Product data sheet
Characteristics

LC1D150M7
IEC contactor, TeSys Deca, nonreversing, 150A, 100HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 220VAC 50/60Hz coil, open



Main

Range	TeSys
Range of Product	TeSys Deca
Product or Component Type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-4 AC-1 AC-3e
Poles description	3P
[Ue] rated operational voltage	Power circuit <= 1000 V AC 25...400 Hz Power circuit <= 300 V DC
[Ie] rated operational current	200 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit 150 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit 150 A (at <140 °F (60 °C)) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	220 V AC 50/60 Hz

Complementary

Motor power kW	40 KW at 220...230 V AC 50/60 Hz (AC-3) 75 KW at 380...400 V AC 50/60 Hz (AC-3) 80 KW at 415...440 V AC 50/60 Hz (AC-3) 90 KW at 500 V AC 50/60 Hz (AC-3) 100 KW at 660...690 V AC 50/60 Hz (AC-3) 75 KW at 1000 V AC 50/60 Hz (AC-3) 22 KW at 400 V AC 50/60 Hz (AC-4) 40 KW at 220...230 V AC 50/60 Hz (AC-3e) 75 KW at 380...400 V AC 50/60 Hz (AC-3e) 80 KW at 415...440 V AC 50/60 Hz (AC-3e) 90 KW at 500 V AC 50/60 Hz (AC-3e) 100 KW at 660...690 V AC 50/60 Hz (AC-3e) 75 kW at 1000 V AC 50/60 Hz (AC-3e)
Maximum Horse Power Rating	40 Hp at 200/208 V AC 50/60 Hz for 3 phase motors 50 Hp at 230/240 V AC 50/60 Hz for 3 phase motors 100 Hp at 460/480 V AC 50/60 Hz for 3 phase motors 125 hp at 575/600 V AC 50/60 Hz for 3 phase motors
Compatibility code	LC1D
Pole contact composition	3 NO
Protective cover	With
[Ith] conventional free air thermal current	200 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 1660 A at 440 V for power circuit conforming to IEC 60947
Rated breaking capacity	1400 A at 440 V for power circuit conforming to IEC 60947

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[Icw] rated short-time withstand current	250 A 104 °F (40 °C) - 10 min for power circuit 580 A 104 °F (40 °C) - 1 min for power circuit 1200 A 104 °F (40 °C) - 10 s for power circuit 1400 A 104 °F (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
Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 315 A gG at <= 690 V coordination type 1 for power circuit 250 A gG at <= 690 V coordination type 2 for power circuit
Average impedance	0.6 mOhm - Ith 200 A 50 Hz for power circuit
Power dissipation per pole	24 W AC-1 13.5 W AC-3 13.5 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 = 684932 cycles contactor with nominal load EN/ISO 13849-1 B10d = 10000000 cycles contactor with mechanical load EN/ISO 13849-1
Mechanical durability	8 Mcycles
Electrical durability	0.85 Mcycles 150 A AC-3 <= 440 V 1 Mcycles 200 A AC-1 <= 440 V 0.85 Mcycles 150 A AC-3e <= 440 V
Control circuit type	AC 50/60 Hz standard
Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.3...0.5 Uc -40…158 °F (-40…70 °C) drop-out AC 50/60 Hz 0.8...1.15 Uc -40…131 °F (-40…55 °C) operational AC 50/60 Hz 1...1.15 Uc 131…158 °F (55…70 °C) operational AC 50/60 Hz
Inrush power in VA	280…350 VA 60 Hz cos phi 0.9 (at 68 °F (20 °C)) 280…350 VA 50 Hz cos phi 0.9 (at 68 °F (20 °C))
Hold-in power consumption in VA	2…18 VA 60 Hz cos phi 0.9 (at 68 °F (20 °C)) 2…18 VA 50 Hz cos phi 0.9 (at 68 °F (20 °C))
Heat dissipation	3…4.5 W at 50/60 Hz
Operating time	20...35 ms closing 40...75 ms opening
Maximum operating rate	1200 cyc/h 140 °F (60 °C)
Maximum operating rate	1200 cyc/h at 60 °C
Connections - terminals	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…0.004 in² (1…2.5 mm²) - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 0.002…0.004 in² (1…2.5 mm²) - cable stiffness: solid without cable end Power circuit: connector 1 0.02…0.2 in² (10…120 mm²) - cable stiffness: flexible without cable end Power circuit: connector 2 0.02…0.08 in² (10…50 mm²) - cable stiffness: flexible without cable end Power circuit: connector 1 0.02…0.2 in² (10…120 mm²) - cable stiffness: flexible with cable end Power circuit: connector 2 0.02…0.08 in² (10…50 mm²) - cable stiffness: flexible with cable end Power circuit: connector 1 0.02…0.2 in² (10…120 mm²) - cable stiffness: solid without cable end Power circuit: connector 2 0.02…0.08 in² (10…50 mm²) - cable stiffness: solid without cable end
Tightening torque	Control circuit 10.6 lbf.in (1.2 N.m) screw clamp terminals flat Ø 6 mm Control circuit 10.6 lbf.in (1.2 N.m) screw clamp terminals Philips No 2 Power circuit 106.2 lbf.in (12 N.m) connector hexagonal 0.2 in (4 mm) Control circuit 10.6 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 IEC 60947-4-1 IEC 60335-1:Clause 30.2 IEC 60335-2-40:Annex JJ UL 60335-2-40:Annex JJ UL 60947-4-1 CSA C22.2 No 60947-4-1 JIS C8201-4-1
Product Certifications	UL[RETURN]CCC[RETURN]CSA[RETURN]CE[RETURN]UKCA[RETURN]Marine[RETURN]E
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) Vibrations contactor closed 4 Gn, 5...300 Hz) Shocks contactor closed 15 Gn for 11 ms) Shocks contactor open 6 Gn for 11 ms)
Height	6.2 in (158 mm)
Width	4.7 in (120 mm)
Depth	5.4 in (136 mm)
Net Weight	5.5 lb(US) (2.5 kg)

Ordering and shipping details

Category	US10I1222359
Discount Schedule	0I12
GTIN	3389110476057
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	8.268 in (21.000 cm)
Package 1 Width	7.874 in (20.000 cm)
Package 1 Length	9.252 in (23.500 cm)
Package 1 Weight	5.490 lb(US) (2.490 kg)
Unit Type of Package 2	S06
Number of Units in Package 2	27
Package 2 Height	29.528 in (75.000 cm)
Package 2 Width	23.622 in (60.000 cm)
Package 2 Length	31.496 in (80.000 cm)
Package 2 Weight	175.971 lb(US) (79.819 kg)

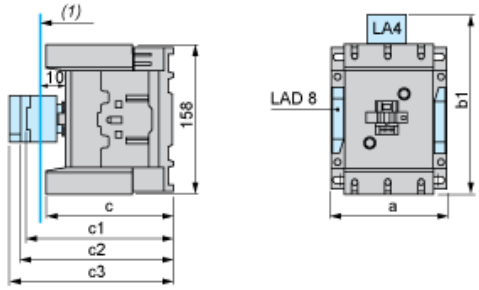
Offer Sustainability

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 www.P65Warnings.ca.gov
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.
PVC free	Yes

Contractual warranty

Warranty	18 months

Dimensions



(1) Minimum electrical clearance

LC1		D115 and D150 (3-pole)
a		120
b1	with LA4 DA2	174
with LA4 DF, DT	185	
with LA4 DM, DL	188	
with LA4 DW	188	
c	without cover or add-on blocks	132
with cover, without add-on blocks	136	
c1	with LAD N or C (2 or 4 contacts)	150
c2	with LA6 DK20	155
c3	with LAD T, R, S	168
with LAD T, R, S and sealing cover	172	

Wiring

