# **Product datasheet**

Specification





# TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 80 A - 24 V DC standard coil

Local distributor code: 381820938

LC1D80BD

EAN Code: 3389110439977

#### Main

Range	TeSys	
Range Of Product	TeSys Deca	
Product Or Component Type	Contactor	
Device Short Name	LC1D	
Contactor Application	Motor control Resistive load	
Utilisation Category	AC-3 AC-3e AC-4 AC-1	
Poles Description	3P	
[Ue] Rated Operational Voltage	Power circuit: <= 300 V DC 25400 Hz Power circuit: <= 690 V AC	
[le] Rated Operational Current	125 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 80 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 80 A (at <60 °C) at <= 440 V AC-3e for power circuit	
[Uc] Control Circuit Voltage	24 V DC	

## Complementary

Motor Power Kw	22 kW at 220230 V AC 50 Hz (AC-3) 37 kW at 380400 V AC 50 Hz (AC-3) 45 kW at 415440 V AC 50 Hz (AC-3) 55 kW at 500 V AC 50 Hz (AC-3) 45 kW at 660690 V AC 50 Hz (AC-3) 15 kW at 400 V AC 50 Hz (AC-4) 22 kW at 220230 V AC 50 Hz (AC-3e) 37 kW at 380400 V AC 50 Hz (AC-3e) 45 kW at 415440 V AC 50 Hz (AC-3e) 55 kW at 500 V AC 50 Hz (AC-3e) 45 kW at 660690 V AC 50 Hz (AC-3e)	
Motor Power Hp	7.5 hp at 120 V AC 50/60 Hz for 1 phase motors 15 hp at 230/240 V AC 50/60 Hz for 1 phase motors 30 hp at 200/208 V AC 50/60 Hz for 3 phases motors 30 hp at 230/240 V AC 50/60 Hz for 3 phases motors 60 hp at 460/480 V AC 50/60 Hz for 3 phases motors 60 hp at 575/600 V AC 50/60 Hz for 3 phases motors	
Compatibility Code	LC1D	
Pole Contact Composition	3 NO	
Protective Cover	With	
[Ith] Conventional Free Air Thermal Current	10 A (at 60 °C) for signalling circuit 125 A (at 60 °C) for power circuit	
Irms Rated Making Capacity	140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1 1100 A at 440 V for power circuit conforming to IEC 60947	

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Rated Breaking Capacity	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] Rated Short-Time Withstand	640 A 40 °C - 10 s for power circuit
Current	990 A 40 °C - 1 s for power circuit
	135 A 40 °C - 10 min for power circuit
	320 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
	200 A gG at <= 690 V coordination type 1 for power circuit
	160 A gG at <= 690 V coordination type 2 for power circuit
Average Impedance	0.8 mOhm - Ith 125 A 50 Hz for power circuit
Power Dissipation Per Pole	5.1 W AC-3 12.5 W AC-1
	5.1 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	8 kV conforming to IEC 60947
Voltage	
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	4 Mcycles
Electrical Durability	0.8 Mcycles 125 A AC-1 at Ue <= 440 V
	1.5 Mcycles 80 A AC-3 at Ue <= 440 V
	1.5 Mcycles 80 A AC-3e at Ue <= 440 V
Control Circuit Type	DC standard
Coil Technology	Without built-in suppressor module
Control Circuit Voltage Limits	0.10.3 Uc (-4070 °C):drop-out DC
	0.851.1 Uc (-4055 °C):operational DC
	11.1 Uc (5570 °C):operational DC
Inrush Power In W	22 W (at 20 °C)
Hold-In Power Consumption In W	22 W at 20 °C
Operating Time	95130 ms closing
	2035 ms opening
Time Constant	75 ms
Maximum Operating Rate	3600 cyc/h 60 °C
Connections - Terminals	Control circuit: screw clamp terminals 2 12.5 mm² - cable stiffness: flexible with
	cable end Control circuit: screw clamp terminals 1 12.5 mm² - cable stiffness: flexible with
	cable end
	Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: flexible without cable end
	Control circuit: screw clamp terminals 2 14 mm² - cable stiffness: flexible without
	cable end
	Control circuit: screw clamp terminals 1 14 mm² - cable stiffness: solid without
	cable end Control circuit: screw clamp terminals 2 14 mm² - cable stiffness: solid without
	Control circuit, screw clamp terminals 2 14 min - cable stiffless; solid without
	cable end
	cable end Power circuit: connector 1 450 mm² - cable stiffness: flexible without cable end
	Power circuit: connector 1 450 mm² - cable stiffness: flexible without cable end Power circuit: connector 2 425 mm² - cable stiffness: flexible without cable end
	Power circuit: connector 1 450 mm² - cable stiffness: flexible without cable end Power circuit: connector 2 425 mm² - cable stiffness: flexible without cable end Power circuit: connector 1 450 mm² - cable stiffness: flexible with cable end
	Power circuit: connector 1 450 mm² - cable stiffness: flexible without cable end Power circuit: connector 2 425 mm² - cable stiffness: flexible without cable end

Tightening Torque	Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm
rightening forque	Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver half 9 6 min
	Power circuit: 12 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm
	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	25400 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	
	CSA C22.2 No 14
	CSA C22.2 No 14 EN 60947-4-1
	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1
	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1
Environment Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 GOST RINA
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508  GOST RINA GL
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV CSA
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV CSA CCC
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV CSA CCC UL
Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV CSA CCC
Standards  Product Certifications	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV CSA CCC UL LROS (Lloyds register of shipping)
Environment Standards  Product Certifications  Ip Degree Of Protection  Protective Treatment	EN 60947-4-1 EN 60947-5-1 IEC 60947-5-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV CSA CCC UL LROS (Lloyds register of shipping) BV
Product Certifications  Ip Degree Of Protection  Protective Treatment	EN 60947-4-1 EN 60947-5-1 IEC 60947-5-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV CSA CCC UL LROS (Lloyds register of shipping) BV  IP20 front face conforming to IEC 60529
Standards  Product Certifications  Ip Degree Of Protection	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508  GOST RINA GL DNV CSA CCC UL LROS (Lloyds register of shipping) BV  IP20 front face conforming to IEC 600529  TH conforming to IEC 60068-2-30

	BV
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
Permissible Ambient Air Temperature Around The Device	-4060 °C 6070 °C with derating
Operating Altitude	03000 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, 5300 Hz) Shocks contactor open (8 Gn for 11 ms) Vibrations contactor closed (3 Gn, 5300 Hz) Shocks contactor closed (10 Gn for 11 ms)
Height	127 mm
Width	85 mm
Depth	186 mm
Net Weight	2.59 kg

# **Packing Units**

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1

Package 1 Height	11.000 cm
Package 1 Width	16.200 cm
Package 1 Length	21.700 cm
Package 1 Weight	2.579 kg
Unit Type Of Package 2	S02
Number Of Units In Package 2	2
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	5.466 kg
Unit Type Of Package 3	P06
Number Of Units In Package 3	32
Package 3 Height	75.000 cm
Package 3 Width	60.000 cm
Package 3 Length	80.000 cm
Package 3 Weight	97.700 kg

## **Contractual warranty**

Warranty 18 months



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### Well-being performance

<b>⊘</b>	Reach Free Of Svhc
<b>⊘</b>	Toxic Heavy Metal Free
<b>⊘</b>	Mercury Free
<b>②</b>	Rohs Exemption Information Yes
<b>⊘</b>	Pvc Free

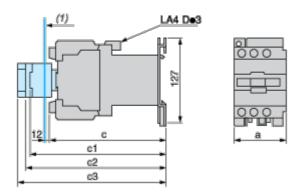
#### **Certifications & Standards**

Reach Regulation	REACh Declaration
Eu Rohs Directive	Compliant EU RoHS Declaration
China Rohs Regulation	China RoHS declaration  Pro-active China RoHS declaration (out of China RoHS legal scope)
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	No need of specific recycling operations

## LC1D80BD

#### **Dimensions Drawings**

#### **Dimensions**



#### (1) Minimum electrical clearance

LC1		D80 and D95
а		85
b1	with LAD 4BB3	_
ומ	with LA4 DF, DT	_
	without cover or add-on blocks	181
С	with cover, without add-on blocks	186
c1	with LAD N (1 contact)	204
	with LAD N or C (2 or 4 contacts)	210
с2	with LA6 DK10	221
	with LAD T, R, S	229
с3	with LAD T, R, S and sealing cover	233

#### LC1D80BD

Connections and Schema

Wiring

