## Product data sheet Characteristics

# LC1D12BD





#### Main

Range	TeSys	
Product name	TeSys D	
Product or component type	Contactor	
Device short name	LC1D	
Contactor application	Resistive load Motor control	
Utilisation category	AC-1 AC-4 AC-3	
Poles description	3P	
Pole contact composition	3 NO	
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25400 Hz Power circuit: <= 300 V DC	
[le] 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	
Motor power kW	3 KW at 220230 V AC 50/60 Hz (AC-3) 5.5 KW at 380400 V AC 50/60 Hz (AC-3) 5.5 KW at 415440 V AC 50/60 Hz (AC-3) 7.5 KW at 500 V AC 50/60 Hz (AC-3) 7.5 KW at 660690 V AC 50/60 Hz (AC-3) 3.7 KW at 400 V AC 50/60 Hz (AC-4)	
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 standard	
[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	
[lcw] 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	

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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	
Power dissipation per pole	0.36 W AC-3 1.56 W AC-1	
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	
Product certifications	BV CSA DNV RINA GL GOST LROS (Lloyds register of shipping) CCC UL	
Connections - terminals	Power circuit: screw clamp terminals 1 cable(s) 14 mm²flexible without cable end Power circuit: screw clamp terminals 2 cable(s) 14 mm²flexible without cable end Power circuit: screw clamp terminals 1 cable(s) 14 mm²flexible with cable end Power circuit: screw clamp terminals 2 cable(s) 12.5 mm²flexible with cable end Power circuit: screw clamp terminals 1 cable(s) 14 mm²solid without cable end Power circuit: screw clamp terminals 2 cable(s) 14 mm²solid without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm²flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm²flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm²flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 12.5 mm²flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm²solid without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm²solid without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm²solid without cable end	
Tightening torque	Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat $\emptyset$ 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 $\emptyset$ 6 mm Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2	
Operating time	53.5572.45 ms closing 1624 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	With integral suppression devices	
Con technology	With integral suppression device	

Coil technology	With integral suppression device	
Time constant	28 Ms	
Inrush power in W	5.4 W (at 20 °C)	
Hold-in power consumption in W	5.4 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	25400 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	
Contact compatibility	M4	
Compatibility code	LC1D	
Power range	46 KW at 380440 V 3 phases 46 KW at 480500 V 3 phases 2.23 KW at 200240 V 3 phases	
Motor starter type	Direct on-line contactor	
Contactor coil voltage	24 V DC standard	

### 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 storage	-6080 °C	
Operating altitude	3000 m without derating	
Fire resistance	850 °C conforming to IEC 60695-2-1	
Flame retardance	V1 conforming to UL 94	
Mechanical robustness	Vibrations contactor open: 2 Gn, 5300 Hz Vibrations contactor closed: 4 Gn, 5300 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

Package 1 Weight	0.525 Kg	
Package 1 Height	0.500 Dm	
Package 1 width	0.920 Dm	
Package 1 Length	1.120 Dm	

## Offer Sustainability

Sustainable offer status	Green Premium product	
EU RoHS Directive	Compliant EEU RoHS Declaration	
Mercury free	Yes	
RoHS exemption information	₫Yes	
China RoHS Regulation	China RoHS Declaration	
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	
PVC free	Yes	

#### Contractual warranty

Warranty	18 months

Product Life Status :	Commercialised	