Product data sheet
Characteristics

LC1DT20BDC
Contactor, TeSys Deca, 4P(4NO), AC-1, 0 to 440V, 20A, 24VDC coil, Screw terminal

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	Without
[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
Rated operational power in W	5.4 W

Operating time	63 ±15 % ms closing 20 ±20 % ms opening
Time constant	28 ms
Maximum operating rate	3600 cyc/h 60 °C
Connections - terminals	Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 1…4 mm² - external diameter: 8 mm - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 1…2.5 mm² - external diameter: 8 mm - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: solid without cable end Power circuit: screw clamp terminals 2 1…4 mm² - external diameter: 8 mm - cable stiffness: solid without cable end 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 contact composition	1 NO + 1 NC
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
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 60947-4-1 GB 14048.4
Product certifications	CCC[RETURN]CE[RETURN]UKCA
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

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
REACh free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins