

Product data sheet

Characteristics

LC1D093FL

TeSys D contactor - 3P(3 NO) - AC-3 - <= 440 V 9 A - 110 V DC coil



Main

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|--|---|
| Range | TeSys |
| Product name | TeSys D |
| Product or component type | Contacteur |
| Device short name | LC1D |
| Contacteur application | Resistive load Motor control |
| Utilisation category | AC-4 AC-3 AC-1 |
| Poles description | 3P |
| Power pole contact composition | 3 NO |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC |
| [Ie] rated operational current | 9 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit |
| Motor power kW | 2.2 kW at 220...230 V AC 50/60 Hz (AC-3) 4 kW at 380...400 V AC 50/60 Hz (AC-3) 4 kW at 415...440 V AC 50/60 Hz (AC-3) 5.5 kW at 500 V AC 50/60 Hz (AC-3) 5.5 kW at 660...690 V AC 50/60 Hz (AC-3) 2.2 kW at 400 V AC 50/60 Hz (AC-4) |
| Motor power HP (UL / CSA) | 1 hp at 230/240 V AC 50/60 Hz for 1 phase motors 2 hp at 200/208 V AC 50/60 Hz for 3 phases motors 2 hp at 230/240 V AC 50/60 Hz for 3 phases motors 5 hp at 460/480 V AC 50/60 Hz for 3 phases motors 7.5 hp at 575/600 V AC 50/60 Hz for 3 phases motors 0.33 hp at 115 V AC 50/60 Hz for 1 phase motors |
| Control circuit type | DC low consumption |
| [Uc] control circuit voltage | 110 V DC |
| Auxiliary contact composition | 1 NO + 1 NC |
| [Uimp] rated impulse withstand voltage | 6 kV conforming to IEC 60947 |
| Oversoltage category | III |

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| [I _{th}] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit 16 A (at 60 °C) for power circuit |
| I _{rms} rated making capacity | 250 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 | 250 A at 440 V for power circuit conforming to IEC 60947 |
| [I _{cw}] rated short-time withstand current | 105 A 40 °C - 10 s for power circuit 210 A 40 °C - 1 s for power circuit 30 A 40 °C - 10 min for power circuit 61 A 40 °C - 1 min 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 mΩ - I _{th} 16 A 50 Hz for power circuit |
| [U _i] rated insulation voltage | Power circuit: 690 V conforming to IEC 60947-4-1 Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified |
| Electrical durability | 0.6 Mcycles 25 A AC-1 at U _e ≤ 440 V 2 Mcycles 9 A AC-3 at U _e ≤ 440 V |
| Power dissipation per pole | 1.56 W AC-1 0.2 W AC-3 |
| Safety cover | With |
| Mounting support | Rail Plate |
| 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 | RINA CCC LROS (Lloyds register of shipping) GL GOST DNV CSA BV UL |
| Connections - terminals | Power circuit: spring terminals 1 cable(s) 2.5 mm ² flexible without cable end Power circuit: spring terminals 2 cable(s) 2.5 mm ² flexible without cable end Control circuit: spring terminals 1 cable(s) 2.5 mm ² flexible without cable end Control circuit: spring terminals 2 cable(s) 2.5 mm ² flexible without cable end |
| Operating time | 65.45...88.55 ms closing 20...30 ms opening |
| Safety reliability level | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1 B10d = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 |
| Mechanical durability | 30 Mcycles |
| Maximum operating rate | 3600 cyc/h 60 °C |

Complementary

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|--------------------------------|--|
| Coil technology | Built-in bidirectional peak limiting diode suppressor |
| Control circuit voltage limits | Drop-out: 0.1...0.3 U _c DC (at 60 °C) Operational: 0.8...1.25 U _c DC (at 60 °C) |
| Time constant | 40 ms |
| Inrush power in W | 2.4 W (at 20 °C) |
| Hold-in power consumption in W | 2.4 W at 20 °C |
| 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

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| Signalling circuit frequency | 25...400 Hz |
| Minimum switching current | 5 mA for signalling circuit |
| Minimum switching voltage | 17 V 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 |
| Insulation resistance | > 10 MOhm for signalling circuit |

Environment

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| IP degree of protection | IP20 front face conforming to IEC 60529 |
| Protective treatment | TH conforming to IEC 60068-2-30 |
| Pollution degree | 3 |
| Ambient air temperature for operation | -5...60 °C |
| Ambient air temperature for storage | -60...80 °C |
| Permissible ambient air temperature around the device | -40...70 °C at Uc |
| Operating altitude | 3000 m without |
| 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 open: 10 Gn for 11 ms Shocks contactor closed: 15 Gn for 11 ms |
| Height | 80 mm |
| Width | 45 mm |
| Depth | 95 mm |
| Net weight | 0.48 kg |

Offer Sustainability

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| Sustainable offer status | Green Premium product |
| RECh Regulation | RECh Declaration |
| RECh free of SVHC | Yes |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS declaration |
| 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 |

Contractual warranty

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| Warranty | 18 months |
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