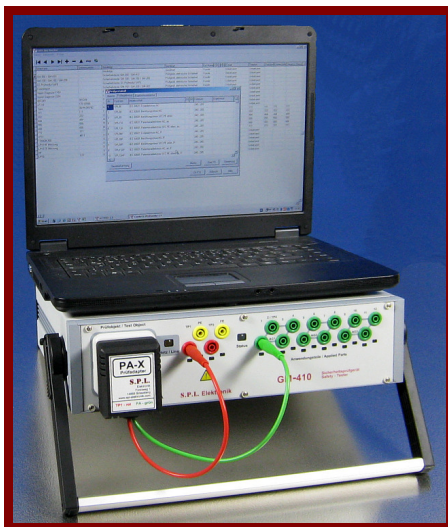


Safety Tester

GM-410



**Testing system for testing electrical safety in accordance with
IEC 60601 / IEC 62353 / IEC 61010 / VDE 0701-0702
MPG / MPBetreibV / BetrSichV / DGUV Vorschrift 3**



- PC operation
- automatic or multimeter measurement
- robust light metal case
- 25 A PE measure according to IEC 60601
- perfect for mobile working with laptop

Test and measurement technic
for medicine and industry



S.P.L.
Elektronik

Technical Data

Line voltage:	230 V / 115 V ac, $\pm 10\%$, 50/60 Hz	Insulation resistance:	0,2 – 4,9 MOhm or 5 – 100 Mohm	$\pm 0,2$ MOhm or $\pm 5\%$ of measurement value
Output power:	maximum 3,5 kW	Leakage current:	0 – 99 μ A 100 – 20000 μ A	± 2 μ A or $\pm 1\%$ of measurement value
Protection class:	1	Difference current:	10 – 20000 μ A	± 2 W or $\pm 1\%$ of measurement value
Overvoltage category:	II	Output power:	1 – 3,5 kW	$\pm 5\%$ of measurement value
Environmental temperature:	+ 5 - + 40 °C	Current:	0 – 16 A	± 50 mA or $\pm 2,5\%$ of measurement value
Storage temperature:	- 10 - + 50 °C	Interface:	1 x USB for PC connection 1 x RS-232 for PC-connection 1 x RS-232 for further test appliances	
Measurement range		Test object connection:	1 x protected ground VDE test socket 12 x safety sockets (4mm) for applied part, groupable into 3 groups 1 x safety socket 4mm for test probe 1 x safety socket 4mm for TP3 1 x safety socket 4mm for PE 1 x safety socket 4mm for FE	
Voltages measurement:	0 - 300 V ac (input resistance: 10 MOhm)	Accessories:	1 x cable with test probe 1 x test adapter PA-X for self-diagnosis test 1 x RS-232 Interface cable	
Discrimination:	0,3 V	Mechanical data:	light weight metal case IP20 290 x 340 x 87 mm, approx 6 kg	
Earth conductor resistance:	0,00 - 40 Ohm (test voltage 6 V ac, max. 25 A / max. 5 A)			
Discrimination:	10 mOhm			
Insulation resistance:	0,2 - 100 MOhm (test voltage 500 V dc, max. 3,5 mA)			
Discrimination:	0,1 – 2 MOhm			
Leakage current:	0 - 10 mA or 0 – 20 mA			
Resistance:	1000 Ohm $\pm 1\%$ or 2000 Ohm $\pm 1\%$			
Discrimination:	1 μ A or 0,2 μ A			
Difference current:	10 μ A - 20000 μ A			
Discrimination:	1 μ A or 0,2 μ A			
Output power:	1 – 3,5 kW			
Discrimination:	1 W			
Current:	0 – 16 A			
Discrimination:	10 mA			
Accuracy of measurement	range	error		
Voltage:	0 - 300 V ac	$\pm 0,3$ V or $\pm 1\%$ of measurement value		
Earth conductor resistance:	0,00 – 4,9 Ohm	$\pm 0,03$ Ohm or		
	5 – 40 Ohm	$\pm 5\%$ of measurement value		

GM-410 is a measurement and test device for testing the electrical safety of medical technical and other technical appliances. The measurements and tests correspond to the conditions of IEC 60601, IEC 62353 (VDE 0751), IEC 61010 and VDE 0701-0702.

To control the GM-410 a 100% compatible IBM computer with industrial standards is needed. The communication between the PC and the GM-410 follows through the RS-232 serial interface and/or USB interface. Control can be made available among other things for the software such as

- ACTIMED
- vFM
- MtData

With GM-410 the following tests are realized:

- line voltage measurement
- output current measurement
- output power measurement
- leakage current measurement
- equivalent leakage current measurement
- earth conductor resistance measurement
- isolation resistance measurement
- differential current measurement

(The specified measuring accuracy refers to the measuring element. Technical modifications and errors reserved. 07/2014)