Product data sheet
Characteristics

LC1D12BL
TeSys Deca contactor - 3P(3 NO) - AC-3/ AC-3e - <= 440 V 12 A - 24 V DC coil

Main

Range	TeSys TeSys Deca
Product name	TeSys D TeSys Deca
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load Motor control
Utilisation category	AC-4 AC-3 AC-1 AC-3e
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	25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 12 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 12 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
Motor power kW	3 KW at 220...230 V AC 50/60 Hz (AC-3) 5.5 KW at 380...400 V AC 50/60 Hz (AC-3) 5.5 KW at 415...440 V AC 50/60 Hz (AC-3) 7.5 KW at 500 V AC 50/60 Hz (AC-3) 7.5 KW at 660...690 V AC 50/60 Hz (AC-3) 3.7 KW at 400 V AC 50/60 Hz (AC-4) 3 KW at 220...230 V AC 50/60 Hz (AC-3e) 5.5 KW at 380...400 V AC 50/60 Hz (AC-3e) 5.5 KW at 415...440 V AC 50/60 Hz (AC-3e) 7.5 KW at 500 V AC 50/60 Hz (AC-3e) 7.5 KW at 660...690 V AC 50/60 Hz (AC-3e)
Motor power hp	0.5 Hp at 115 V AC 50/60 Hz for 1 phase motors 2 Hp at 230/240 V AC 50/60 Hz for 1 phase motors 3 Hp at 200/208 V AC 50/60 Hz for 3 phases motors 3 Hp at 230/240 V AC 50/60 Hz for 3 phases motors 7.5 Hp at 460/480 V AC 50/60 Hz for 3 phases motors 10 Hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	DC low consumption
[Uc] control circuit voltage	24 V DC
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 KV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	25 A (at 60 °C) for power circuit 10 A (at 60 °C) for signalling circuit

Irms rated making capacity	250 A at 440 V for power circuit conforming to IEC 60947 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	250 A at 440 V for power circuit conforming to IEC 60947
[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 40 A gG at <= 690 V coordination type 1 for power circuit 25 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2.5 MOhm - Ith 25 A 50 Hz for power circuit
[Ui] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
Electrical durability	2 Mcycles 12 A AC-3 at Ue <= 440 V 0.8 Mcycles 25 A AC-1 at Ue <= 440 V 2 Mcycles 12 A AC-3e at Ue <= 440 V
Power dissipation per pole	0.36 W AC-3 1.56 W AC-1 0.36 W AC-3e
Protective cover	With
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 508 IEC 60335-1
Product certifications	GOST BV CSA DNV RINA CCC LROS (Lloyds register of shipping) GL UL UKCA
Connections - terminals	Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible without cable end Power circuit: screw clamp terminals 2 cable(s) 1…4 mm²flexible without cable end Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible with cable end Power circuit: screw clamp terminals 2 cable(s) 1…2.5 mm²flexible with cable end Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²solid without cable end Power circuit: screw clamp terminals 2 cable(s) 1…4 mm²solid without cable end 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 1 cable(s) 1…4 mm²flexible with 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 without cable end Control circuit: screw clamp terminals 2 cable(s) 1…4 mm²solid 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 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver-pozidriv No 2 Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver-pozidriv No 2
Operating time	65.45...88.55 ms closing 20...30 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	30 Mcycles
Maximum operating rate	3600 Cyc/H 60 °C

Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.1...0.3 Uc (-40…70 °C):drop-out DC 0.8...1.25 Uc (-40…60 °C):operational DC 1...1.25 Uc (60…70 °C):operational DC
Time constant	40 Ms
Inrush power in W	2.4 W (at 20 °C)
Hold-in power consumption in W	2.4 W at 20 °C
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
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
Mechanical robustness	Vibrations contactor open: 2 Gn, 5...300 Hz Vibrations contactor closed: 4 Gn, 5...300 Hz Shocks contactor open: 10 Gn for 11 ms Shocks contactor closed: 15 Gn for 11 ms
Height	77 Mm
Width	45 Mm
Depth	95 Mm
Net weight	0.485 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	531 G
Package 1 Height	5 Cm
Package 1 width	9.2 Cm
Package 1 Length	11.2 Cm
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Weight	8.284 Kg
Package 2 Height	15 Cm
Package 2 width	30 Cm
Package 2 Length	40 Cm
Unit Type of Package 3	P06
Number of Units in Package 3	240
Package 3 Weight	143.22 Kg
Package 3 Height	80 Cm

Package 3 width	80 Cm
Package 3 Length	60 Cm

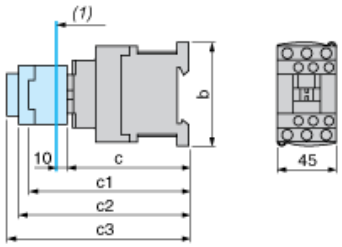
Offer Sustainability

REACh Regulation	REACh Declaration
REACh free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes

Contractual warranty

Warranty	18 months

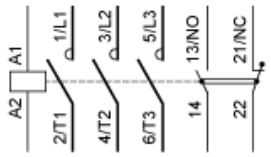
Dimensions



(1) Minimum electrical clearance

LC1		D09…D18	D093…D123	D099…D129
b		77	99	80
c	without cover or add-on blocks	93	93	93
with cover, without add-on blocks		95	95	
c1	with LAD N or C (2 or 4 contacts)	126	126	126
c2	with LA6 DK10	138	138	138
c3	with LAD T, R, S	146	146	146
with LAD T, R, S and sealing cover		150	150	

Wiring



Product Life Status :	Commercialised