Function Tester **STIMU-600**



Test device for function tests of electro-stimulation equipment

- ☑ touchscreen or PC operation
- ☑ graphical display of signals
- ☑ measurement of effective current and effective voltage
- ☑ measurement of interference current values
- ☑ determination of frequency
- ☑ user specific language setting
- ☑ accumulator operated handily device

S.P.L. Elektronik

Mess- und Prüftechnik
für medizinische und industrielle Anwendungen
Tel. +49 33232 39915, www.spl-elektronik.com
Forstweg 1, 14656 Brieselang, Deutschland

Management System ISO 9001:2015
TÜVRheinland ZERTIFIZIERT
www.tuv.com ID 0910095181

Technical Data

Mains Voltage:	+ 6 V DC or internal accumulator operation
Protection class:	internal power supply
Environmental temperature:	+ 5 - + 40 °C
Storage temperature:	-10 - + 50 °C
Timer:	OFF, 3, 5, 10 min, ± 1 sec
Interface:	1 x Mini USB Type B for PC connection
Testing device connections:	6 sockets 4 mm
Display:	4,3'' TFT-Display
Operation:	Touchscreen
Mechanical data:	light weight metal case IP20
Dimensions:	167 x 190 x 37 mm (W x H x D)
Weight:	approx. 1,2 kg
Selectable languages:	german, english, french, polish spanish, italian, portuguese, turkish

Load resistance:	Ranges of measurement / Version H4		
	1	2	3
	± 10 V	± 50 V	± 250 V
	± 0,1 V or 1 % of measurement value		
10000 Ohm ± 3 %	0 – 1 mA	0 – 5 mA	0 – 25 mA
2000 Ohm ± 2 %	0 – 5 mA	0 – 25 mA	0 – 125 mA
1000 Ohm ± 1 %	0 – 10 mA	0 – 50 mA	0 – 250 mA
500 Ohm ± 1 %	0 – 20 mA	0 – 100 mA	0 – 500 mA
300 Ohm ± 2 %	0 – 33 mA	0 – 165 mA	0 – 830 mA
80 Ohm ± 2 % (extern)	0 – 125 mA	0 – 625 mA	0 – 3125 mA

Time base electro-stimulation (selectable):	1, 5, 50, 200 ms
Time base nerve-stimulation (fixed):	1,5 sec
Minimum pulse width:	100 µs (200 µs bipolar)
Frequency bandwidth for rms-value determination:	30 kHz
Determination of rms-value for input signals:	± 5 %
Measurement of maximum-value:	± 5 %
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 determines the rms values for current and voltage, the beat for interference-current, the DC and AC component and frequency.

The signal curves can additionally be displayed graphically based on the measured values. The STIMU-600 determines the following measured values:

- current and voltage
  (maximum, rms value, plot of curve)
- displays values of the input signals
- frequency of the input signal and the rms signal
- DC component
- AC 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. Additionally, 80 Ohms can be realized by an external resistor.

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.

Measurement of rms current and rms voltage:

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

DC and AC component:

Measurement of the DC component takes place by means of low-pass filtering with a time constant of 400 ms.
To measure the AC component, the DC component is first determined and then subtracted from the RMS value.

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. 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 exclusively from continuous signals (without pause duration), the parameters of which must be within the technical specifications of the STIMU-600.

(The specified measuring accuracy refers to the measuring element. Technical modifications and errors reserved. 10/2026)

S.P.L. Elektronik
Mess- und Prüftechnik
für medizinische und industrielle Anwendungen
Tel. +49 33232 39915, www.spl-elektronik.com
Forstweg 1, 14656 Brieselang, Deutschland

Management System ISO 9001:2015
TÜVRheinland ZERTIFIZIERT
www.tuv.com ID 0910095181