



Main

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|-------------------------------------|------------------------------------|
| Range | TeSys |
| Product name | TeSys LRF |
| Device short name | LR9F |
| Product or component type | Electronic thermal overload relay |
| Relay application | Motor protection |
| Product compatibility | LC1F115...LC1F185 |
| Network type | AC |
| Thermal overload class | Class 10 conforming to IEC 60947-4 |
| Thermal protection adjustment range | 60...100 A |

Complementary

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|---|---|
| Network frequency | 50/60 Hz |
| Supply voltage limits | 17...32 V |
| Mounting support | Direct on contactor Plate |
| Tripping threshold | 1.12 +/- 0.06 In tripping conforming to IEC 60947-4-1 |
| Surge withstand | 4 kV conforming to IEC 61000-4-5 |
| Contacts type and composition | 1 NO + 1 NC |
| [Ith] conventional free air thermal current | 5 A for control circuit |
| [Ue] rated operational voltage | 1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C |
| [Ui] rated insulation voltage | Power circuit: 1000 V AC conforming to IEC 60947-4 |
| [Uimp] rated impulse withstand voltage | IEC 60947-1 8 kV |
| Phase failure sensitivity | Tripping in 4 s +/- 20 % conforming to IEC 60947-4-1 |
| Reset | Manual reset on front relay |
| Control type | Dial white full-load current adjustment Test button red Push-button red reset Push-button stop |

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

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|------------------------------|--|
| Local signalling | Trip indicator |
| Temperature compensation | -20...70 °C |
| Current consumption | <= 5 mA no-load |
| Switching capacity for alarm | 0...150 mA |
| Maximum voltage drop | <2.5 V closed state |
| Connections - terminals | Control circuit: screw clamp terminals 1 cable 0.75...2.5 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable 0.75...2.5 mm ² - cable stiffness: solid Control circuit: screw clamp terminals 1 cable 0.75...4 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable 1...1.5 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 2 cable 1...2.5 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable 1 mm ² - cable stiffness: solid Power circuit: lugs-ring terminals M8 |
| Tightening torque | Control circuit: 1.2 N.m on screw clamp terminals Power circuit: 18 N.m on screw clamp terminals |
| Height | 96 mm |
| Width | 115 mm |
| Depth | 123.5 mm |
| Net weight | 0.9 kg |

Environment

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|---------------------------------------|---|
| Standards | IEC 60255-8 VDE 0660 IEC 60255-17 IEC 60947-4-1 EN 60947-4-1 |
| Product certifications | UL CSA |
| Protective treatment | TH |
| IP degree of protection | IP20 conforming to IEC 60529 IP20 conforming to VDE 0106 |
| Ambient air temperature for operation | -20...55 °C conforming to IEC 60255-8 |
| Ambient air temperature for storage | -40...85 °C |
| Operating altitude | <= 2000 m without derating |
| Fire resistance | 850 °C conforming to IEC 60695-2-1 |
| Mechanical robustness | Shocks: 13 Gn for 11 ms conforming to IEC 60068-2-7 Vibrations 5...300 Hz: 2 Gn conforming to IEC 60068-2-6 |
| Dielectric strength | 6 kV 50 Hz conforming to IEC 255-5 |
| Electromagnetic compatibility | Resistance to electrostatic discharge: 6 kV in indirect mode conforming to IEC 61000-4-2 Resistance to electrostatic discharge: 8 kV in air conforming to IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test: 10 V/m conforming to IEC 61000-4-3 Fast transients immunity test: 2 kV conforming to IEC 61000-4-4 |

Offer Sustainability

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|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS declaration Product out of China RoHS scope. Substance declaration for your information |
| 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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