Product datasheet

Specifications

TeSys D contactor 3P 66A AC-3 up to 440V coil 48V AC 50/60Hz

LC1D80AE7

Main

Range	TeSys TeSys Deca
Range of product	TeSys Deca
Product or component type	Contactor
Device short name	LC1D
Contactor application	Resistive load Motor control
Utilisation category	AC-1 AC-4 AC-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: 690 V AC 25...400 Hz Power circuit: 300 V DC
[Ie] rated operational current	80 A (at <60 °C) at <= 440 V AC-1 for power circuit 66 A (at <60 °C) at <= 440 V AC-3 for power circuit 66 A (at <60 °C) at <= 440 V AC-3e for power circuit
[Uc] control circuit voltage	48 V AC 50/60 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) 37 kW at 415 V AC 50/60 Hz (AC-3) 37 kW at 440 V AC 50/60 Hz (AC-3) 37 kW at 500 V AC 50/60 Hz (AC-3) 37 kW at 660...690 V AC 50/60 Hz (AC-3) 22 kW at 220...230 V AC 50/60 Hz (AC-3e) 37 kW at 380...400 V AC 50/60 Hz (AC-3e) 37 kW at 415 V AC 50/60 Hz (AC-3e) 37 kW at 440 V AC 50/60 Hz (AC-3e) 37 kW at 500 V AC 50/60 Hz (AC-3e) 37 kW at 660...690 V AC 50/60 Hz (AC-3e)
Motor power hp	5 hp at 115 V AC 60 Hz for 1 phase motors 10 hp at 230/240 V AC 60 Hz for 1 phase motors 20 hp at 200/208 V AC 60 Hz for 3 phases motors 20 hp at 230/240 V AC 60 Hz for 3 phases motors 40 hp at 460/480 V AC 60 Hz for 3 phases motors 50 hp at 575/600 V AC 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 80 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 1000 A at 440 V AC for power circuit conforming to IEC 60947
Rated breaking capacity	1000 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 900 A 40 °C - 1 s for power circuit 110 A 40 °C - 10 min for power circuit 260 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 60947-5-1 125 A gG at <= 690 V coordination type 1 for power circuit 125 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	1.5 mOhm - Ith 80 A 50 Hz for power circuit
Power dissipation per pole	9.6 W AC-1 6.3 W AC-3 6.3 W AC-3e
[Ui] rated insulation voltage	Signalling circuit: 690 V conforming to IEC 60947-1 Power circuit: 690 V conforming to IEC 60947-4-1
Overvoltage category	III
Pollution degree	3
[Uimp] rated impulse withstand voltage	6 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	6 Mcycles
Electrical durability	0.7 Mcycles 80 A AC-1 at Ue <= 440 V 1 Mcycles 66 A AC-3 at Ue <= 440 V 1 Mcycles 66 A AC-3e at Ue <= 440 V
Control circuit type	AC at 50/60 Hz standard
Coil technology	Without built-in suppressor module
Control circuit voltage limits	0.3...0.6 Uc (-40…70 °C):drop-out AC 50/60 Hz 0.8...1.1 Uc (-40…60 °C):operational AC 50 Hz 0.85...1.1 Uc (-40…60 °C):operational AC 60 Hz 1...1.1 Uc (60…70 °C):operational AC 50/60 Hz
Inrush power in VA	140 VA 60 Hz cos phi 0.75 (at 20 °C) 160 VA 50 Hz cos phi 0.75 (at 20 °C)
Hold-in power consumption in VA	13 VA 60 Hz cos phi 0.3 (at 20 °C) 15 VA 50 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	4…5 W at 50/60 Hz
Operating time	4...19 ms opening 12...26 ms closing
Maximum operating rate	3600 cyc/h at 60 °C

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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…4 mm² - cable stiffness: flexible with cable end
	Power circuit: EverLink BTR screw connectors 1 1…35 mm² - cable stiffness: flexible with cable end
	Power circuit: EverLink BTR screw connectors 2 1…25 mm² - cable stiffness: flexible with cable end
	Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid
	Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid
	Power circuit: EverLink BTR screw connectors 1 1…35 mm² - cable stiffness: solid
	Power circuit: EverLink BTR screw connectors 2 1…25 mm² - cable stiffness: solid
	Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible
	Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible
	Power circuit: EverLink BTR screw connectors 1 1…35 mm² - cable stiffness: flexible
	Power circuit: EverLink BTR screw connectors 2 1…25 mm² - cable stiffness: flexible
Tightening torque	Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm
	Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2
	Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25…35 mm² hexagonal screw head 4 mm
	Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1…25 mm² hexagonal screw head 4 mm
	Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
	Power circuit: 2.5 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	EN 60947-4-1
	EN 60947-5-1
	IEC 60947-4-1
	IEC 60947-5-1
	CSA C22.2 No 14
	UL 60947-4-1
	IEC 60335-2-40:Annex JJ
	UL 60335-2-40:Annex JJ
	IEC 60335-1:Clause 30.2
Product certifications	CCC
	CSA
	EAC
	UL
	KC
	DNV-GL
	LROS (Lloyds register of shipping)
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 (10 Gn for 11 ms)
Height	122 mm
Width	55 mm
Depth	120 mm
Net weight	0.86 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.200 cm
Package 1 Width	13.500 cm
Package 1 Length	15.500 cm
Package 1 Weight	928.500 g
Unit Type of Package 2	S02
Number of Units in Package 2	10
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	9.847 kg

Contractual warranty

Warranty (in months)	18

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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing "Use Better, Use Longer, Use Again" campaign to extend product lifetimes and recyclability.

Environmental Data explained ›

How we assess product sustainability ›

Environmental footprint

Total lifecycle Carbon footprint	**67 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**6 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0.1 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0.2 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**58 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**2 kg CO2 eq.**
Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**Yes**
SCIP Number	**3d0a4f45-d28c-4c3d-bee1-c14ec8c34bee**
EU RoHS Directive	**Compliant**
REACh Regulation	**Reference contains Substances of Very High Concern above the threshold**
PVC free	**Yes**

Use Longer

Lifetime extension

Repair	**No**

Use Again

Repack and remanufacture

Recyclability potential, in %	**76**
End of life manual availability	**End of Life Information**
Take-back	**Nej**
WEEE Label	⌧ **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins**

Offer Marketing Illustration

Product benefits / Features

TeSys Deca Contactors
Range Accessories

Auxiliary contact block

Contactor Coil

Time delay auxiliary contact block

Mechanical interlock

Power connections

Assembling kits

Comb busbar

Offer Marketing Illustration

Product benefits / Features

Offer Marketing Illustration

Product benefits / Features

Technical Illustration

Assembly's dimensions

mm
[in]

127
[5]

181
[7.1]

85
[3.3]