Product data sheet

Specification





Contactor, TeSys Deca, 4P(4 NO), AC-1, <=440V, 20A, 120V AC 50/60Hz coil, screw clamp terminal

LC1DT20G7

Main

Range	TeSys TeSys Deca
Range Of Product	TeSys Deca
Product Or Component Type	Contactor
Device Short Name	LC1D
Contactor Application	Resistive load
Utilisation Category	AC-1
Poles Description	4P
[Ue] Rated Operational Voltage	Power circuit <= 690 V AC 25400 Hz Power circuit <= 300 V DC
[le] Rated Operational Current	20 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit
[Uc] Control Circuit Voltage	120 V AC 50/60 Hz

Complementary

,	
Compatibility Code	LC1D
Pole Contact Composition	4 NO
Protective Cover	With
[Ith] Conventional Free Air Thermal Current	10 A (at 140 °F (60 °C)) for signalling circuit 20 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 60947-5-1 250 A at 440 V for power circuit conforming to IEC 60947
Rated Breaking Capacity	250 A at 440 V for power circuit conforming to IEC 60947
[Icw] Rated Short-Time Withstand Current	30 A 104 °F (40 °C) - 10 min for power circuit 61 A 104 °F (40 °C) - 1 min for power circuit 105 A 104 °F (40 °C) - 10 s for power circuit 210 A 104 °F (40 °C) - 1 s for power circuit 210 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 25 A gG at <= 690 V coordination type 1 for power circuit 20 A gG at <= 690 V coordination type 2 for power circuit
Average Impedance	2.5 mOhm - Ith 20 A 50 Hz for power circuit
Power Dissipation Per Pole	1.56 W AC-1

[Ui] Rated Insulation Voltage	Power circuit 600 V CSA
	Power circuit 600 V UL Signalling circuit 690 V IEC 60947-1
	Signalling circuit 600 V CSA
	Signalling circuit 600 V UL
	Power circuit 690 V IEC 60947-4-1
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 = 200000000 cycles contactor with mechanical load EN/ISO 13849-1
Mechanical Durability	15 Mcycles
Control Circuit Type	AC 50/60 Hz
Coil Technology	Without built-in suppressor module
Control Circuit Voltage Limits	0.30.6 Uc -40158 °F (-4070 °C) drop-out AC 50/60 Hz
	0.81.1 Uc -40140 °F (-4060 °C) operational AC 50 Hz
	0.851.1 Uc -40140 °F (-4060 °C) operational AC 60 Hz
	11.1 Uc 140158 °F (6070 °C) operational AC 50/60 Hz
Inrush Power In Va	70 VA 60 Hz cos phi 0.75 (at 68 °F (20 °C))
	70 VA 50 Hz cos phi 0.75 (at 68 °F (20 °C))
Hold-In Power Consumption In Va	7.5 VA 60 Hz cos phi 0.3 (at 68 °F (20 °C)) 7 VA 50 Hz cos phi 0.3 (at 68 °F (20 °C))
Heat Dissipation	23 W at 50/60 Hz
Operating Time	419 ms opening
Sporating Time	1222 ms closing
Maximum Operating Rate	3600 cyc/h 140 °F (60 °C)
Connections - Terminals	Control circuit: screw clamp terminals 2 0.000.00 in² (12.5 mm²) - cable stiffness: flexible with cable end
	Control circuit: screw clamp terminals 1 0.000.01 in² (14 mm²) - cable stiffness:
	flexible without cable end
	Control circuit: screw clamp terminals 2 0.000.01 in² (14 mm²) - cable stiffness:
	flexible without cable end Control circuit: screw clamp terminals 1 0.000.01 in² (14 mm²) - cable stiffness:
	flexible with cable end
	Control circuit: screw clamp terminals 1 0.000.01 in² (14 mm²) - cable stiffness:
	solid without cable end
	Control circuit: screw clamp terminals 2 0.000.01 in² (14 mm²) - cable stiffness: solid without cable end
	Power circuit: screw clamp terminals 1 0.000.01 in² (14 mm²) - cable stiffness:
	flexible without cable end
	Power circuit: screw clamp terminals 2 0.000.01 in ² (14 mm ²) - cable stiffness:
	flexible without cable end Power circuit: screw clamp terminals 1 0.000.01 in² (14 mm²) - cable stiffness:
	flexible with cable end
	Power circuit: screw clamp terminals 2 0.000.00 in ² (12.5 mm ²) - cable stiffness:
	flexible with cable end Power circuit: screw clamp terminals 1 0.000.01 in² (14 mm²) - cable stiffness:
	solid without cable end
	Power circuit: screw clamp terminals 2 $0.000.01$ in 2 $(14$ mm $^2)$ - cable stiffness: solid without cable end
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 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm
	Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2 Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2
	Power circuit 15.05 lbf.in (1.7 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	25400 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

CSA C22.2 No 14	Liviloillient	
BV GL LROS (Lloyds register of shipping) DNV GOST UL CSA CCC D Degree Of Protection IP20 front face IEC 60529 Protective Treatment THIEC 60068-2-30 Climatic Withstand IACS E10 exposure to damp heat IEC 60947-1 Annex Q category D exposure to damp heat IEC 60947-1 Annex Q exposure to damp heat IEC 60947-1 Annex Q exposure to damp heat IEC 60947-1 Annex Q	Standards	EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508
Protective Treatment THIEC 60068-2-30 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 -40140 °F (-4060 °C) 140158 °F (6070 °C) with derating Operating Altitude 03000 m Fire Resistance 1562 °F (850 °C) IEC 60695-2-1 Flame Retardance V1 UL 94 Mechanical Robustness Vibrations contactor open 2 Gn, 5300 Hz) Vibrations contactor closed 4 Gn, 5300 Hz) Shocks contactor closed 15 Gn for 11 ms) Shocks contactor open 10 Gn for 11 ms) Height 3.35 in (85 mm) Width 1.77 in (45 mm) Depth 3.62 in (92 mm)	Product Certifications	BV GL LROS (Lloyds register of shipping) DNV GOST UL CSA
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 40140 °F (-4060 °C) 140158 °F (6070 °C) with derating Operating Altitude 03000 m Fire Resistance 1562 °F (850 °C) IEC 60695-2-1 Flame Retardance V1 UL 94 Mechanical Robustness Vibrations contactor open 2 Gn, 5300 Hz) Vibrations contactor closed 4 Gn, 5300 Hz) Shocks contactor closed 15 Gn for 11 ms) Shocks contactor open 10 Gn for 11 ms) Height 3.35 in (85 mm) Width 1.77 in (45 mm) Depth 3.62 in (92 mm)	Ip Degree Of Protection	IP20 front face IEC 60529
Permissible Ambient Air Temperature Around The Device -40140 °F (-4060 °C) 140158 °F (6070 °C) with derating Operating Altitude 03000 m Fire Resistance 1562 °F (850 °C) IEC 60695-2-1 Flame Retardance V1 UL 94 Mechanical Robustness Vibrations contactor open 2 Gn, 5300 Hz) Vibrations contactor closed 4 Gn, 5300 Hz) Shocks contactor closed 15 Gn for 11 ms) Shocks contactor open 10 Gn for 11 ms) Height 3.35 in (85 mm) Width 1.77 in (45 mm) Depth 3.62 in (92 mm)	Protective Treatment	THIEC 60068-2-30
Temperature Around The Device 140158 °F (6070 °C) with derating Operating Altitude 03000 m Fire Resistance 1562 °F (850 °C) IEC 60695-2-1 Flame Retardance V1 UL 94 Mechanical Robustness Vibrations contactor open 2 Gn, 5300 Hz) Vibrations contactor closed 4 Gn, 5300 Hz) Shocks contactor closed 15 Gn for 11 ms) Shocks contactor open 10 Gn for 11 ms) Height 3.35 in (85 mm) Width 1.77 in (45 mm) Depth 3.62 in (92 mm)	Climatic Withstand	· · · · · · · · · · · · · · · · · · ·
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Mechanical Robustness Vibrations contactor open 2 Gn, 5300 Hz) Vibrations contactor closed 4 Gn, 5300 Hz) Shocks contactor closed 15 Gn for 11 ms) Shocks contactor open 10 Gn for 11 ms) Height 3.35 in (85 mm) Width 1.77 in (45 mm) Depth 3.62 in (92 mm)	Fire Resistance	1562 °F (850 °C) IEC 60695-2-1
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Width 1.77 in (45 mm) Depth 3.62 in (92 mm)	Mechanical Robustness	Vibrations contactor closed 4 Gn, 5300 Hz) Shocks contactor closed 15 Gn for 11 ms)
Depth 3.62 in (92 mm)	Height	3.35 in (85 mm)
	Width	1.77 in (45 mm)
Net Weight 0.80 b(US) (0.365 kg)	Depth	3.62 in (92 mm)
-	Net Weight	0.80 lb(US) (0.365 kg)

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	2.17 in (5.5 cm)
Package 1 Width	3.74 in (9.5 cm)
Package 1 Length	4.41 in (11.2 cm)
Package 1 Weight	13.72 oz (389 g)
Unit Type Of Package 2	S02
Number Of Units In Package 2	16

Package 2 Height	5.91 in (15 cm)
Package 2 Width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)
Package 2 Weight	14.97 lb(US) (6.789 kg)

Contractual warranty

Warranty 18 months



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Transparency RoHS/REACh

Well-being performance

9	Reach Free Of Svhc
⊘	Toxic Heavy Metal Free
⊘	Mercury Free
⊘	Rohs Exemption Information Yes
⊘	Pvc Free

Certifications & Standards

Reach Regulation	REACh Declaration
Eu Rohs Directive	Compliant EU RoHS Declaration
China Rohs Regulation	China RoHS declaration Pro-active China RoHS declaration (out of China RoHS legal scope)
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information