

# Product data sheet

Specifications



## Contactors, TeSys Deca, 3P(3 NO), AC-3/AC-3e, 0 to 440V, 66A, 24V DC coil, EverLink

LC1D80ABBE

### Main

Range	TeSys TeSys Deca
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-1 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit: $\leq 690$ V AC 25...400 Hz
[Ie] rated operational current	80 A (at $\leq 60$ °C) at $\leq 440$ V AC-1 for power circuit 66 A (at $\leq 60$ °C) at $\leq 440$ V AC-3 for power circuit 66 A (at $\leq 60$ °C) at $\leq 440$ V AC-3e for power circuit
[Uc] control circuit voltage	24 V DC

### Complementary

Motor power kW	18.5 kW at 220...230 V AC 50 Hz (AC-3) 37 kW at 380...400 V AC 50 Hz (AC-3) 37 kW at 415 V AC 50 Hz (AC-3) 37 kW at 440 V AC 50 Hz (AC-3) 37 kW at 500 V AC 50 Hz (AC-3) 37 kW at 660...690 V AC 50 Hz (AC-3)
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	80 A (at $60$ °C) for power circuit 10 A (at $60$ °C) for signalling 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

<b>[Icw] rated short-time withstand current</b>	110 A 40 °C - 10 min for power circuit 260 A 40 °C - 1 min for power circuit 520 A 40 °C - 10 s for power circuit 900 A 40 °C - 1 s for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit
<b>Associated fuse rating</b>	125 A gG at <= 690 V coordination type 1 for power circuit 125 A gG at <= 690 V coordination type 2 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
<b>Average impedance</b>	1.5 mOhm - lth 80 A 50 Hz for power circuit
<b>Power dissipation per pole</b>	9.6 W AC-1 6.5 W AC-3 6.5 W AC-3e
<b>[Ui] rated insulation voltage</b>	Power circuit: 690 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1
<b>Overvoltage category</b>	III
<b>Pollution degree</b>	3
<b>[Uimp] rated impulse withstand voltage</b>	6 kV conforming to IEC 60947
<b>Safety reliability level</b>	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
<b>Mechanical durability</b>	6 Mcycles
<b>Electrical durability</b>	1 Mcycles 66 A AC-3 at Ue <= 440 V 0.5 Mcycles 80 A AC-1 at Ue <= 440 V 1 Mcycles 66 A AC-3e at Ue <= 440 V
<b>Control circuit type</b>	DC DC low consumption
<b>Coil technology</b>	Built-in bidirectional peak limiting
<b>Control circuit voltage limits</b>	<= 0.1 Uc (-40...70 °C):drop-out DC 0.8...1.2 Uc (-40...60 °C):operational DC 1...1.2 Uc (60...70 °C):operational DC
<b>Inrush power in W</b>	11 W (at 20 °C)
<b>Hold-in power consumption in W</b>	0.5 W at 20 °C
<b>Heat dissipation</b>	0.5 W
<b>Operating time</b>	55...65 ms closing 20...80 ms opening
<b>Maximum operating rate</b>	3600 cyc/h 60 °C
<b>Connections - terminals</b>	Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid Power circuit: EverLink BTR screw connectors 1 1...35 mm <sup>2</sup> - cable stiffness: flexible without cable end Power circuit: EverLink BTR screw connectors 1 1...35 mm <sup>2</sup> - cable stiffness: flexible with cable end Power circuit: EverLink BTR screw connectors 1 1...35 mm <sup>2</sup> - cable stiffness: solid Power circuit: EverLink BTR screw connectors 2 1...25 mm <sup>2</sup> - cable stiffness: flexible without cable end Power circuit: EverLink BTR screw connectors 2 1...25 mm <sup>2</sup> - cable stiffness: flexible with cable end Power circuit: EverLink BTR screw connectors 2 1...25 mm <sup>2</sup> - cable stiffness: solid
<b>Tightening torque</b>	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 mm <sup>2</sup> hexagonal screw head 4 mm Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm <sup>2</sup> hexagonal screw head 4 mm Power circuit: 5 N.m - with screwdriver pozidriv No 2 M4 Control circuit: 1.7 N.m - with screwdriver pozidriv No 2 M3.5
<b>Auxiliary contact composition</b>	1 NO + 1 NC
<b>Auxiliary contacts type</b>	type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 type mirror contact 1 NC conforming to IEC 60947-4-1
<b>Signalling circuit frequency</b>	25...400 Hz
<b>Minimum switching voltage</b>	17 V for signalling circuit

<b>Minimum switching current</b>	5 mA for signalling circuit
<b>Insulation resistance</b>	> 10 MOhm for signalling circuit
<b>Non-overlap time</b>	1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact
<b>Mounting support</b>	Rail Plate

## Environment

<b>Standards</b>	EN/IEC 60947-4-1 EN/IEC 60947-5-1 UL 60947-4-1 CSA C22.2 No 60947-4-1 IEC 60335-1
<b>Product certifications</b>	CCC CSA EAC UL KC DNV-GL LROS (Lloyds register of shipping) UKCA
<b>IP degree of protection</b>	IP20 front face conforming to IEC 60529
<b>Climatic withstand</b>	conforming to IACS E10 exposure to damp heat conforming to IEC 60947-1 Annex Q category D exposure to damp heat
<b>Permissible ambient air temperature around the device</b>	-40...60 °C 60...70 °C with derating
<b>Operating altitude</b>	0...3000 m
<b>Fire resistance</b>	850 °C conforming to IEC 60695-2-1
<b>Flame retardance</b>	V1 conforming to UL 94
<b>Mechanical robustness</b>	Vibrations contactor open (2 Gn, 5...300 Hz) Vibrations contactor closed (4 Gn, 5...300 Hz) Shocks contactor open (10 Gn for 11 ms) Shocks contactor closed (15 Gn for 11 ms)
<b>Height</b>	122 mm
<b>Width</b>	55 mm
<b>Depth</b>	120 mm
<b>Net weight</b>	1.002 kg

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	6.200 cm
<b>Package 1 Width</b>	13.800 cm
<b>Package 1 Length</b>	15.300 cm
<b>Package 1 Weight</b>	1.058 kg
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	9
<b>Package 2 Height</b>	15.000 cm
<b>Package 2 Width</b>	30.000 cm
<b>Package 2 Length</b>	40.000 cm
<b>Package 2 Weight</b>	9.818 kg

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>EU RoHS Directive</b>	Compliant <a href="#">EU RoHS Declaration</a>
<b>Mercury free</b>	Yes
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a> Product out of China RoHS scope. Substance declaration for your information
<b>RoHS exemption information</b>	Yes
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>
<b>WEEE</b>	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
<b>Halogen content performance</b>	Halogen free plastic parts & cables product

## Contractual warranty

<b>Warranty</b>	18 months
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## Recommended replacement(s)