Product data sheet
Characteristics

LC1D25EHE
Contactor, TeSys Deca Advanced, 3P(3NO), AC-3/3e, <=440V, 25A, 48...130V AC/DC coil, screw clamp terminals



Main

Range of product	TeSys Deca Advanced
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-3e AC-1
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz
[Ie] rated operational current	25 A (at <60 °C) at <= 440 V AC-3 for power circuit 40 A (at <60 °C) at <= 440 V AC-1 for power circuit 25 A (at <60 °C) at <= 440 V AC-3e for power circuit
[Uc] control circuit voltage	48...130 V AC 50/60 Hz 48...130 V DC

Complementary

Motor power kW	5.5 KW at 220/230 V AC 50/60 Hz (AC-3) 11 KW at 380/400 V AC 50/60 Hz (AC-3) 11 KW at 415 V AC 50/60 Hz (AC-3) 11 KW at 440 V AC 50/60 Hz (AC-3) 15 KW at 500 V AC 50/60 Hz (AC-3) 15 KW at 660/690 V AC 50/60 Hz (AC-3) 5.5 KW at 220/230 V AC 50/60 Hz (AC-3e) 11 KW at 380/400 V AC 50/60 Hz (AC-3e) 11 KW at 415 V AC 50/60 Hz (AC-3e) 11 KW at 440 V AC 50/60 Hz (AC-3e) 15 KW at 500 V AC 50/60 Hz (AC-3e) 15 KW at 660/690 V AC 50/60 Hz (AC-3e)
Motor power hp	2 Hp at 115 V AC 60 Hz for 1 phase motors 3 Hp at 230/240 V AC 60 Hz for 1 phase motors 7.5 Hp at 200/208 V AC 60 Hz for 3 phases motors 7.5 Hp at 230/240 V AC 60 Hz for 3 phases motors 15 Hp at 460/480 V AC 60 Hz for 3 phases motors 20 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 40 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 60947-5-1 450 A at 440 V for power circuit conforming to IEC 60947

Rated breaking capacity	450 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit 50 A 40 °C - 10 min for power circuit 120 A 40 °C - 1 min for power circuit 240 A 40 °C - 10 s for power circuit 380 A 40 °C - 1 s for power circuit
Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 63 A gG at <= 690 V coordination type 1 for power circuit 40 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	2 MOhm - Ith 40 A 50 Hz for power circuit
Power dissipation per pole	3.2 W AC-1 1.25 W AC-3 1.25 W AC-3e
[Ui] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Signalling circuit: 690 V conforming to IEC 60947-1
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	15 Mcycles
Electrical durability	2 Mcycles 21 A AC-3 at Ue <= 440 V 0.9 Mcycles 40 A AC-1 at Ue <= 440 V 2 Mcycles 21 A AC-3e at Ue <= 440 V
Control circuit type	AC/DC at 50/60 Hz AC/DC electronic
Coil technology	Built-in bidirectional peak limiting
Control circuit voltage limits	<= 0.1 Uc (-40…70 °C):drop-out AC/DC 0.85...1.1 Uc (-40…60 °C):operational AC/DC 1...1.1 Uc (60…70 °C):operational AC/DC
Inrush power in VA	25 VA 50/60 Hz (at 20 °C)
Inrush power in W	24 W (at 20 °C)
Hold-in power consumption in VA	1.3 VA 50/60 Hz (at 20 °C)
Hold-in power consumption in W	0.8 W at 20 °C
Heat dissipation	0.8 W at 50/60 Hz
Operating time	45...55 ms closing 20...90 ms opening
Maximum operating rate	3600 Cyc/H at 60 °C
Connections - terminals	Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible with cable end 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: solid Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid Power circuit: screw clamp terminals 1 2.5…10 mm² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 2 2.5…10 mm² - cable stiffness: flexible without cable end Power circuit: screw clamp terminals 1 1…10 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 2 1.5…6 mm² - cable stiffness: flexible with cable end Power circuit: screw clamp terminals 1 1.5…10 mm² - cable stiffness: solid Power circuit: screw clamp terminals 2 2.5…10 mm² - cable stiffness: solid
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: 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 M4 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 M3.5
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/IEC 60947-4-1 EN/IEC 60947-5-1 UL 60947-4-1 CSA C22.2 No 60947-4-1 IEC 60335-1
Product certifications	CCC[RETURN]CSA[RETURN]EAC[RETURN]UL[RETURN]KC[RETURN]DNV-GL[RETURN]LR
IP degree of protection	IP20 front face conforming to IEC 60529
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 (8 Gn for 11 ms)
Height	85 Mm
Width	45 Mm
Depth	92 Mm
Net weight	0.433 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.5 Cm
Package 1 Width	9.5 Cm
Package 1 Length	11.8 Cm
Package 1 Weight	456.0 G
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Height	15.0 Cm
Package 2 Width	30.0 Cm
Package 2 Length	40.0 Cm
Package 2 Weight	7.208 Kg

Offer Sustainability

Recyclability potential, in %	70
Total lifecycle Carbon footprint	15 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	3.5608747952923987
Carbon footprint of the manufacturing phase [A1 to A3]	4 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.12856654969324607
Carbon footprint of the distribution phase [A4]	0.1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.047993159540356975
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	10.16931315789474
Carbon footprint of the use phase [B2, B3, B4, B6]	10 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	0.7375323754339642
Carbon footprint of the end-of-life phase [C1 to C4]	0.7 kg CO2 eq.

Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	15
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	7d699774-c34b-4bf4-9ecb-388a149eefdd
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
Halogen-free status	Halogen free plastic parts & cables product
End of life manual availability	End Of Life Information
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised