



SIPROTEC 7SY82

Universal Protection Device for LPITs in air and gas-insulated switchgears

[siemens.com/7SY82](https://www.siemens.com/7SY82)

A real universal device for protection with LPITs (Low Power Instrument Transformers)! SIPROTEC 7SY82 – member of the SIPROTEC 5 family, is designed for the connection of LPITs. The new LPIT input design makes the SIPROTEC 7SY82 a universal protection device for almost all LPITs according to IEC 61869.

The SIPROTEC 7SY82 universal protection device is part of the Siemens Xcelerator in combination with the SIPROTEC DigitalTwin and the SIPROTEC Dashboard and offers further possibilities for digitization.

Highlights



Universal protection device for the connection of 8 LPIT sensors according to IEC 61869



4 combined RJ45 inputs – fast and safe



Easy extension of the function point class within a few minutes via the new application SIPROTEC Function Point Manager



Functions from the SIPROTEC 5 function library can be loaded into the device configuration simply by dragging and dropping with DIGSI 5

Your benefits

- Minimization of your device variance and thus optimization of your investment and operating costs
- SIPROTEC 7SY82 processes signals from LPIT sensor types according to IEC 61869
- Easy function upgrade immediately on demand via the function point manager
- Retrofit of existing LPIT devices also from other manufacturers thanks to the universal LPIT input is possible in most cases
- Transfer of protection parameterizations of existing systems with conventional transformers
- Very large primary rated current operating range with only one sensor ratio
- No dangerous overvoltage at open clamps

Areas of application

The SIPROTEC 7SY82 universal protection is designed for the following types of protection:

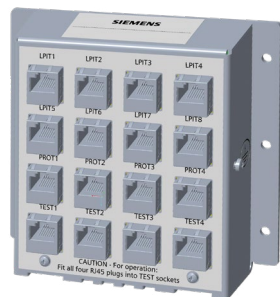
- Protection and control of feeders for cables and lines
- Protection and control of feeders for motors and capacitor banks
- Detection and selective 3-pole tripping of short circuits in medium-voltage networks
- Selective detection of all ground faults

Protection applications and functions

- Directional and non-directional overcurrent protection of feeders, with additional functions
- Detection of ground faults of any type in isolated or arc-suppression-coil grounded power systems
- Overvoltage and undervoltage protection
- Frequency protection and frequency-rate-of-change protection
- Power protection

Import LPIT data easily

- Our configuration tool DIGSI 5 provides default settings for the most common available sensors, i.e., you only select the sensor type, and the device automatically loads all sensor data from a database. LPITs that are not listed can be included manually
- If sensor-specific calibration data is provided by a sensor manufacturer, we offer the sensor manufacturer a cloud-based solution for uploading its calibration data. DIGSI 5 can automatically import this data via the sensor ID



Adapter and testbox in one

The optional adapter and testbox is connected between LPIT sensors and protection device SIPROTEC 7SY82. With the adapter function, 4 current and 4 voltage single sensors with RJ45 connector are connected and merged. Combined sensors (current/voltage) only occupy the first four RJ45 inputs. Patch cables are used for connection to the SIPROTEC 7SY82. During commissioning and for test purposes, the test function can be used. Current and voltage signals are fed directly into the box from the test equipment (inputs Test 1 to 4) without interrupting the measuring circuits of the LPIT sensors.

Produktmerkmale

- Universal LPIT input that supports all typical sensor types, according IEC 61869:
 - Rogowski coil and inductive low-power sensor for current measurement, the input will be configured via software for the sensor method
 - R-divider and C-divider for voltage measurement, the input will be configured via software for the sensor method
 - Temperature measurement for optional temperature compensation (for C-divider)
- Sensor data are conveniently entered as device parameters
- Device with 8 LPIT inputs as standard, the number of required binary inputs and outputs can be selected from two variants:
 - 9 binary inputs, 9 binary outputs
 - 21 binary inputs, 16 binary outputs
- Accuracy for current & voltage operating values: 0.2



Webinar: SIPROTEC 7SY82 –
Universal protection for LPITs

Manufacturers of MV cubicles: the use of LPITs enables a smaller design, simple connection with less wiring and reduced variance of transformers

Energy generators: Simple adaptation of device functions when connecting regenerative infeed

Industrial users: Addition of protection functions e.g., simple upgrade of feeder protection with motor or frequency protection functions



Siemens AG
Smart Infrastructure
Electrification & Automation
Mozartstrasse 31c
91052 Erlangen, Germany

© Siemens 2024, January 2024
Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.