Product data sheet
Characteristics

LC1DT20BDC
Contactor, TeSys Deca, 4P(4NO), AC-1, 0 to 440V, 20A, 24VDC 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	Resistive load
Utilisation category	AC-1 AC-3 AC-3e AC-4
Poles description	4P
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC
[Ie] rated operational current	20 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
[Uc] control circuit voltage	24 V DC

Complementary

Compatibility code	LC1D
Pole contact composition	4 NO
Protective cover	With
[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 20 A (at 60 °C) for power circuit
[Icw] rated short-time withstand current	105 A 40 °C - 10 s for power circuit 210 A 40 °C - 1 s for power circuit 30 A 40 °C - 10 min for power circuit 61 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 25 A gG at <= 690 V coordination type 1 for power circuit 20 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2.5 MOhm - Ith 20 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

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	Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: flexib Power circuit: screw clamp terminals 2 1…4 mm² - external diameter: 8 mm - cable stiffness: flexib Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: flexib Power circuit: screw clamp terminals 2 1…2.5 mm² - external diameter: 8 mm - cable stiffness: fle Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: solid Power circuit: screw clamp terminals 2 1…4 mm² - external diameter: 8 mm - cable stiffness: solid 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
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 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 Power 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
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	85 Mm
Width	45 Mm
Depth	99 Mm
Net weight	0.365 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	8.8 Cm
Package 1 Width	10.6 Cm
Package 1 Length	5.2 Cm
Package 1 Weight	382.3 G
Unit Type of Package 2	CAR
Number of Units in Package 2	20
Package 2 Height	30.0 Cm
Package 2 Width	40.0 Cm
Package 2 Length	15.0 Cm
Package 2 Weight	7.696 Kg
Unit Type of Package 3	PAL
Number of Units in Package 3	320
Package 3 Height	60.0 Cm
Package 3 Width	80.0 Cm
Package 3 Length	75.0 Cm
Package 3 Weight	122.536 Kg

Offer Sustainability

Recyclability potential, in %	75
Total lifecycle Carbon footprint	507 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	2.093420013519835
Carbon footprint of the manufacturing phase [A1 to A3]	2 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.5616164125843998
Carbon footprint of the distribution phase [A4]	0.6 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.000551477032810263
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	503.68776961165116
Carbon footprint of the use phase [B2, B3, B4, B6]	504 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]	0.5579963196943122
Carbon footprint of the end-of-life phase [C1 to C4]	0.6 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	507
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
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