

High-voltage probe HV3

1 Applications

The high-voltage probe HV3 is meant for voltage measurement on secondary high-voltage circuits up to 3 kV, whereby the primary circuit is connected to low-voltage systems as described in IEC 664.

2 Safety features and precautions

You have chosen a high-voltage probe which offers you a very high degree of safety. The high voltage probe HV3 is constructed and tested in compliance with the safety rules of IEC 1010-1/DIN EN 61010-1/VDE 0411-1. When properly used, the safety of both the user and the measuring setup is assured. It is not assured, however, if the probe and the connected measuring instrument are misused or carelessly handled.

To maintain the technically safe and proper condition and to ensure safe operation, it is absolutely necessary to carefully and completely read these operating instructions before using the high-voltage probe, and to follow them in all respects.

Note the following safety precautions:

- The HV3 probe must only be operated by skilled and qualified persons with safety training who understand the danger of shock hazards and know how to apply safety precautions.
- Shock hazards exist wherever voltages of more than 30 V \sim (rms) or 60 V \equiv can appear.
- When measuring voltages where shock hazards exist, do not work alone. A second person must be present.
- Make a reliable connection to ground before starting to measure (see section 4 Connection and measurement).
- The maximum permissible voltage between probe tip and ground is 3,000 V and between the connections and ground 400 V.
- Hands, shoes and working site must be dry. Measurements under moist environmental conditions are not permissible.

- Verify that the probe is not damaged and that the test leads are in good condition (no cracked insulation, no interruption in the leads or connectors).
- Keep the high-voltage probe clean and free from conductive soiling.

3 Meaning of the symbols on the probe

The symbols on the probe have the following meaning:



Warning of dangerous voltage



Warning of a danger point
(Attention, refer to documentation)



Double or reinforced all-insulation
(according to class II in IEC 536)



Ground connector

4 Connection and measurement

- ⇒ **First** connect the black test leads whose plug is marked with the \perp symbol to ground. For this purpose, you can also use the alligator clips that are included with the supply.
- ⇒ Now connect the other two leads to the meter - the black lead to the ground input and the red lead to the mV and/or V input.

5 Specifications

Measuring voltage.....	max. 3000 V
Frequency range	0...15... <u>45</u> ... <u>65</u> ...400 Hz
Divider ratio	1000:1 / 100:1
Inherent deviation.....	± 1%
Internal resistance.....	10 M Ω
Input resistance of the meter.....	10 M Ω
Test voltage	8.5 kV
Ambient conditions	
Operational temperature ..	- 10 °C ... + 40 °C
Storage temperature.....	- 25 °C ... + 75 °C
Relative humidity.....	max. 80 % at + 23 °C

Electrical safety

Protection class.....	II
Overvoltage category.....	III
Degree of pollution	2

Mechanical configuration

Dimensions.....	d = 41 mm, l = 175 mm
Lead length.....	1 m
Weight.....	200 g

6 Maintenance

Always keep the probe clean from dirt and conductive soiling. Use a slightly moist cloth for cleaning. Do not use detergents and scouring agents.

7 Repair and replacement parts service

In case of need, please contact:

GOSSEN-METRAWATT GMBH

Service

Thomas-Mann-Straße 16 – 20

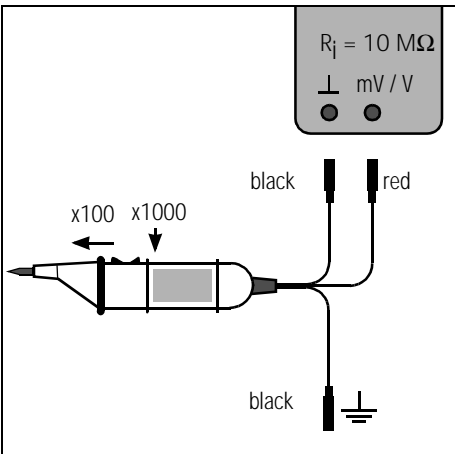
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This address is for Germany only. Abroad, our representatives or establishments are at your disposal.



- Choose a measuring range higher than or equal to 3 V or switch to autoranging.
- Apply the probe tip to the measuring point and read the measured value on the meter display. Consider the conversion factor 1:1000. Moving the sliding switch towards the measuring point during the measurement results in a conversion factor of 1:100.

Caution!

Make sure that both case and protective conductor of the device under test and the ground connector of the high-voltage probe are securely connected to ground during the measurement. The ground connection is an absolute must for a safe operation. An incorrect or faulty connection can cause injuries to the user and damages to the connected meter.