terminals	Control circuit: screw clamp terminals 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1…2.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1…4 mm² - cable stiffness: solid without cable end Power circuit: bus terminal - cable stiffness: solid - busbar cross section: 3 x 16 mm Power circuit: connector 4…50 mm² - external diameter: 17 mm - cable stiffness: flexible without c Power circuit: connector 4…25 mm² - external diameter: 17 mm - cable stiffness: flexible without c Power circuit: connector 4…50 mm² - external diameter: 17 mm - cable stiffness: flexible with cabl Power circuit: connector 4…16 mm² - external diameter: 17 mm - cable stiffness: flexible with cabl Power circuit: connector 4…50 mm² - external diameter: 17 mm - cable stiffness: solid without cab Power circuit: connector 4…25 mm² - cable stiffness: solid without cable end
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 screw clamp terminals - with screwdriver flat Ø 6...8 mm Power circuit: 12 N.m - on screw clamp terminals hexagonal screw head 4 mm Power circuit: 12 N.m - on connector hexagonal screw head 10 mm M6 Power circuit: 12 N.m - on connector - with screwdriver flat Ø 8 mm Power circuit: 12 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
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
Auxiliary contact composition	1 NO + 1 NC
Signalling circuit frequency	25...400 Hz
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	IEC 60947-1 IEC 60947-4-1 GB/T 14048.4
Product certifications	CE[RETURN]UKCA[RETURN]CCC
IP degree of protection	IP2X front face for main circuit conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Permissible ambient air temperature around the device	-40…60 °C operation 60…70 °C with derating -60…80 °C storage
Operating altitude	3000 m without derating
Fire resistance	850 °C conforming to IEC 60695-2-11
Mechanical robustness	Vibrations contactor open (2 Gn, 5...300 Hz) conforming to IEC 60068-2-6 Shocks 11 ms contactor open (8 gn) conforming to IEC 60068-2-27 Shocks 11 ms contactor closed (10 Gn) conforming to IEC 60068-2-27 Vibrations contactor closed (3 Gn, 5...300 Hz) conforming to IEC 60068-2-6
Height	127 Mm
Width	85 Mm
Depth	130 Mm
Net weight	1.59 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	11.194 Cm
Package 1 Width	15.27 Cm
Package 1 Length	15.906 Cm
Package 1 Weight	1.571 Kg
Unit Type of Package 2	CAR
Number of Units in Package 2	5
Package 2 Height	18.8 Cm
Package 2 Width	29.5 Cm
Package 2 Length	40.4 Cm
Package 2 Weight	8.29 Kg
Unit Type of Package 3	PAL
Number of Units in Package 3	60
Package 3 Height	75.0 Cm
Package 3 Width	60.0 Cm
Package 3 Length	80.0 Cm
Package 3 Weight	104.64 Kg

Offer Sustainability

Recyclability potential, in %	88
Total lifecycle Carbon footprint	1 071 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	9.883685448092269
Carbon footprint of the manufacturing phase [A1 to A3]	10 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.3329316881887891
Carbon footprint of the distribution phase [A4]	0.3 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.02870235164303439
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	1057.1926108746234
REACh free of SVHC	Yes
Carbon footprint of the use phase [B2, B3, B4, B6]	1 057 kg CO2 eq.
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	No

Carbon footprint of the end-of-life phase [C1 to C4]	3.2627768362854717
Carbon footprint of the end-of-life phase [C1 to C4]	3 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	1071
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	C94a5ba1-ed1b-4724-b5a0-b0a9f1f2a1f9
REACh Regulation	Free of Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant
End of life manual availability	No need of specific recycling operations
Take-back	No

Contractual warranty

Warranty (in months)	18

Product Life Status : End of commerc. - Block