Product data sheet
Characteristics

LC1D18FDC
Contactor, TeSys Deca, 3P(3 NO), AC-3/ AC-3e, 0 to 440V, 18A, 110VDC coil, Screw terminal



Commercial status
End of Commercialisation :

⚠ End of Commercialisation

Main

Range	TeSys Deca
Range of product	TeSys Deca
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-4 AC-1 AC-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 225 V DC
[Ie] rated operational current	32 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 18 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 18 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	110 V DC

Complementary

Motor power kW	10 KW at 500 V AC 50/60 Hz (AC-3) 4 KW at 220/240 V AC 50/60 Hz (AC-3) 7.5 KW at 380/400 V AC 50/60 Hz (AC-3) 9 KW at 415/440 V AC 50/60 Hz (AC-3) 10 KW at 660/690 V AC 50/60 Hz (AC-3) 4 KW at 400 V AC 50/60 Hz (AC-4) 10 KW at 500 V AC 50/60 Hz (AC-3e) 4 KW at 220/240 V AC 50/60 Hz (AC-3e) 7.5 KW at 380/400 V AC 50/60 Hz (AC-3e) 9 KW at 415/440 V AC 50/60 Hz (AC-3e) 10 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 32 A (at 60 °C) for power circuit

[Icw] rated short-time withstand current	145 A 40 °C - 10 s for power circuit 240 A 40 °C - 1 s for power circuit 40 A 40 °C - 10 min for power circuit 84 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 50 A gG at <= 690 V coordination type 1 for power circuit 35 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2.5 MOhm - Ith 32 A 50 Hz for power circuit
[Ui] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1
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	30 Mcycles
Electrical durability	1 Mcycles 32 A AC-1 at Ue <= 440 V 1.6 Mcycles 18 A AC-3 at Ue <= 440 V 3 Mcycles 11 A AC-3 at Ue 660/690 V 1.6 Mcycles 18 A AC-3e at Ue <= 440 V 3 Mcycles 11 A AC-3e at Ue 660/690 V
Control circuit type	DC standard
Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.25 Uc (-40…60 °C):drop-out 0.7...1.25 Uc (-40…60 °C):operational
Inrush power in W	5.4 W (at 20 °C)
Hold-in power consumption in W	5.4 W at 20 °C
Operating time	63 ±15 % ms closing 20 ±20 % ms opening
Time constant	28 Ms
Connections - terminals	Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without cable end Power circuit: screw clamp terminals 1 1.5…6 mm² - external diameter: 8 mm - cable stiffness: fle Power circuit: screw clamp terminals 2 1.5…6 mm² - external diameter: 8 mm - cable stiffness: fle Power circuit: screw clamp terminals 1 1…6 mm² - external diameter: 8 mm - cable stiffness: flexi Power circuit: screw clamp terminals 2 1…4 mm² - external diameter: 8 mm - cable stiffness: flexi Power circuit: screw clamp terminals 1 1.5…6 mm² - external diameter: 8 mm - cable stiffness: so Power circuit: screw clamp terminals 2 1.5…6 mm² - external diameter: 8 mm - cable stiffness: so
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 Power circuit: 1.7 N.m - on cable connector - with screwdriver flat Ø 6 mm M3.5 Power circuit: 1.7 N.m - on cable connector - with screwdriver Philips No 2 M3.5 Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 Control circuit: 1.7 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
Minimum switching voltage	17 V 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	Rail Plate

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 IP2X front face for coil 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 Vibrations contactor closed (4 Gn, 5...300 Hz) conforming to IEC 60068-2-6 Shocks 11 ms contactor open (10 Gn) conforming to IEC 60068-2-27 Shocks 11 ms contactor closed (15 gn) conforming to IEC 60068-2-27
Height	77 Mm
Width	45 Mm
Depth	95 Mm
Net weight	0.33 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.19 Cm
Package 1 Width	7.81 Cm
Package 1 Length	10.29 Cm
Package 1 Weight	518.0 G
Unit Type of Package 2	S02
Number of Units in Package 2	21
Package 2 Height	15.0 Cm
Package 2 Width	30.0 Cm
Package 2 Length	40.0 Cm
Package 2 Weight	11.322 Kg
Unit Type of Package 3	PAL
Number of Units in Package 3	336
Package 3 Height	60.0 Cm
Package 3 Width	80.0 Cm
Package 3 Length	75.0 Cm
Package 3 Weight	174.75 Kg

Offer Sustainability

Recyclability potential, in %	75
Total lifecycle Carbon footprint	265 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	2.810344675684162
Carbon footprint of the manufacturing phase [A1 to A3]	3 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.7539508004557696
Carbon footprint of the distribution phase [A4]	0.8 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.0007403390303480242
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	260.5281566956816
Carbon footprint of the use phase [B2, B3, B4, B6]	261 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	0.7490909497266109
Carbon footprint of the end-of-life phase [C1 to C4]	0.7 kg CO2 eq.

Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	265
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	2ab694b0-b482-4207-a2fd-644d2c2d9bc4
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
End of life manual availability	End Of Life Information
Take-back	No

Contractual warranty

Warranty (in months)	18

Product Life Status : End of commerc. - Block