Handyprobe HP3

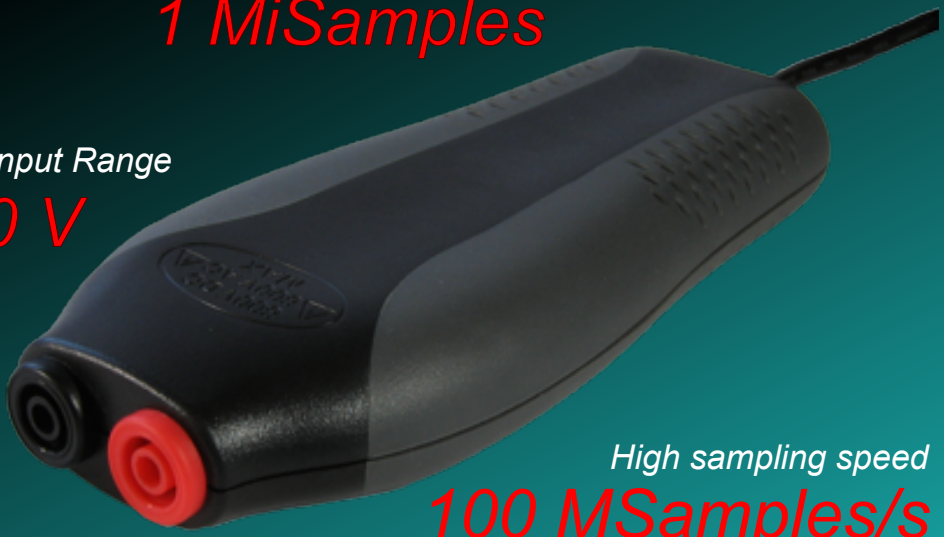
A new standard in portable measuring

High bandwidth

50 MHz

Long record length

1 MiSamples



High Input Range

800 V

High sampling speed

100 MSamples/s

Differential

Plug In And Measure

- *Oscilloscope*
- *Spectrum analyzer*
- *Voltmeter*
- *Y-t recorder*

www.tiepie.nl

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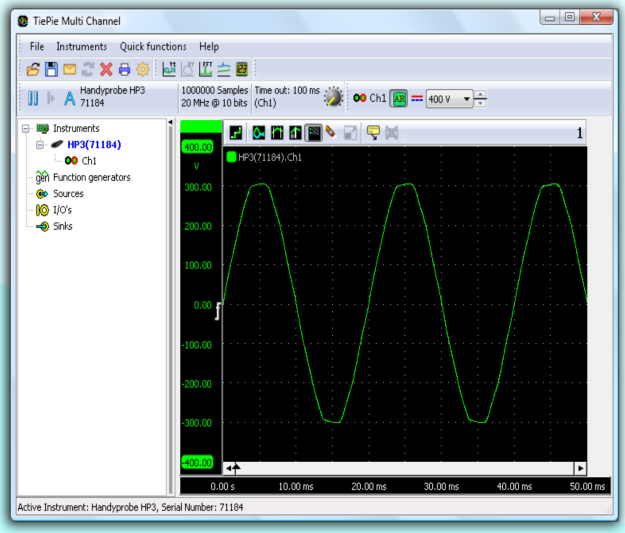
The Handyprobe HP3 is a portable USB oscilloscope with a full differential input that will allow you to measure voltages up to 800 V peak value with a maximum sampling rate of 100 MSamples/s into a memory of 1 MiSamples.



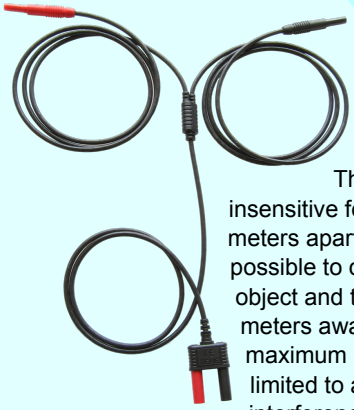
High input range

The differential input with a high input range of 800 V full scale gives unequalled possibilities in measuring Connect the Handyprobe HP3 to any point in your circuit, without the need of additional attenuators. The differential input makes it impossible to create a short circuit to ground via the Handyprobe HP3. This means extra protection for the PC.

Portable

The Handyprobe HP3 is designed to fit nicely in your hand. Its housing is fitted with soft rubber areas that ensure a good grip on it. A wrist strap can be attached, to carry the Handyprobe HP3 or to hang it near the test setup. The Handyprobe HP3 is USB powered, so no bulky external power adapter is required.

Low noise measuring lead

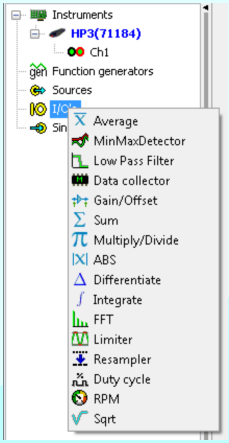


A special low noise measuring lead is developed for the Handyprobe HP3. The input of the Handyprobe HP3 is differential, which means that both sides of the input have a high impedance. There is no connection to ground as in conventional oscilloscopes which are used with coax cables.

The special cable that is developed for the Handyprobe HP3 is very insensitive for external interfering signals. The two ends can be placed two meters apart from each other, without picking up any interference. It is possible to connect the negative terminal of the input at one side of your test object and then connect the positive terminal at a different point, up to two meters away. With a conventional oscilloscope this is not possible. The maximum distance between the positive side and ground is then usually limited to approximately 20 cm. And this 20 cm is very susceptible to interference. The measuring lead has a heat resistant silicone isolation and shrouded banana plugs.

Sophisticated software

The Handyprobe HP3 comes with the versatile Multi Channel measurement software that allows to do measurements in a quick and convenient way. With the software, the Handyprobe HP3 can be operated as an oscilloscope, a multimeter, a spectrum analyzer and a Y-t recorder. The captured data can be viewed in many different ways, in a single graph or in multiple views, each displaying a different property of the measured signal.



Mathematical operations

Mathematical operations like e.g. adding, subtracting, multiplying, dividing, integrating, differentiating etc. are available in the form of processing blocks. Besides the mathematical operations, there are also several processing blocks to perform other operations on the data, like determining minimum or maximum values, limiting to specified range, averaging, filtering, applying gain and offset, etc.

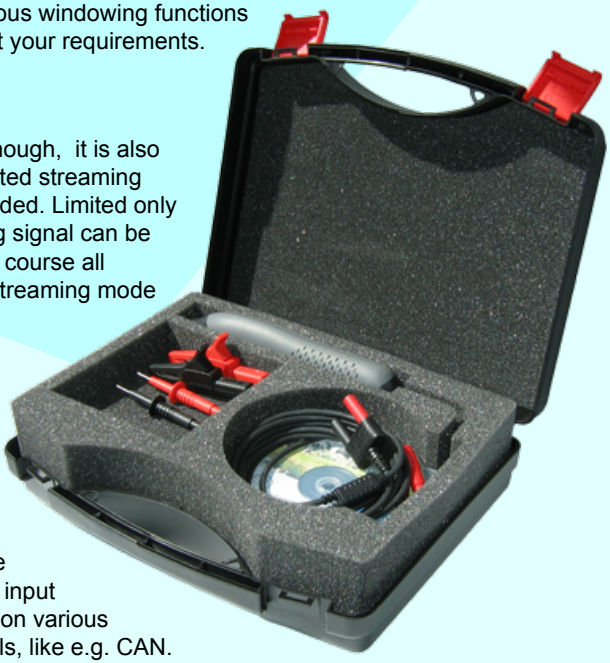
Combining these mathematical processing blocks gives unrivalled possibilities in constructing complex mathematical operations.
The results of these operations can be displayed in one or more graphs, can be displayed in numeric displays and can be written to disk in various common formats.

Spectrum analyzer

Use the spectrum analyzer to see the frequency spectrum of your signal next to the time domain signal. Various windowing functions and display functions are available to meet your requirements.

Streaming measurements

When 1 MiSamples record length is not enough, it is also possible to perform continuous, uninterrupted streaming measurements to measure as long as needed. Limited only by the available hard drive space, any long signal can be measured and stored for later analysis. Of course all mathematical operations are available in streaming mode as well.



Applications

The excellent hardware specifications and the versatile software make the Handyprobe HP3 an ideal instrument for measuring in e.g. mains power installations, switch mode power supplies, frequency converters, automotive applications, etc. The balanced differential input also makes it possible to measure directly on various communication buses with balanced signals, like e.g. CAN.

Handyprobe HP3

Specifications

Acquisition system	
Number of input channels	1 analog differential
Maximum sampling rate	100 MS/s (block mode) 10 MS/s (streaming mode)
Accuracy	±0.01%
Memory	1 MiSamples

Input	
Resolution	10 bits
Amplitude accuracy	±0.3 %
Ranges	0.2 V .. 800 V full scale in a 2 - 4 - 8 sequence
Coupling	AC/DC
Impedance	2.1 MOhm // 15 pF
Maximum input voltage (in all ranges)	566 Vrms CAT II; derated at 3 dB/decade above 20kHz to 25 Vpk-pk at 50 MHz
Maximum Common Mode voltage	0.2 V .. 8 V range: 12 V 20 V .. 80 V range: 120 V 200 V .. 800 V range : 800 V
Common Mode Rejection Ratio	60 dB
Bandwidth	50 MHz

Trigger system	
Source	CH1
Trigger kinds	rising slope, falling slope, inside window, outside window
Pre trigger	0 - 1 MiSamples (0 - 100%, one sample resolution)

Power	
Power source	USB
Input	400 mA max (2 W max)

System requirements	
PC I/O connection	USB 2.0 High Speed (480 Mbit/s) USB 1.1 Full Speed (12 Mbit/sec) compatible
Operating System	Windows 98/ME/2000/XP/Vista32

Physical	
Dimension (h x w x l)	25 x 68 x 177 mm (1 x 2.7 x 6.9 inch)
Weight	290 gram (10.2 ounce)

Kit contents	
Carrying case	230 x 280 x 80 mm (9 x 11 x 3.1 inch)
Instrument	Handyprobe HP3
Test lead	low noise, heat resisitant differential test lead with 4 mm shrouded banana jacks with colored clips
Accessories	2 test probes with 4 mm banana socket 2 crocodile clips with 4 mm banana socket wrist strap
Software	For Windows 98/ME/2000/XP/Vista32 on CDROM
Manuals	Instrument manual and Quick Start Guide

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