# Product data sheet

Specifications



## TeSys LRF - electronic thermal overload relay - 380...630 A - class 20

LR9F7581

Discontinued on: Apr 30, 2025

To be discontinued

**Product availability: Stock - Normally stocked in distribution facility**

## 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** | LC1F400...LC1F630<br>LC1F800 |
| **Network type** | AC |
| **Thermal overload class** | Class 20 IEC 60947-4 |
| **Thermal protection adjustment range** | 380…630 A |
| **Signalling function** | Pre-alarm indicator |

## Complementary

| | |
|---|---|
| **Network Frequency** | 50/60 Hz |
| **Mounting support** | Direct on contactor<br>Plate |
| **Tripping threshold** | 1.12 +/- 0.06 In tripping IEC 60947-4-1 |
| **Surge withstand** | 4 kV IEC 61000-4-5 |
| **Contacts type and composition** | 1 NO + 1 NC |
| **[Ith] conventional free air thermal current** | 5 A control circuit |
| **[Ue] rated operational voltage** | 1000 V AC 50/60 Hz power circuit VDE 0110 group C |
| **[Ui] rated insulation voltage** | Power circuit 1000 V AC IEC 60947-4 |
| **[Uimp] rated impulse withstand voltage** | 8 kV IEC 60947-1 |
| **Phase failure sensitivity** | Tripping in 4 s +/- 20 % IEC 60947-4-1 |
| **Reset** | Manual reset |
| **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** | -4…158 °F (-20…70 °C) |
| **Current consumption** | <= 5 mA no-load |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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

| | |
|---|---|
| **switching capacity for alarm** | 0...150 mA |
| **Maximum voltage drop** | <2.5 V closed state |
| **Connections - terminals** | Control circuit screw clamp terminals 1 0.001…0.004 in² (0.75…2.5 mm²) flexible - with cable end<br>Control circuit screw clamp terminals 1 0.001…0.004 in² (0.75…2.5 mm²) solid<br>Control circuit screw clamp terminals 1 0.001…0.006 in² (0.75…4 mm²) flexible - without cable end<br>Control circuit screw clamp terminals 2 0.002…0.002 in² (1…1.5 mm²) flexible - with cable end<br>Control circuit screw clamp terminals 2 0.002…0.004 in² (1…2.5 mm²) flexible - without cable end<br>Control circuit screw clamp terminals 2 0.002 in² (1 mm²) solid<br>Power circuit lugs-ring terminals M12 |
| **Tightening torque** | Control circuit 1.2 N.m screw clamp terminals<br>Power circuit 58 N.m screw clamp terminals |
| **Height** | 9.008 in (228.8 mm) |
| **Width** | 7.6 in (193 mm) |
| **Depth** | 5.02 in (127.6 mm) |
| **Product Weight** | 9.17 lb(US) (4.16 kg) |

## Environment

| | |
|---|---|
| **Standards** | IEC 60947-4-1<br>IEC 60255-8<br>EN 60947-4-1<br>IEC 60255-17<br>VDE 0660 |
| **Product Certifications** | UL<br>CSA<br>UKCA |
| **Protective treatment** | TH |
| **IP degree of protection** | IP20 conforming to IEC 60529 |
| **Ambient air temperature for operation** | -4…131 °F (-20…55 °C) IEC 60255-8 |
| **Ambient Air Temperature for Storage** | -40…185 °F (-40…85 °C) |
| **Operating altitude** | <= 6561.68 ft (2000 m) without derating |
| **Fire resistance** | 1562 °F (850 °C) IEC 60695-2-1 |
| **Mechanical robustness** | Shocks13 Gn for 11 ms IEC 60068-2-7<br>Vibrations 5...300 Hz2 GN IEC 60068-2-6 |
| **Dielectric strength** | 6 kV 50 Hz IEC 255-5 |
| **Electromagnetic compatibility** | Resistance to electrostatic discharge 6 kV in indirect mode IEC 61000-4-2<br>Resistance to electrostatic discharge 8 kV in air IEC 61000-4-2<br>Radiated radio-frequency electromagnetic field immunity test 10 V/m IEC 61000-4-3<br>Fast transients immunity test 2 kV IEC 61000-4-4 |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US1CTR521259 |
| **Discount Schedule** | CTR5 |
| **GTIN** | 3389110640236 |
| **Returnability** | No |
| **Country of origin** | FR |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |

| | |
|---|---|
| **Nbr. of units in pkg.** | 1 |
| **Package 1 Height** | 6.3 in (16.0 cm) |
| **Package 1 Width** | 7.09 in (18.0 cm) |
| **Package 1 Length** | 6.7 in (17.0 cm) |
| **Package weight(Lbs)** | 7.873 lb(US) (3.571 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty (in months)** | 18 |

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

### Environmental footprint

| | |
|---|---|
| Total lifecycle Carbon footprint | **158 kg CO2 eq.** |
| Carbon footprint of the manufacturing phase [A1 to A3] | **20 kg CO2 eq.** |
| Carbon footprint of the distribution phase [A4] | **3 kg CO2 eq.** |
| Carbon footprint of the installation phase [A5] | **0.5 kg CO2 eq.** |
| Carbon footprint of the use phase [B2, B3, B4, B6] | **127 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **8 kg CO2 eq.** |
| Environmental Disclosure | **Product Environmental Profile** |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | **Yes** |
| Packaging without single use plastic | **No** |
| SCIP Number | **D5a17874-1166-4927-b008-33d15e304a41** |
| EU RoHS Directive | **Compliant By Exemption** |
| REACh Regulation | **Reference contains Substances of Very High Concern above the threshold** |
| California proposition 65 | **WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov** |
| PVC free | **Yes** |

## Use Longer

### Lifetime extension

| | |
|---|---|
| Repair | **No** |

## Use Again

### Repack and remanufacture

| | |
|---|---|
| Recyclability potential, in % | **92** |
| Circularity Profile | **End of Life Information** |
| Take-back | **No** |