



OVERCURRENT PROTECTION

Reyrolle 7SR57

[siemens.com/reyrolle](https://www.siemens.com/reyrolle)

Description

The Reyrolle 5 is designed for the electricity networks of the future with enhanced communications and cyber security while maintaining a user-friendly interface and easy product management.

The Reyrolle 7SR57 motor protection devices include a wide range of protection functions and IEC 61850 Ethernet communications as standard. To further minimize the product variants the power supply and the binary inputs cover the full operating range with configurable binary input thresholds.

The large LCD, tactile pushbuttons and programmable LEDs provide a user-friendly product interface and the relay element is withdrawable for easy replacement.

Benefits

- Compact design and low product life-cycle cost
- Reliable operation due to powerful, proven protection algorithms
- IEC 61850 Edition 1 & 2 with HSR, PRP and RSTP operation for increased availability
- Simple product ordering
- Combined 1 A and 5 A current transformer inputs
- 28 programmable tri-color LEDs for clear indications.
- User selectable languages: English, French, German, Portugese, Spanish, Turkish
- Conformal coating ordering option

Applications

- Motor protection functions designed to protect during all motor starting and running sequences
- Thermal algorithm optimized to closely match the thermal characteristics of motors
- Thermal monitoring via plant temperature sensors supported

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Functions

Standard Functionality

- 14 Locked rotor protection
- 37/37G Undercurrent protection – phase/earth
- 46BC Broken conductor detection
- 46PR Phase-rotation reversal
- 46UB Phase unbalance
- 48 Starting-time supervision
- 49M Motor thermal overload protection
- 49TS Temperature sensor supervision¹
- 50/50G/50N Instantaneous overcurrent/earth fault
- 50AFD Arc flash detection²
- 50BCL Break capacity limit
- 50BF Circuit-breaker failure protection – 3-pole
- 51/51G/51N Time delayed overcurrent/earth fault
- 52 Circuit-breaker control
- 60CTS CT supervision
- 66 Number of starts
- 74CC/74TC Close-circuit and trip-circuit supervision
- 81B Backspin monitor
- 81HB2 Inrush current detection
- 86 Lockout
- 87GH Restricted earth fault protection – high-impedance

Additional Functionality – Devices with VT Inputs

- 27/27Vx Undervoltage protection
- 32 Power protection
- 47 Sequence overvoltage protection
- 55 Power factor
- 59/59Vx Overvoltage protection
- 59N Neutral voltage displacement
- 60VTS VT supervision
- 67/67G/67N Directional – phase/earth fault
- 81 Frequency protection – "f>" or "f<"
- 81B-V Backspin monitor – voltage reference

Monitoring Functions

- Primary, secondary, phase sequence, current and voltage
- Frequency, power, and energy
- Fault data, event and waveform records
- Motor start data log

Communication

- IEC 60870-5-103, Modbus TCP, Modbus RTU, DNP3, IEC 61850, Modbus Client for connection to external RTD box

Inputs and Outputs

4 I + 8 BI + 6 BO
4 I + 3 AFD + 8 BI + 9 BO (inc. 3 HSBO)
4 I + 13 BI + 8 BO
4 I + 3 AFD + 13 BI + 11 BO (inc. 3 HSBO)
4 I + 4 V + 9 BI + 8 BO
4 I + 4 V + 3 AFD + 9 BI + 11 BO (inc. 3 HSBO)
4 I + 4 V + 19 BI + 12 BO
4 I + 4 V + 3 AFD + 19 BI + 15 BO (inc. 3 HSBO)

Communication

Standard front USB port (for configuration using Reydisp PC based software tool) rear RS485, 2 x RJ45 electrical ports or optional optical Ethernet connections

Housing

Size 6 or 12 with withdrawable design

Display

Backlit 128 x 128 LCD with text and graphical display capabilities suitable for single line mimic diagrams

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¹ An external interface unit is required.

² Requires external components