PHV1000-RO

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400MHz, 1000V RMS, 50MΩ, 100:1
HIGH IMPEDANCE PASSIVE PROBE

FEATURES

- CeramCore™ Hybrid Probe
- Modular construction
- Coaxial design
- Interchangeable spring contact tip
- Certificate of calibration available on request
- Read-out BNC connector
- Supplied in carry case with additional accessories

The PHV1000-RO is a 400MHz, standard sized, 100:1 passive probe designed for instruments having 1MΩ input resistance. This probe is recommended for probing applications in service and development environments and is adjustable for low and high frequencies. It is also recommended for transient measurements up to 6kV such as EMC testing applications. The probe is rated with 1000V CAT II maximum input voltage and complies with latest safety standards. The DC fine adjustment enables trimming for preferred voltage ranges.

The PHV 1000-RO features CeramCoreTM technology. The probe's entire core is made of a high quality ceramic hybrid. Pure coaxial design and laser trimmed resistors ensure highest signal fidelity along the signal path offering high bandwidth and fast risetimes for accurate impulse measurements.

The probe is equipped with spring loaded, needle sharp tips to support precise and safe measurements minimizing the risk of slipping. Various types of tips are available. Besides the spring contact tip there is also a solid tip available at the user's choice. Probe tips are interchangeable and can be replaced easily. Basic probe accessories and replacement tips are provided within the scope of delivery and can be purchased separately. The case option includes additional accessories listed in this datasheet. The probe's mechanical construction is modular and therefore spare probe leads are available.

SPECIFICATIONS

Attenuation Ratio [1]:	100:1 ±2% at DC
Voltage Coefficient:	0.00025%/V
Probe Bandwidth:	400MHz (-3dB)
Probe Risetime:	900ps (10% – 90%)
Maximum Rated Input Voltage [2]	
Measurement Category I:	1000V rms 4000V transient overvoltage
Measurement Category II:	1000V rms CAT II
Pollution Degree [2]	2

(1) Connected to oscilloscope with an input impedance of 1MΩ ±1%
(2) As defined in IEC 61010-031

The instrument should have warmed up for at least 20 minutes and the environmental conditions must not exceed the specified limits of the probe.

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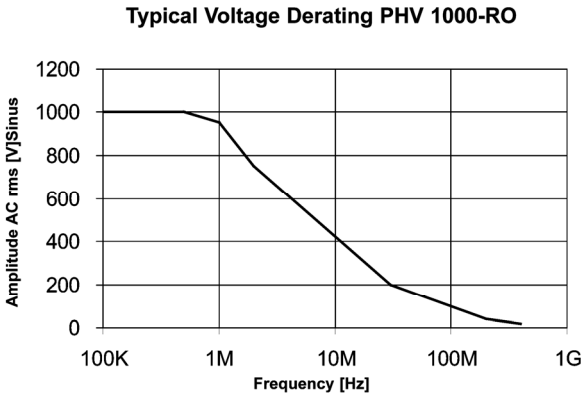
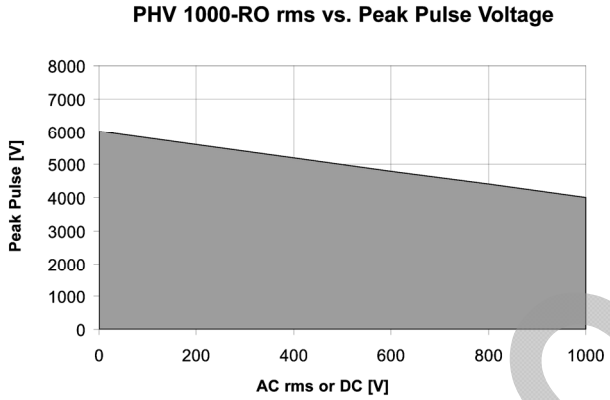
▪ VOLTAGE DERATING

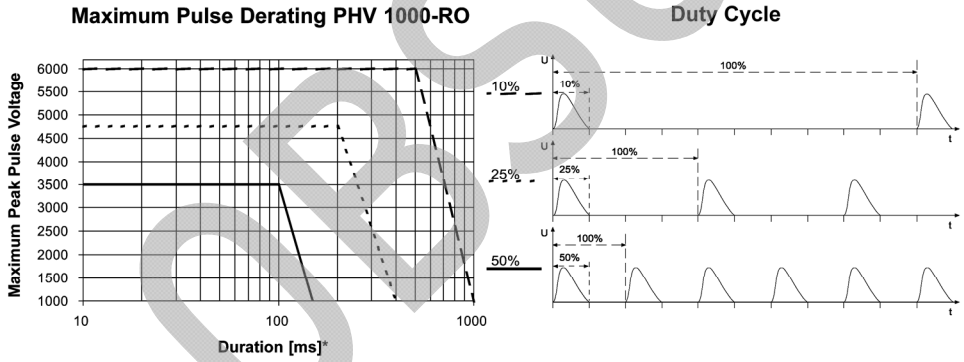


Note that the max. Input Voltage rating of the probe decreases as the frequency of the applied signal increases.

▪ MAXIMUM PULSE RATINGS

For pulse measurements make sure to comply with the ratings as shown on this page.





* Values at 10ms also apply to all pulse durations smaller than 10ms.

▪ ELECTRICAL CHARACTERISTICS

Input Resistance (system):	50MΩ ±1%
Input Capacitance (system):	7.5pF
Compensation Range:	10pF – 50pF
Input Coupling of the Measuring Instrument:	1MΩ AC/DC

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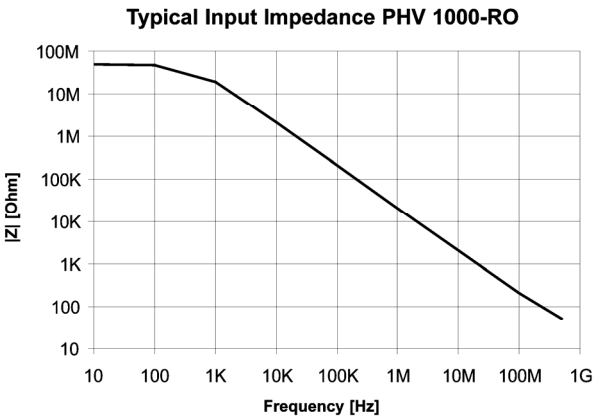
INPUT IMPEDANCE

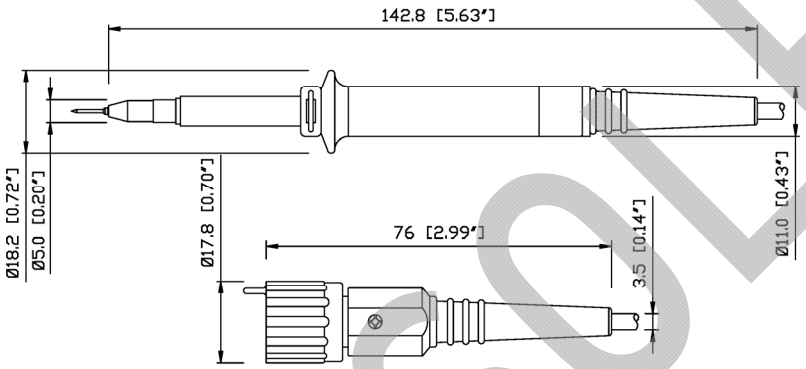


Note that the Input Impedance of the probe decreases as the frequency of the applied signal increases.

MECHANICAL CHARACTERISTICS

Weight (probe only):	67g
Cable Length:	2m
Probe Tip Diameter:	5mm

DIMENSIONS



ENVIRONMENTAL SPECIFICATIONS

Altitude	operating:	up to 2000m
	non-operating:	up to 15000m
Temperature range	operating:	0°C to +50°C
	non-operating:	-40°C to +71°C
Maximum relative humidity	operating:	80% relative humidity for temperatures up to +31°C, decreasing linearly to 40% at +50°C

DECLARATION OF CONFORMITY

The manufacturer declares the conformity of his products with the actual required safety standards in accordance with the Low Voltage Directive (LVD)2006/95/EC:

CEI/IEC 61010-031:2008
Safety requirements for electrical equipment for measurement, control and laboratory use.

Part 031:
Safety requirements for hand-held probe assemblies for electrical measurement and test.

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WEEE/ ROHS DIRECTIVES

The PHV1000-RO is classified within the WEEE/ RoHS* category list as monitoring and control equipment (category 9). Category 9 products are exempt from the restrictions under the scope of the RoHS directive.

* EC Directives:

WEEE Directive 2002/96/EC:	Waste Electrical and Electronic Equipment
RoHS Directive 2002/95/EC:	Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment

SCOPE OF DELIVERY

- Probe
- Ground Lead 22 cm
- Instruction Manual
- Insulating Cap 5.0-L
- Protection Cap 5.0-L
- Solid Tip 0.8mm
- Spring Tip 0.8 mm
- Sprung Hook 5.0-L
- Adjustment Tool T
- BNC Adapter 5.0-L
- Coding Rings (Set) 3 x 4 colours
- Flexible Adapter 5.0-L
- Ground Lead 22cm to 4mm Banana Plug
- Hard Case
- Safety Aligator Clip (red)

Disclaimer

The information given in this data sheet is technical data, not assured product characteristics. It has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies. The user has to ensure by adequate tests that the product is suitable for his application regarding safety and technical aspects.
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Safety Advice

Design, installation and inspection of machinery and devices carrying high voltage require accordingly trained and qualified personnel. Appropriate safety rules and directives must be complied with.
Improper handling of high voltage can mean severe injuries or death and may cause serious collateral damage!

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