Product data sheet
Characteristics

LC1D80M5
Contactor, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 80A, 220V AC 50Hz coil

Main

Range	TeSys
Range of product	TeSys Deca
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load Motor control
Utilisation category	AC-3 AC-3e AC-4 AC-1
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 300 V DC 25...400 Hz Power circuit: <= 690 V AC
[Ie] 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	220 V AC 50 Hz

Complementary

Motor power kW	22 KW at 220...230 V AC 50/60 Hz (AC-3) 37 KW at 380...400 V AC 50/60 Hz (AC-3) 45 KW at 415...440 V AC 50/60 Hz (AC-3) 55 KW at 500 V AC 50/60 Hz (AC-3) 45 KW at 660...690 V AC 50/60 Hz (AC-3) 15 KW at 400 V AC 50/60 Hz (AC-4) 22 KW at 220...230 V AC 50/60 Hz (AC-3e) 37 KW at 380...400 V AC 50/60 Hz (AC-3e) 45 KW at 415...440 V AC 50/60 Hz (AC-3e) 55 KW at 500 V AC 50/60 Hz (AC-3e) 45 KW at 660...690 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
Contact compatibility	M12
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
Rated breaking capacity	1100 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	640 A 40 °C - 10 s for power circuit 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	10 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 Hz
Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc (-40…70 °C):drop-out AC 50 Hz 0.85...1.1 Uc (-40…55 °C):operational AC 50 Hz 1...1.1 Uc (55…70 °C):operational AC 50 Hz
Inrush power in VA	200 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	20 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	6…10 W at 50 Hz
Operating time	20...35 ms closing 6...20 ms opening
Maximum operating rate	3600 Cyc/H 60 °C
Connections - terminals	Control circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with-cable end Control circuit: screw clamp terminals 1 1…2.5 mm² - cable stiffness: flexible-with cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible with-out cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible with-out cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid without-cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without-cable end Power circuit: connector 1 4…50 mm² - cable stiffness: flexible without cable end Power circuit: connector 2 4…25 mm² - cable stiffness: flexible without cable end Power circuit: connector 1 4…50 mm² - cable stiffness: flexible with cable end Power circuit: connector 2 4…16 mm² - cable stiffness: flexible with cable end Power circuit: connector 1 4…50 mm² - cable stiffness: solid without cable end Power circuit: connector 2 4…25 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	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	UL DNV LROS (Lloyds register of shipping) GL CCC CSA RINA GOST 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	-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) Shocks contactor open (8 Gn for 11 ms) Vibrations contactor closed (3 Gn, 5...300 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	1.558 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	8.037 Kg
Unit Type of Package 3	P06
Number of Units in Package 3	80
Package 3 Height	75.000 Cm
Package 3 Width	80.000 Cm

Package 3 Length	60.000 Cm
Package 3 Weight	136.592 Kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
REACh free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
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
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

Product Life Status : Commercialised