

# Function Tester **STIMU-600**

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## Testing system for function tests of electro-stimulation equipment

- touch screen or PC operation
- graphical display of signals
- measurement of effective current and effective voltage
- measurement of interference current values
- identification of beats
- user specific language setting
- accumulator operated handily device

# Technical Data

Mains Voltage:	+ 6 V DC or internal accumulator operation	Load resistance:	Ranges of measurement:		
Protection class:	internal power supply		1	2	3
Environmental temperature:	+ 5 - + 40 °C		± 10 V	± 100 V	± 700 V
Storage temperature:	-10 - + 50 °C		± 0,1 V or 1 % of measurement value		
Timer:	OFF, 3, 5, 10 min, ± 1 sec	10000 Ohm ± 3 %	0 – 1 mA	0 – 10 mA	0 – 70 mA
Interface:	1 x Mini USB Type B for PC connection	2000 Ohm ± 2 %	0 – 5 mA	0 – 50 mA	0 – 350 mA
Testing device connections:	6 sockets 4 mm	1000 Ohm ± 1 %	0 – 10 mA	0 – 100 mA	0 – 700 mA
		500 Ohm ± 1 %	0 – 20 mA	0 – 200 mA	0 – 1400 mA
		300 Ohm ± 2 %	0 – 33 mA	0 – 333 mA	0 – 2333 mA
		80 Ohm ± 2 % (extern)	0 – 125 mA	0 – 1250 mA	0 – 8750 mA
Display:	4,3" TFT-Display				
Operation:	Touchpanel	Time base electro-stimulaion (selectable):	1, 10, 20, 200 ms		
		Time base nerve-stimulaion (fix):	1,5 sec		
Mechanical data:	light weight metal case IP20	Minimum pulse width:	100 µs (200 µs bipolar)		
Dimensions:	167 x 190 x 37 mm (W x H x D)	Frequency bandwidth for rms-value determination:	30 kHz		
Weight:	approx. 1,2 kg	Determination of rms-value for input signals :	± 5 %		
		Measurement of maximum-value :	± 5 %		
Selectable languages:	german, english, french, polish spanish, italian, portuguese, turkish	Measurement of the DC component :	± 5 %		
		Measurement of the interference-current signal :	± 5 %		
		Frequency determination of sine-wave signals :	± 7 %		
		Measurement of pulse width :	± 25 µs		

## Description of functions:

The STIMU-600 serves for functional testing of electro-therapy equipment which operates with DC, low frequency, medium frequency or interference current. STIMU-600 checks the rms values for current and voltage, the beat for interference-current equipment, the DC component and frequency. The signal curves can be displayed. The measured values are displayed and can be stored in measurement protocols. The STIMU-600 determines the following measured values:

- rms current and rms voltage (maximum, rms value, plot of curve)
- displays values of the input signals
- frequency of the input signal and the rms signal
- DC component
- interference current
- beat frequency.

STIMU-600 offers three measurement channels with program-controlled, adjustable load-resistance. 300 Ohm, 500 Ohm, 1000 Ohm, 2000 Ohm and 10 kOhm can be set. In addition to that 80 Ohms can be realized by an external resistor.

## Measurement of rms current and rms voltage:

Measurement of the rms values of voltage and current takes place by means of an rms-value converter. This unit converts either the signal from the selected channels or the sum of these signals into a true rms value.

(The specified measuring accuracy refers to the measuring element. Technical modifications and errors reserved. 02/2020)

## Measurement of frequency:

Determination of the signal frequency can take place for the original signals as well as for rms-value signals - or for the interference signals.

## DC component:

Measurement of the DC component takes place by means of low-pass filtering with a time constant of 400 ms.

## Measurement of interference current and determination of beat:

Interference-current devices have two or more electro-stimulation channels, one of them usually has a fixed amplitude and frequency - and the other one, fixed amplitude and changeable frequency or phase. As described above, the current and frequency values for the individual channels can be measured for each channel. Additionally, the interference current is measured as rms-value of the sum of two individual channels and can be displayed.:

## Nerve stimulators:

The measurement values are determined using continuous signals (without pause times), the parameters of which must be within the technical specifications of the STIMU-600.