

Product data sheet

Characteristics



LC1D12F7

TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V
12 A - 110 V AC coil

Product availability : Stock - Normally stocked in distribution facility



Main

| | |
|--------------------------------|---|
| Range of product | TeSys D |
| Range | TeSys |
| Product name | TeSys D |
| Product or component type | Contactor |
| Device short name | LC1D |
| Contactor application | Resistive load Motor control |
| Utilisation category | AC-1 AC-3 AC-4 |
| Poles description | 3P |
| Pole contact composition | 3 NO |
| System Voltage | <= 300 V DC power circuit <= 690 V AC 25...400 Hz power circuit |
| [Ie] rated operational current | 12 A (<= 140 °F (60 °C)) at <= 440 V AC AC-3 power circuit 25 A (<= 140 °F (60 °C)) at <= 440 V AC AC-1 power circuit |
| Motor power kW | 7.5 kW at 500 V AC 50/60 Hz AC-3 7.5 kW at 660...690 V AC 50/60 Hz AC-3 5.5 kW at 380...400 V AC 50/60 Hz AC-3 5.5 kW at 415...440 V AC 50/60 Hz AC-3 3 kW at 220...230 V AC 50/60 Hz AC-3 3.7 kW at 400 V AC 50/60 Hz AC-4 |
| Motor power hp | 1 hp at 115 V AC 50/60 Hz 1 phase motors 2 hp at 230/240 V AC 50/60 Hz 1 phase motors 3 hp at 200/208 V AC 50/60 Hz 3 phases motors 3 hp at 230/240 V AC 50/60 Hz 3 phases motors 7.5 hp at 460/480 V AC 50/60 Hz 3 phases motors 10 hp at 575/600 V AC 50/60 Hz 3 phases motors |
| Control circuit type | AC 50/60 Hz |
| [Uc] control circuit voltage | 110 V AC 50/60 Hz |
| Auxiliary contact composition | 1 NO + 1 NC |

Jul 31, 2017

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|---|--|
| [Uimp] rated impulse withstand voltage | 6 kV conforming to IEC 60947 |
| Overvoltage category | III |
| [Ith] conventional free air thermal current | 25 A at <= 140 °F (60 °C) power circuit 10 A at <= 140 °F (60 °C) signalling circuit |
| Irms rated making capacity | 250 A at 440 V power circuit conforming to IEC 60947 140 A AC signalling circuit conforming to IEC 60947-5-1 250 A DC signalling circuit conforming to IEC 60947-5-1 |
| Rated breaking capacity | 250 A at 440 V power circuit conforming to IEC 60947 |
| [Icw] rated short-time withstand current | 105 A <= 104 °F (40 °C) 10 s power circuit 210 A <= 104 °F (40 °C) 1 s power circuit 30 A <= 104 °F (40 °C) 10 min power circuit 61 A <= 104 °F (40 °C) 1 min power circuit 100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit |
| Associated fuse rating | 25 A gG at <= 690 V coordination type 2 power circuit 40 A gG at <= 690 V coordination type 1 power circuit 10 A gG signalling circuit conforming to IEC 60947-5-1 |
| Average impedance | 2.5 mOhm at 50 Hz - Ith 25 A power circuit |
| [Ui] rated insulation voltage | 600 V power circuit certifications CSA 600 V power circuit certifications UL 690 V power circuit conforming to IEC 60947-4-1 690 V signalling circuit conforming to IEC 60947-1 600 V signalling circuit certifications CSA 600 V signalling circuit certifications UL |
| Electrical durability | 2 Mcycles 12 A AC-3 at Ue <= 440 V 0.8 Mcycles 25 A AC-1 at Ue <= 440 V |
| Power dissipation per pole | 0.36 W AC-3 1.56 W AC-1 |
| Protective cover | With |
| Mounting support | Plate Rail |
| Standards | CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 |
| Product certifications | UL DNV GOST GL CSA RINA LROS (Lloyds register of shipping) CCC BV |
| Connections - terminals | Control circuit: screw clamp terminals 2 cable(s) 0...0 in ² (1...2.5 mm ²) - cable stiffness: flexible - with cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: solid - without cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: flexible - without cable end Power circuit: screw clamp terminals 2 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: flexible - without cable end Power circuit: screw clamp terminals 2 cable(s) 0...0 in ² (1...2.5 mm ²) - cable stiffness: flexible - with cable end Power circuit: screw clamp terminals 1 cable(s) 0...0.01 in ² (1...4 mm ²) - cable stiffness: solid - without cable end |

Power circuit: screw clamp terminals 2 cable(s) 0...0.01 in² (1...4 mm²) - cable stiffness: solid - without cable end

| | |
|--------------------------|--|
| Tightening torque | Power circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver Philips No 2 Control circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 15.04 lbf.in (1.7 N.m) - on screw clamp terminals - with screwdriver Philips No 2 |
| Operating time | 4...19 ms opening 12...22 ms closing |
| 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 |
| Operating rate | 3600 cyc/h at ≤ 140 °F (60 °C) |

Complementary

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|---------------------------------|---|
| Coil technology | Without built-in suppressor module |
| Control circuit voltage limits | 0.3...0.6 U _c drop-out at 140 °F (60 °C), AC 50/60 Hz 0.8...1.1 U _c operational at 140 °F (60 °C), AC 50 Hz 0.85...1.1 U _c operational at 140 °F (60 °C), AC 60 Hz |
| Inrush power in VA | 70 VA at 68 °F (20 °C) (cos φ 0.75) 60 Hz 70 VA at 68 °F (20 °C) (cos φ 0.75) 50 Hz |
| Hold-in power consumption in VA | 7.5 VA at 68 °F (20 °C) (cos φ 0.3) 60 Hz 7 VA at 68 °F (20 °C) (cos φ 0.3) 50 Hz |
| Heat dissipation | 2...3 W at 50/60 Hz |
| 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 current | 5 mA signalling circuit |
| Minimum switching voltage | 17 V signalling circuit |
| Non-overlap time | 1.5 ms on energisation between NC and NO contact 1.5 ms on de-energisation between NC and NO contact |
| Insulation resistance | > 10 MOhm signalling circuit |
| Power range | 2.2...3 kW 200...240 V 3 phases 4...6 kW 380...440 V 3 phases 4...6 kW 480...500 V 3 phases |
| Motor starter type | Direct on-line contactor |
| Contactor coil voltage | 110 V AC standard |

Environment

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|---|--|
| IP degree of protection | IP2x front face conforming to IEC 60529 |
| Protective treatment | TH conforming to IEC 60068-2-30 |
| Pollution degree | 3 |
| Ambient air temperature for operation | -4...140 °F (-20...60 °C) |
| Ambient air temperature for storage | -76...176 °F (-60...80 °C) |
| Permissible ambient air temperature around the device | -40...158 °F (-40...70 °C) at U _c |
| Operating altitude | 9842.52 ft (3000 m) without derating in temperature |
| Fire resistance | 1562 °F (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 open 10 Gn for 11 ms Shocks contactor closed 15 Gn for 11 ms |
| Height | 3.03 in (77 mm) |
| Width | 1.77 in (45 mm) |
| Depth | 3.39 in (86 mm) |
| Product weight | 0.72 lb(US) (0.325 kg) |

Ordering and shipping details

| | |
|-----------------------|------------------------------------|
| Category | 22345 - CTR,D-LINE,OPEN,NONREV-NEW |
| Discount Schedule | I12 |
| GTIN | 00785901207023 |
| Nbr. of units in pkg. | 1 |
| Package weight(Lbs) | 0.780000000000000003 |
| Returnability | Y |
| Country of origin | ID |

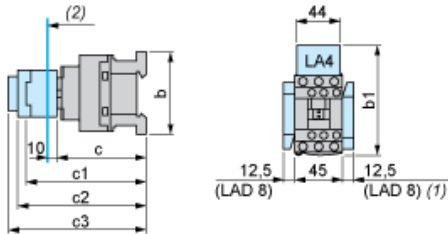
Offer Sustainability

| | |
|----------------------------------|---|
| Sustainable offer status | Green Premium product |
| RoHS (date code: YYWW) | Compliant - since 0627 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity |
| REACH | Reference not containing SVHC above the threshold Reference not containing SVHC above the threshold |
| Product environmental profile | Available |
| Product end of life instructions | Available |

Contractual warranty

| | |
|-----------------|-----------|
| Warranty period | 18 months |
|-----------------|-----------|



Dimensions



- (1) Including LAD 4BB
(2) Minimum electrical clearance

| LC1 | | D09...D18 | D093...D123 | D099...D129 |
|------------|------------------------------------|--------------------|----------------------|-------------|
| b | without add-on blocks | 77 | 99 | 80 |
| b1 | with LAD 4BB | 94 | 107 | 95.5 |
| with LA4 D | F10 ⁽¹⁾ | 123 ⁽¹⁾ | 111.5 ⁽¹⁾ | |
| with LA4 D | F11 ⁽¹⁾ | 132 ⁽¹⁾ | 120.5 ⁽¹⁾ | |
| with LA4 D | F12 ⁽¹⁾ | 139 ⁽¹⁾ | 127.5 ⁽¹⁾ | |
| c | without cover or add-on blocks | 84 | 84 | 84 |
| c | with cover, without add-on blocks | 86 | 86 | |
| c1 | with LAD N or C (2 or 4 contacts) | 117 | 117 | 117 |
| c2 | with LA6 DK10, LAD 6K10 | 129 | 129 | 129 |
| c3 | with LAD T, R, S | 137 | 137 | 137 |
| | with LAD T, R, S and sealing cover | 141 | 141 | |
| (1) | Including LAD 4BB. | | | |

Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power 5,5 kW and 415 VAC

| Motor Power (kW) | Icu (kA) | Breaker | Contactor |
|------------------|----------|--|---|
| 5.5 | 15 |  GV2ME16 |  LC1D12F7 |

Non contractual pictures. Type 1 coordination requires that in a short-circuit condition, the contactor or starter must not present any danger to personnel or installations and must not be able to resume operation without repair or the replacement of parts.