



## ENERGY AUTOMATION PRODUCTS

# 7SR57

# Motor protection

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

The Reyrolle 7SR57 is a protective device engineered for comprehensive motor protection. It is utilized across various industrial settings and electrical systems to shield motors from potential damages caused by operational irregularities. The device boasts a broad spectrum of protection functions, flexible configurations for binary inputs/outputs, a wide-ranging power supply capability, and supports IEC 61850 Ethernet communications as a standard feature, enabling its easy integration into existing and automated energy systems.



### Highlights



Compact design and low product life-cycle cost



Combined 1 A and 5 A current transformer inputs



28 programmable tri-color LEDs for clear indications

### Benefits

- Reliable operation due to powerful, proven protection algorithms
- IEC 61850 Edition 1 & 2, DNP3 TCP, Modbus TCP with HSR, PRP and RSTP operation for increased availability
- Role Based Access Control (RBAC)
- Simple product ordering
- User selectable languages: English, French, German, Portuguese, Spanish, Turkish, Italian
- Conformal coating ordering option

Inputs and Outputs	<ul style="list-style-type: none"> <li>• Current inputs – 4 or 8</li> <li>• Voltage inputs – 0 or 4</li> <li>• Binary inputs (max) – 29</li> <li>• Binary outputs (max) incl. Device healthy contact – 16</li> <li>• Arc flash detector inputs (AFD) – 0 or 3</li> <li>• Heavy duty binary outputs (HDBO) – 0 or 4</li> <li>• High speed binary outputs (HSBO) – 0 or 3</li> <li>• Temperature sensor inputs (TSI) – 0, 8 or 16</li> </ul>
Communication	Standard front USB port (for configuration using Reydisp Manager 2, a PC based software tool), rear RS485, 2 x RJ45 electrical ports or optional optical Ethernet connections
Housing	Size 6, 8 or 12 with withdrawable design
Display	Backlit 128 x 128 LCD with text and graphical display capabilities suitable for single line mimic diagrams

## 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
- Motor differential protection (87M) for large motors (7SR572 devices only)

## 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 supervision
- 50/50G/50N Instantaneous overcurrent/earth fault
- 50AFD Arc flash detection
- 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
- 87M Motor differential protection (7SR572)

## 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 & voltage
- Frequency, power, and energy
- Fault data, event and waveform records
- Motor start data log

## Security Features

- Signed firmware
- Encrypted connection between the device and PC tool
- Security logging
- Separate firmwares for protection and communication
- Secure access with password control
- Role based access control
- Encrypted WebUI access

## Communication

- IEC 60870-5-103, DNP3, Modbus RTU, Modbus Client (for use with external TSI interface), IEC 61850, DNP3 TCP, Modbus TCP

 [Virtual Relay Tool](#)

 [Configuration software - Reydisp Manager](#)

 [Webinar series - Reyrolle essentials](#)

 [Catalog Reyrolle 7SR5 Platform](#)

 [Online shop - Industry Mall](#)

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