Product data sheet
Characteristics

LC1D50AEHE
IEC contactor, TeSys Deca Green, nonreversing, 50A, 40HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 48/130VAC/VDC coil

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-3 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit <= 690 V AC 25...400 Hz
[Ie] rated operational current	80 A (at <140 °F (60 °C)) at <= 440 V AC-1 for power circuit 50 A (at <140 °F (60 °C)) at <= 440 V AC-3 for power circuit 50 A (at <140 °F (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	15 KW at 220...230 V AC 50 Hz (AC-3) 22 KW at 380...400 V AC 50 Hz (AC-3) 25 KW at 415 V AC 50 Hz (AC-3) 30 KW at 440 V AC 50 Hz (AC-3) 30 KW at 500 V AC 50 Hz (AC-3) 33 KW at 660...690 V AC 50 Hz (AC-3) 15 KW at 220...230 V AC 50 Hz (AC-3e) 22 KW at 380...400 V AC 50 Hz (AC-3e) 25 KW at 415 V AC 50 Hz (AC-3e) 30 KW at 440 V AC 50 Hz (AC-3e) 30 KW at 500 V AC 50 Hz (AC-3e) 33 kW at 660...690 V AC 50 Hz (AC-3e)
Maximum Horse Power Rating	3 Hp at 115 V AC 60 Hz for 1 phase motors 7.5 Hp at 230/240 V AC 60 Hz for 1 phase motors 15 Hp at 200/208 V AC 60 Hz for 3 phase motors 15 Hp at 230/240 V AC 60 Hz for 3 phase motors 40 Hp at 460/480 V AC 60 Hz for 3 phase motors 40 hp at 575/600 V AC 60 Hz for 3 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[Ith] conventional free air thermal current	80 A (at 140 °F (60 °C)) for power circuit 10 A (at 140 °F (60 °C)) for signalling circuit
Irms rated making capacity	900 A at 440 V for power circuit conforming to IEC 60947 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1
Rated breaking capacity	900 A at 440 V for power circuit conforming to IEC 60947

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[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 84 A 104 °F (40 °C) - 10 min for power circuit 208 A 104 °F (40 °C) - 1 min for power circuit 400 A 104 °F (40 °C) - 10 s for power circuit 810 A 104 °F (40 °C) - 1 s for power circuit
Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 100 A gG at <= 690 V coordination type 1 for power circuit 100 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 3.7 W AC-3 3.7 W AC-3e
[Ui] rated insulation voltage	Power circuit 690 V IEC 60947-4-1 Signalling circuit 690 V IEC 60947-1
Overvoltage category	III
Pollution degree	3
[Uimp] rated impulse withstand voltage	6 kV IEC 60947
Safety reliability level	B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1 B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1
Mechanical durability	6 Mcycles
Electrical durability	1.8 Mcycles 42 A AC-3 <= 440 V 0.5 Mcycles 80 A AC-1 <= 440 V 1.8 Mcycles 42 A AC-3e <= 440 V
Control circuit type	AC/DC 50/60 Hz AC/DC electronic
Coil technology	Built-in bidirectional peak limiting
Control circuit voltage limits	<= 0.1 Uc -40…158 °F (-40…70 °C) drop-out AC/DC 0.85...1.1 Uc -40…140 °F (-40…60 °C) operational AC/DC 1...1.1 Uc 140…158 °F (60…70 °C) operational AC/DC
Inrush power in VA	23 VA 50/60 Hz (at 68 °F (20 °C))
Inrush power in W	19 W 68 °F (20 °C))
Hold-in power consumption in VA	1.4 VA 50/60 Hz (at 68 °F (20 °C))
Hold-in power consumption in W	0.9 W 68 °F (20 °C)
Heat dissipation	0.9 W at 50/60 Hz
Operating time	55...65 ms closing 20...120 ms opening >= 17221) 20...80 ms opening >= 18011)
Maximum operating rate	3600 cyc/h 140 °F (60 °C)
Maximum operating rate	3600 cyc/h at 60 °C
Connections - terminals	Control circuit: screw clamp terminals 1 0.002…0.006 in² (1…4 mm²) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 0.002…0.006 in² (1…4 mm²) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 0.002…0.006 in² (1…4 mm²) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 0.002…0.006 in² (1…4 mm²) - cable stiffness: solid Control circuit: screw clamp terminals 2 0.002…0.006 in² (1…4 mm²) - cable stiffness: solid Power circuit: EverLink BTR screw connectors 1 0.002…0.05 in² (1…35 mm²) - cable stiffness: flexible without cable end Power circuit: EverLink BTR screw connectors 1 0.002…0.05 in² (1…35 mm²) - cable stiffness: flexible with cable end Power circuit: EverLink BTR screw connectors 1 0.002…0.05 in² (1…35 mm²) - cable stiffness: solid Power circuit: EverLink BTR screw connectors 2 0.002…0.04 in² (1…25 mm²) - cable stiffness: flexible without cable end Power circuit: EverLink BTR screw connectors 2 0.002…0.04 in² (1…25 mm²) - cable stiffness: flexible with cable end Power circuit: EverLink BTR screw connectors 2 0.002…0.04 in² (1…25 mm²) - cable stiffness: solid

Tightening torque	Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2 Power circuit 70.8 lbf.in (8 N.m) EverLink BTR screw connectors 0.04…0.05 in² (25…35 mm²) hexagonal 0.2 in (4 mm) Power circuit 44.3 lbf.in (5 N.m) EverLink BTR screw connectors 0.002…0.04 in² (1…25 mm²) hexagonal 0.2 in (4 mm) Power circuit 44.3 lbf.in (5 N.m) pozidriv No 2 Control circuit 15.05 lbf.in (1.7 N.m) 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	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]LROS (Lloyds register of shipping)[RETURN]UKCA
IP degree of protection	IP20 front face IEC 60529
Climatic withstand	IACS E10 exposure to damp heat IEC 60947-1 Annex Q category D 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) Vibrations contactor closed 4 Gn, 5...300 Hz) Shocks contactor open 10 Gn for 11 ms) Shocks contactor closed 15 Gn for 11 ms)
Height	4.8 in (122 mm)
Width	2.2 in (55 mm)
Depth	4.7 in (120 mm)
Net Weight	2.198 lb(US) (0.997 kg)

Ordering and shipping details

Category	US10I1222356
Discount Schedule	0I12
GTIN	3606480988240
Returnability	No
Country of origin	FR

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.4 in (6.2 cm)
Package 1 Width	5.4 in (13.8 cm)
Package 1 Length	6.1 in (15.5 cm)
Package 1 Weight	2.332 lb(US) (1.058 kg)
Unit Type of Package 2	S02
Number of Units in Package 2	9

Package 2 Height	5.9 in (15.0 cm)
Package 2 Width	11.8 in (30.0 cm)
Package 2 Length	15.7 in (40.0 cm)
Package 2 Weight	21.658 lb(US) (9.824 kg)

Offer Sustainability

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Compliant with Exemptions
Mercury free	Yes
Sustainable packaging	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
Halogen content performance	Halogen free plastic parts & cables product

Contractual warranty

Warranty	18 months