# HF-Module **HF**


**The GS Testing Module for function tests of**
**HF Surgical Equipment in accordance to IEC 60601-2-2**

- ☑ HF - power measurement
- ☑ HF - voltage measurement
- ☑ HF - current measurement
- ☑ HF - leakage current measurement
- ☑ Neutral electrode test
- ☑ test load resistances 10 Ohm, 25 – 6375 Ohm in steps of 25 Ohm

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# Technical Data

| | |
|---|---|
| Measuring range | |
| HF-current TRMS: | 0 - 5000 mA |
| Discrimination: | 0,1 mA |
| HF- output power RMS: (in dependence of $R_L$) | 1 - 500 Watt |
| HF-leakage current: | 0 - 250 mA |
| Discrimination: | 0,1 mA |
| Neutral electrode test: | 0 - 1000 Ohm |
| Bandwidth | 0,3 - 10 MHz |
| Measuring principle: | thermal electric converter |
| Load resistors: | 10 Ohm<br>25 Ohm - 6375 Ohm<br>In steps of 25 Ohm |
| Swing in time: | < 3 sec |
| Output power: | 500 W: 1 min on, 5 min off<br>permanent: max. 200 W at 25°C environmental temperature<br>(50 – 800 Ohm) |

| | range | error |
|---|---|---|
| HF output power: | 0 - 500 W | ± 1 W or<br>± 2,5 % of value |
| HF leakage current: | 0 - 250 mA | ± 2 mA<br>± 5 % of value |
| HF-current TRMS: | 0 - 5000 mA | ± 2 mA<br>± 4 % of value |
| Load resistors: | 10 Ohm,<br>25 - 6375 Ohm | <br>± 3 % |
| Accessories: | 1 x Adapter for potential balance | |

**Description of functions:**

The GS Testing Module HF, serves to test the function of HF Surgical Equipment. In accordance to the instructions of the manufacturer of such surgical devices, the user can measure the HF output power and the HF leakage current given on a load resistor. The load resistor is adjustable to 10 Ohm and from 25 – 6375 Ohm in steps of 25 Ohm. The test parameters for testing can be laid down in a test instruction and can be automatically tested with a PC. This makes it possible to reduce the time for testing. In the use as multi-functional test device, the measured values will be directly displayed. For example:

HF output power
HF leakage current
HF current, RMS
HF voltage, RMS

**HF output power:**

During the measurement of power, firstly the software sets the prescribed load resistance to 10 Ohm or from 25 Ohm to 6375 Ohm in 25 Ohm steps. Than the HF output power can be send to the HF and is measured. An automatic range switcher takes care of the optimal control of the RMS-converter. The RMS converter, based on a thermal conversion principle and together with the driver module, is designed for frequencies up to 10 MHz.

**HF leakage current:**

The high-frequency leakage current is measured through a 200 Ohm resistor. For this test, the load resistor is adjustable.

(The specified measuring accuracy refers to the measuring element. Technical modifications and errors reserved. 09/2020)