## AN001: FAQ Function manager of PSI 9000 / PSI 8000

## What is a function manager?

The function manager manages the function that is stored inside the device and which can be edited manually or edited, loaded and saved by means of a PC.

#### What is a function?

A function is a set of up to five sequences and a few global settings. The function can be controlled either manually or by digital remote, i.e. start, stop etc. Once started, it automatically runs until its end and either stops or repeats as often as defined (up 254 times or infinitely). This can be used to realise automatic test runs. Running the function results in a certain voltage-time and current-time curve, which start simultaneously because for every sequence point a voltage, a current and a time value are defined. The set values for voltage and current can be defined within the nominal values of the device, ignoring any adjustment limit that is set for the device, and the time value between min. 2ms and max. 99h59m59s. It generally applies that all time values are based upon a 2ms grid, so that time values of, for example, 9ms can not be set. When manually editing the values, the step width it given. For remote control, unallowed time values are rounded down. The function has five slots for sequences, any sequence can be selected one time or several times.

#### What is a sequence?

A sequence is a part of a function, consisting of 10 sequence points, which are defined by one voltage values, one current value and one time value. There can be up to 5 different sequences. A sequence is either processed one time or repeated (up to 254 times or infinitely). A certain sequence can be selected a several times within the five sequence slots of a function.

## What control do I have?

Functions and sequences can be edited manually on the power supply or by digital remote control via certain interface cards. In order to control the function there are several buttons to RUN, STOP or continue (GO) the function, as well as let sequence points be executed STEPwise. Another button, NEW, is used to reset the function to start in order to start again or to leave the function manager.

If the power supply output is switched off during the function run, the function run is only simulated. This can be used to test the function.

#### What's there to adjust?

One of the global settings for the function is to select whether to run in U/I resp. U/I/P mode or to run U/I/R mode. U/I/P is only available for models with power adjustment and U/I/R is only available after the optional "internal resistance control" feature has been unlocked. For the functions, as well as for the sequences, the user can define the repetitions (1...254 or infinite) and the order how the single sequences are processed.

For the 10 sequence points of each sequence, the user can set voltage, current and time. Those 10 points have to be defined always, it means they can not be left off. If, for example, only 7 points of a sequence are used, the remaining 3 points could be set to the same voltage and current values as point 6 (points are counted from 0 to 9), and the time values to the minimum of 2ms. This results in 6ms overhead before the end of the sequence, which can be compensated by adjusting the time of point 6 accordingly.

#### How do I edit the function or sequence points?

- a) Select FUNCTION in the device menu (button M), then select the sequence to edit or "Setup function"
- b) "Sequence control" -> Repetitions, set power/resistance (where available) -> leave
- c) "Sequence points 0-4" or 5-9, set values for every point as desired
- d) Übernehmen mit der Return-Taste

#### How do I start/stop a function?

- a) Back to main display level
- b) Push button for second button panel level, then SEQ
- c) Control the function run with the various buttons



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## What problems can occur?

a) Remote control via analogue interface is active --> function manager not accessible

- b) Remote control via digital interface is active --> manual control locked --> LOCAL button (hand symbol) can interrupt remote control to let the user do manual control
- c) A device error occurs --> the function will stop --> remove cause of error --> function can be continued or restarted
- d) The values can not be adjusted in menu item FUNCTION --> Switch output OFF

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