

# Product datasheet

Specifications



## TeSys LRF - electronic thermal overload relay - 132...220 A - class 10

LR9F5371

! Discontinued on: 13 January 2023

! To be end-of-service on: 31 March 2024

! Discontinued

### Main

|                                     |                                    |
|-------------------------------------|------------------------------------|
| Range                               | TeSys                              |
| Product name                        | TeSys LRF                          |
| Device short name                   | LR9F                               |
| Product or component type           | Electronic thermal overload relay  |
| Relay application                   | Motor protection                   |
| Product compatibility               | LC1F185...LC1F265                  |
| Network type                        | AC                                 |
| Thermal overload class              | Class 10 conforming to IEC 60947-4 |
| Thermal protection adjustment range | 132...220 A                        |

### Complementary

|   |   |
|---|---|
| Network frequency                           | 50/60 Hz  |
| Mounting support                            | Direct on contactor<br>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      | 8 kV conforming to IEC 60947-1  |
| 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<br>Test button red<br>Push-button red reset<br>Push-button stop |
| Local signalling                            | Trip indicator  |
| Temperature compensation                    | -20...70 °C   |

|                                     |   |
|-------------------------------------|---|
| <b>Current consumption</b>          | <= 5 mA no-load   |
| <b>Switching capacity for alarm</b> | 0...150 mA  |
| <b>Maximum voltage drop</b>         | <2.5 V closed state   |
| <b>Connections - terminals</b>      | Control circuit: screw clamp terminals 1 cable 0.75...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit: screw clamp terminals 1 cable 0.75...2.5 mm <sup>2</sup> - cable stiffness: solid<br>Control circuit: screw clamp terminals 1 cable 0.75...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit: screw clamp terminals 2 cable 1...1.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit: screw clamp terminals 2 cable 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit: screw clamp terminals 2 cable 1 mm <sup>2</sup> - cable stiffness: solid<br>Power circuit: lugs-ring terminals M10 |
| <b>Tightening torque</b>            | Control circuit: 1.2 N.m on screw clamp terminals<br>Power circuit: 35 N.m on screw clamp terminals   |
| <b>Height</b>                       | 101 mm  |
| <b>Width</b>                        | 115 mm  |
| <b>Depth</b>                        | 123.5 mm  |
| <b>Net weight</b>                   | 0.95 kg   |

## Environment

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

## Packing Units

|                                     |           |
|-------------------------------------|-----------|
| <b>Unit Type of Package 1</b>       | PCE       |
| <b>Number of Units in Package 1</b> | 1         |
| <b>Package 1 Height</b>             | 15.000 cm |
| <b>Package 1 Width</b>              | 16.500 cm |
| <b>Package 1 Length</b>             | 13.000 cm |
| <b>Package 1 Weight</b>             | 1.035 kg  |
| <b>Unit Type of Package 2</b>       | S04       |
| <b>Number of Units in Package 2</b> | 11        |
| <b>Package 2 Height</b>             | 30.000 cm |
| <b>Package 2 Width</b>              | 40.000 cm |

|                              |           |
|------------------------------|-----------|
| Package 2 Length             | 60.000 cm |
| Package 2 Weight             | 12.030 kg |
| Unit Type of Package 3       | P06       |
| Number of Units in Package 3 | 44        |
| Package 3 Height             | 75.000 cm |
| Package 3 Width              | 60.000 cm |
| Package 3 Length             | 80.000 cm |
| Package 3 Weight             | 59.048 kg |

## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a>  |
| Mercury free               | Yes   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Product out of China RoHS scope. Substance declaration for your information       |
| RoHS exemption information | Yes   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End of Life Information</a>   |
| 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 |
|----------|-----------|

## Recommended replacement(s)