

SIEMENS

Ingenuity for life

SIPROTEC 7SC80

Distribution network protection and automation

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Solutions for the networks of today and tomorrow

The SIPROTEC protection devices manufactured by Siemens are consistently used in all applications of medium and high voltage. SIPROTEC allows you to keep your equipment safely under control and serves as a basis for implementing cost-effective solutions for all tasks of modern, intelligent and "smart" networks. As SIPROTEC stands for continuity, openness and security for the future, you as a user can combine devices of different SIPROTEC device series in order to perform various tasks.

Device description

7SC80 is more than a simple time overcurrent protection device

The SIPROTEC 7SC80 distribution network protection device is used for protection and automation of feeders in solid or low-resistance grounded, isolated or compensated medium-voltage distribution networks.

The protection functions are flexibly configurable, and the user can create up to 20 additional protection functions specifically for his needs. In addition, primary switching devices such as grounding switches, isolating switches and transfer switches can be monitored.

User-defined functions such as automation of a switchgear bay (interlocking, load shedding programs) can be implemented with the help of the integrated programmable logic (CFC). The ability to generate user-defined messages completes the versatility of the device.

Plug-in and interactive web-based HMI

The device has a plug-in or web-based HMI which provides 32 LED and 9 freely programmable function keys for direct shortcuts or different applications.



Overview of all benefits

- Fast fault detection
Isolation of the faulty feeder section
Supply restoration to healthy sections of the feeder
- Support and advanced programming functions for feeder automation applications
- Plug-in terminals with integrated short-circuit jumpers
- Data transmission for distances of up to 24 km with a single-mode cable and up to 4 km with a multi-mode cable
- Flexible communication options, e.g. for radio transmission used specifically for feeder automation
- Integrated GPS module for time synchronization and position detection
- Full remote control, remote monitoring and firmware upgrades
- The web-based HMI provides full remote control and remote monitoring of the device
- Battery monitoring and management

Intelligent and safe

Device characteristics

Communication interfaces and protocols

- Electrical and optical Ethernet
- IEC 61850 Edition 1 and 2
- DNP3 TCP, IEC 60870-5-104, Profinet
- Ethernet redundancy protocols RSTP, PRP and HSR
- USB front interface for DIGSI 4

Operation and display

- Large display, 14 function and arrow keys
- 32 freely programmable LEDs, additional LEDs indicating the operating status
- Automatic LED and function key labeling in the web

Monitoring functions

- Measured and metered values U, I, f, Wp, Wq
- Min./max. values
- Circuit breaker wear monitoring
- Fuse monitoring, trip circuit monitoring
- 8 fault records

Auxiliary voltage

- AC 115 V, AC 230 V
- DC 24 - 250 V

Inputs/outputs

- 4 current transformers, 1 or optionally 4 voltage transformers
- 12 binary inputs, 8 binary outputs
- 1 life contact
- Terminal for low power current and voltage transformers

Temperature range:

- From -50°C to +85°C

Housing specification

- Reliable metal housing for flush and panel surface mounting
- Dimensions: 295 x 307 x 68 mm (W / H / D)
- Protection type: max. IP51

Special features

- FASE and FAST: Convenient engineering and testing tools for distribution network applications.
- Plug-in and interactive web-based HMI



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SIPROTEC 7SC80_V2 profile.docx
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For all products using security features of OpenSSL, the following shall apply:

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (www.openssl.org), cryptographic software written by Eric Young (eay@cryptsoft.com) and software developed by Bodo Moeller.