

# LC1D80GD

IEC contactor, TeSys Deca, nonreversing, 80A, 60HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 120VDC coil, open style



## Main

Range	TeSys
Range of Product	TeSys Deca
Product or Component Type	Contactors
Device short name	LC1D
Contactors 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 25...400 Hz Power circuit <= 690 V AC
[Ie] rated operational current	125 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit 80 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit 80 A (at <140 °F (60 °C)) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	125 V DC

## 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)
Maximum Horse Power Rating	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 phase motors 30 Hp at 230/240 V AC 50/60 Hz for 3 phase motors 60 Hp at 460/480 V AC 50/60 Hz for 3 phase motors 60 hp at 575/600 V AC 50/60 Hz for 3 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Contact compatibility	M9
Protective cover	With
[Ith] conventional free air thermal current	10 A (at 140 °F (60 °C)) for signalling circuit 125 A (at 140 °F (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

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[Icw] rated short-time withstand current	640 A 104 °F (40 °C) - 10 s for power circuit 990 A 104 °F (40 °C) - 1 s for power circuit 135 A 104 °F (40 °C) - 10 min for power circuit 320 A 104 °F (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[RETURN]Power circuit 600 V UL[RETURN]Power circuit 1000 V IEC 60947-4-1[RETURN]Signalling circuit 690 V IEC 60947-1[RETURN]Signalling circuit 600 V CSA[RETURN]Signalling circuit 600 V UL
Overvoltage category	III
Pollution degree	3
[Uimp] rated impulse withstand voltage	8 kV IEC 60947
Safety reliability level	B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1 B10d = 2000000 cycles contactor with mechanical load EN/ISO 13849-1
Mechanical durability	4 Mcycles
Electrical durability	0.8 Mcycles 125 A AC-1 ≤ 440 V 1.5 Mcycles 80 A AC-3 ≤ 440 V 1.5 Mcycles 80 A AC-3e ≤ 440 V
Control circuit type	DC standard
Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.1...0.3 Uc -40...158 °F (-40...70 °C) drop-out DC 0.85...1.1 Uc -40...131 °F (-40...55 °C) operational DC 1...1.1 Uc 131...158 °F (55...70 °C) operational DC
Inrush power in W	22 W 68 °F (20 °C))
Hold-in power consumption in W	22 W 68 °F (20 °C)
Operating time	95...130 ms closing 20...35 ms opening
Time constant	75 ms
Maximum operating rate	3600 cyc/h 140 °F (60 °C)
Connections - terminals	Control circuit: screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) - cable stiffness: solid without cable end Power circuit: connector 1 0.01...0.08 in <sup>2</sup> (4...50 mm <sup>2</sup> ) - cable stiffness: flexible without cable end Power circuit: connector 2 0.01...0.04 in <sup>2</sup> (4...25 mm <sup>2</sup> ) - cable stiffness: flexible without cable end Power circuit: connector 1 0.01...0.08 in <sup>2</sup> (4...50 mm <sup>2</sup> ) - cable stiffness: flexible with cable end Power circuit: connector 2 0.01...0.02 in <sup>2</sup> (4...16 mm <sup>2</sup> ) - cable stiffness: flexible with cable end Power circuit: connector 1 0.01...0.08 in <sup>2</sup> (4...50 mm <sup>2</sup> ) - cable stiffness: solid without cable end Power circuit: connector 2 0.01...0.04 in <sup>2</sup> (4...25 mm <sup>2</sup> ) - cable stiffness: solid without cable end
Tightening torque	Control circuit 10.62 lbf.in (1.2 N.m) screw clamp terminals flat Ø 6 mm Control circuit 10.62 lbf.in (1.2 N.m) screw clamp terminals Phillips No 2 Power circuit 106.21 lbf.in (12 N.m) connector flat Ø 6 to Ø 8 mm Power circuit 106.21 lbf.in (12 N.m) connector hexagonal 0.16 in (4 mm) Control circuit 10.62 lbf.in (1.2 N.m) screw clamp terminals pozidriv No 2
Auxiliary contact composition	1 NO + 1 NC
Auxiliary contacts type	Mechanically linked 1 NO + 1 NC IEC 60947-5-1 Mirror contact 1 NC 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	Rail Plate

## 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	RINA[RETURN]CCC[RETURN]CSA[RETURN]DNV[RETURN]GOST[RETURN]LROS (Lloyds register of shipping)[RETURN]UL[RETURN]BV[RETURN]GL
IP degree of protection	IP20 front face IEC 60529
Protective treatment	THIEC 60068-2-30
Climatic withstand	IACS E10 exposure to damp heat
Permissible ambient air temperature around the device	-40...140 °F (-40...60 °C) 140...158 °F (60...70 °C) with derating
Operating altitude	0...9842.52 ft (0...3000 m)
Fire resistance	1562 °F (850 °C) 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	5.00 in (127 mm)
Width	3.35 in (85 mm)
Depth	7.32 in (186 mm)
Net Weight	5.71 lb(US) (2.59 kg)

## Ordering and shipping details

Category	22359-CTR, TESYS D, OPEN, 80-150A AC&DC
Discount Schedule	I12
GTIN	3389110440799
Returnability	No
Country of origin	CZ

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	8.27 in (21.000 cm)
Package 1 Width	3.94 in (10.000 cm)
Package 1 Length	5.51 in (14.000 cm)
Package 1 Weight	5.69 lb(US) (2.580 kg)
Unit Type of Package 2	S02
Number of Units in Package 2	3
Package 2 Height	5.91 in (15.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	18.07 lb(US) (8.195 kg)

## Offer Sustainability

Sustainable offer status	Green Premium product
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	No need of specific recycling operations
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
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