

SVERKER 900

Relay and Substation Test System

Quick Guide



Safety

Always comply with local safety regulations when using SVERKER 900. Read and comply with the safety instructions in the User's manual before using SVERKER 900.

Home menu

	Main instrument
	Prefault - Fault instrument
	Ramping instrument
	Sequencer instrument
	CT-Magnetization instrument
	Impedance instrument
	Test File Manager
	System configuration
	Settings for UG/IG

General

	Home menu
	Confirm
	Run
	Exit
	Browse left/right
	BI1 The trigger level can be defined when voltage mode is selected.
	BI2 – BI4 The trigger levels are fixed.
	Red dot Input is active. ≥1 Input is logic connected to another input with OR function.
	& Input is logic connected to another input with AND function.

	U1 I1	Voltage and current generators (UG and IG)
	U2 I2	
	U3 I3	
	U4	
	Set % of basic & harmonic freq. equal for generators.	
	Equals values for current, voltage and frequency.	
	Balances the phase angle values.	
	U4-DC: Setting the voltage for the U4 generator.	
	Configuration of the binary inputs.	
Ext Timer & BI1-BI4		
	Internal Start/Stop	The Ext Timer follows the ON/OFF generating mode.
		A voltage is applied to the input or when a contact is closed.
		A voltage applied to the input vanishes or when a contact is opened.
		When the state of the input changes.

	Voltage mode. Detects if voltage is applied or not.
	Contact mode. Detects if circuit is closed or not.
	Turns on the selected binary input.
	Turns off the selected binary input.

Configuration for UG/ IG

	Generators separate
	Generators in series
	Generators in parallel
	Use as a fourth generator or as an auxiliary power source
	Select AC or DC

Main instrument

	OFF+TIME: Current source is turned off. When the object being tested has operated, the time is displayed. SVERKER returns to OFF mode. A lamp at the input is on when voltage is present or the circuit is closed.
	ON+TIME Current source is activated until the object being tested has operated. The time is displayed and SVERKER returns to OFF mode.
	HOLD Main: Freezes Pick-up and Drop-off voltage/current.
	Measuring: Sets the instrument into measurement mode. To stop measurement mode, press the button again. Measurement mode is not settable if Advanced mode is selected in the system configuration menu.
	View the Frequency (Hz), Power (VA and W), Impedance (R and Z) and phase angle values.

Test file manager

	Quick save
	SAVE Test
	OPEN Test
	Save to USB
	Open USB
	Create new test file
	Open test file library
	View test
	Edit test
	Delete

From all instruments you can save any test results or test configuration in SVERKER 900 persistent storage or to an external USB memory.

When you save a test the first time you select where to save the test. A second test will by default be saved in the previous used test file.

Prefault - Fault instrument



Prefault

Select generators to be active and configure the voltage, current, phase and frequency parameters for each.



Fault + Time

+ Configure the two timing parameters; the max time duration, for how long the Fault state will be generated and the off delay duration, which is the time period after the test object has triggered and until the output generation will be switched off.



Prefault-Fault

Generates the Prefault condition for the set time duration and then change to Fault state until any of the following conditions are met:

- Maximum configured time duration has time-out
- Test object trips
- You press the stop button

Ramping instrument



Set ramp start



Set ramp speed



Set ramp stop



Test mode view (initiate a ramp test)

The Ramping test is very similar to the Prefault->Fault scenario. The difference is that you can configure a ramping condition, between the Prefault and the Fault state. This includes the step-changes in voltage, current, phase and/or frequency, as well as the ramping time duration.

Measurement mode, see main instrument, can only be set in "Set ramp start" mode.

Sequencer instrument

STATE 1 (16)

Copy or delete state



Go to first / last state



Go forward / backward between states



Activates BI & Stop condition for selected state

250 ms

Set the time for selected state

END SEQ

Set the end of sequence

BO

Select BO position

BI

Set voltage or contact sense on B1

STATE

Stop condition for selected state

BI

Set contact condition for the binary inputs



Edit



Insert selected state



Insert and replace state



Copy selected state



Delete state

CT magnetization instrument

---V

Set maximum voltage
Possible in all test modes

---A

Set maximum current
Possible in all test modes



Manual test mode

AUTO

Automatic test mode

In the lid is an accessory, CTM, placed that is to be used for the CT magnetization instrument.

The CT magnetization instrument is used to determine the knee point voltage of a current transformer.

In CT-mode SVERKER 900 can generate up to 900 V by connecting the four voltage generators in series and 300 V by connecting the four voltage in parallel.

Impedance instrument



Prefault



Fault + Manual pickup search



Prefault-Fault



Manual binary search



Configuration



Advanced configuration



CT direction



Cartesian diagram



Polar diagram



Reset to factory settings

Using the Impedance instrument you configure sequence(s) with different states including impedance entry mode for fault state(s).

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Adhesive