Product datasheet





TeSys, Contactor, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 80A, 240V AC 50/60Hz coil

LC1D80U7

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 AC-3e for power circuit	
[Uc] Control Circuit Voltage	240 V AC 50/60 Hz	

Complementary

Motor Power Kw	22 kW at 220230 V AC 50/60 Hz (AC-3)	
	37 kW at 380400 V AC 50/60 Hz (AC-3)	
	45 kW at 415440 V AC 50/60 Hz (AC-3)	
	55 kW at 500 V AC 50/60 Hz (AC-3)	
	45 kW at 660690 V AC 50/60 Hz (AC-3)	
	15 kW at 400 V AC 50/60 Hz (AC-4)	
	22 kW at 220230 V AC 50/60 Hz (AC-3e)	
	37 kW at 380400 V AC 50/60 Hz (AC-3e)	
	45 kW at 415440 V AC 50/60 Hz (AC-3e)	
	55 kW at 500 V AC 50/60 Hz (AC-3e)	
	45 kW at 660690 V AC 50/60 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	10 A (at 60 °C) for signalling circuit	
Thermal Current	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 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	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	AC at 50/60 Hz
Coil Technology	Without built-in suppressor module
Control Circuit Voltage Limits	0.851.1 Uc (-4055 °C):operational AC 60 Hz
	0.30.6 Uc (-4070 °C):drop-out AC 50/60 Hz
	0.81.1 Uc (-4055 °C):operational AC 50 Hz
	11.1 Uc (5570 °C):operational AC 50/60 Hz
Inrush Power In Va	245 VA 60 Hz cos phi 0.75 (at 20 °C)
	245 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-In Power Consumption In Va	26 VA 60 Hz cos phi 0.3 (at 20 °C)
•	26 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat Dissipation	610 W at 50/60 Hz
Operating Time	2035 ms closing
	620 ms opening
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 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 2 416 mm² - cable stiffness: flexible with cable end
	Power circuit: connector 1 450 mm² - cable stiffness: solid without cable end Power circuit: connector 2 425 mm² - 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 - 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	
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	DNV GOST CCC
	RINA CSA GL
	BV LROS (Lloyds register of shipping) UL
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	-4060 °C
Temperature Around The Device	6070 °C with derating

850 °C conforming to IEC 60695-2-1

V1 conforming to UL 94

0...3000 m

Operating Altitude

Flame Retardance

Fire Resistance

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	130 mm	
Net Weight	1.59 kg	

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	9.500 cm
Package 1 Width	13.500 cm
Package 1 Length	14.000 cm
Package 1 Weight	1.550 kg
Unit Type Of Package 2	S02
Number Of Units In Package 2	5
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	8.075 kg
Unit Type Of Package 3	P06
Number Of Units In Package 3	80
Package 3 Height	75.000 cm
Package 3 Width	60.000 cm
Package 3 Length	80.000 cm
Package 3 Weight	139.780 kg

Contractual warranty

Warranty 18 months



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Transparency RoHS/REACh

Well-being performance

9	Reach Free Of Svhc
⊘	Toxic Heavy Metal Free
⊘	Mercury Free
⊘	Rohs Exemption Information Yes
⊘	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