

Product data sheet

Specifications



Contactors, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 115A, 24V DC standard coil, screw clamp terminals

LC1D115BD

Main

Range	TeSys
Range of product	TeSys Deca
Product or component type	Contactors
Device short name	LC1D
Contactors application	Resistive load Motor control
Utilisation category	AC-4 AC-1 AC-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 1000 V AC 25...400 Hz Power circuit: <= 300 V DC
[Ie] rated operational current	200 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 115 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 115 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	24 V DC

Complementary

Motor power kW	30 kW at 220...230 V AC 50/60 Hz (AC-3) 55 kW at 380...400 V AC 50/60 Hz (AC-3) 59 kW at 415...440 V AC 50/60 Hz (AC-3) 75 kW at 500 V AC 50/60 Hz (AC-3) 80 kW at 660...690 V AC 50/60 Hz (AC-3) 65 kW at 1000 V AC 50/60 Hz (AC-3) 18.5 kW at 400 V AC 50/60 Hz (AC-4) 30 kW at 220...230 V AC 50/60 Hz (AC-3e) 55 kW at 380...400 V AC 50/60 Hz (AC-3e) 59 kW at 415...440 V AC 50/60 Hz (AC-3e) 75 kW at 500 V AC 50/60 Hz (AC-3e) 80 kW at 660...690 V AC 50/60 Hz (AC-3e) 65 kW at 1000 V AC 50/60 Hz (AC-3e)
Motor power hp	30 hp at 200/208 V AC 50/60 Hz for 3 phases motors 40 hp at 230/240 V AC 50/60 Hz for 3 phases motors 75 hp at 460/480 V AC 50/60 Hz for 3 phases motors 100 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Compatibility code	LC1D
Pole contact composition	3 NO
Contact compatibility	M10
Protective cover	With
[Ith] conventional free air thermal current	200 A (at 60 °C) for power circuit

Irms rated making capacity	1260 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	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	250 A 40 °C - 10 min for power circuit 550 A 40 °C - 1 min for power circuit 950 A 40 °C - 10 s for power circuit 1100 A 40 °C - 1 s 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	250 A gG at <= 690 V coordination type 1 for power circuit 200 A gG at <= 690 V coordination type 2 for power circuit 10 A gG for signalling circuit
Average impedance	0.6 mOhm - lth 200 A 50 Hz for power circuit
Power dissipation per pole	24 W AC-1 7.9 W AC-3 7.9 W AC-3e
[Ui] rated insulation voltage	Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Power circuit: 1000 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
Overvoltage category	III
Pollution degree	3
[Uimp] rated impulse withstand voltage	8 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	8 Mcycles
Electrical durability	0.8 Mcycles 200 A AC-1 at Ue <= 440 V 0.95 Mcycles 115 A AC-3 at Ue <= 440 V 0.95 Mcycles 115 A AC-3e at Ue <= 440 V
Control circuit type	DC standard
Coil technology	With integral suppression device
Control circuit voltage limits	0.75...1.2 Uc (-40...55 °C):operational DC 0.15...0.4 Uc (-40...70 °C):drop-out DC 1...1.2 Uc (55...70 °C):operational DC
Inrush power in W	270...365 W (at 20 °C)
Hold-in power consumption in W	2.4...5.1 W at 20 °C
Operating time	20...35 ms closing 40...75 ms opening
Time constant	25 ms
Maximum operating rate	1200 cyc/h 60 °C
Connections - terminals	Control circuit: screw clamp terminals 2 1...2.5 mm ² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1...2.5 mm ² - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1...2.5 mm ² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1...2.5 mm ² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1...2.5 mm ² - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1...2.5 mm ² - cable stiffness: solid without cable end Power circuit: connector 1 10...120 mm ² - cable stiffness: flexible without cable end Power circuit: connector 2 10...50 mm ² - cable stiffness: flexible without cable end Power circuit: connector 1 10...120 mm ² - cable stiffness: flexible with cable end Power circuit: connector 2 10...50 mm ² - cable stiffness: flexible with cable end Power circuit: connector 1 10...120 mm ² - cable stiffness: solid without cable end Power circuit: connector 2 10...50 mm ² - cable stiffness: solid without cable end
Tightening torque	Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit: 12 N.m - on connector hexagonal screw head 4 mm Control circuit: 1.2 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 voltage	17 V for signalling circuit
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	Plate Rail

Environment

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	CCC UL BV CSA GL GOST DNV LROS (Lloyds register of shipping) RINA UKCA CE
IP degree of protection	IP20 front face conforming to IEC 60529
Protective treatment	TH conforming to IEC 60068-2-30
Climatic withstand	conforming to IACS E10 exposure to damp heat conforming to IEC 60947-1 Annex Q category D exposure to damp heat
Permissible ambient air temperature around the device	-40...60 °C 60...70 °C with derating
Operating altitude	0...3000 m
Fire resistance	850 °C conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	Vibrations contactor open (2 Gn, 5...300 Hz) Vibrations contactor closed (4 Gn, 5...300 Hz) Shocks contactor closed (15 Gn for 11 ms) Shocks contactor open (6 Gn for 11 ms)
Height	158 mm
Width	120 mm
Depth	136 mm
Net weight	2.5 kg

Packing Units

Unit Type of Package 1	Db
Number of Units in Package 1	1
Package 1 Height	20.0 cm
Package 1 Width	22.0 cm
Package 1 Length	23.0 cm
Package 1 Weight	2.478 kg
Unit Type of Package 2	P06
Number of Units in Package 2	27
Package 2 Height	75.0 cm

Package 2 Width	80.0 cm
Package 2 Length	60.0 cm
Package 2 Weight	79.798 kg

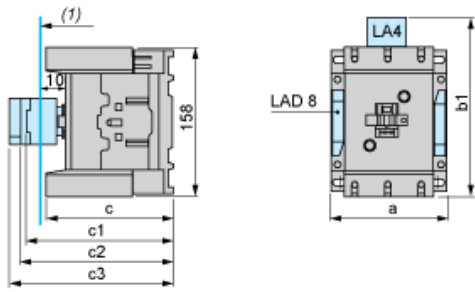
Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Compliant EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS declaration Product out of China RoHS scope. Substance declaration for your information
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
PVC free	Yes
California proposition 65	WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Contractual warranty

Warranty	18 months
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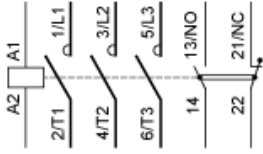
Dimensions



(1) Minimum electrical clearance

LC1		D115 and D150 (3-pole)
a		120
b1	with LA4 DA2	174
	with LA4 DF, DT	185
	with LA4 DM, DL	188
	with LA4 DW	188
c	without cover or add-on blocks	132
	with cover, without add-on blocks	136
c1	with LAD N or C (2 or 4 contacts)	150
c2	with LA6 DK20	155
c3	with LAD T, R, S	168
	with LAD T, R, S and sealing cover	172

Wiring



Recommended replacement(s)