



**Probing Solutions.
Made in Germany.**

EN






PHV SERIES

High Voltage Passive Probe

Datasheet



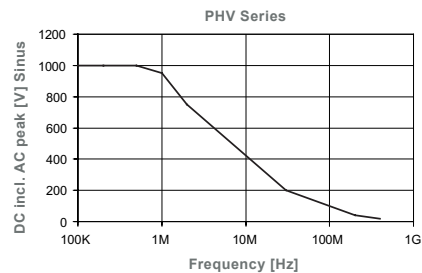
PHV DATASHEET

	PHV 1000	PHV 1000-3	PHV 1000-5	PHV 2000	PHV 2000-3	PHV 2000-5	PHVS 2000	PHVS 2000-3	PHVS 2000-5
Order-Number without Read-Out	PHV 1000 860-622-B00	PHV 1000-3 860-623-B00	PHV 1000-5 860-625-B00	PHV 2000 870-622-A00	PHV 2000-3 870-623-A00	PHV 2000-5 870-625-A00	PHVS 2000 870-722-A00	PHVS 2000-3 870-723-A00	PHVS 2000-5 870-725-A00
Order-Number with Read-Out	PHV 1000-RO 860-622-B02	PHV 1000-3-RO 860-623-B02	PHV 1000-5-RO 860-625-B02	PHV 2000-RO 870-622-A02	PHV 2000-3-RO 870-623-A02	PHV 2000-5-RO 870-625-A02	PHV 2000-RO 870-722-A03	PHVS 2000-3-RO 870-723-A03	PHVS 2000-5-RO 870-725-A03
Order-Number without Read-Out in Case	PHV 1000-C 86C-622-B00	PHV 1000-3 C 86C-623-B00	PHV 1000-5 C 86C-625-B00	PHV 2000 C 87C-622-A00	PHV 2000-3 C 87C-623-A00	PHV 2000-5 C 87C-625-A00	PHV 2000-C 87C-722-A00	PHVS 2000-3 C 87C-723-A00	PHVS 2000-5 C 87C-725-A00
Order-Number with Read-Out in Case	PHV 1000-C-RO 86C-622-B02	PHV 1000-3 C-RO 86C-623-B02	PHV 1000-5 C-RO 86C-625-B02	PHV 2000 C-RO 87C-622-A02	PHV 2000-3 C-RO 87C-623-A02	PHV 2000-5 C-RO 87C-625-A02	PHV 2000-C-RO 87C-722-A03	PHVS 2000-3 C-RO 87C-723-A03	PHVS 2000-5 C-RO 87C-725-A03
Electrical Specifications									
Attenuation Ratio (± 2 % at DC) (1)	100:1	100:1	100:1	100:1	100:1	100:1	1000:1	1000:1	1000:1
Voltage Coefficient (at DC)	0.00025 %/V	0.0005 %/V	0.00025 %/V	0.00025 %/V	0.0005 %/V	0.00025 %/V	0.0005 %/V	0.0005 %/V	0.0005 %/V
System Bandwidth (-3 dB)	400 MHz	250 MHz	120 MHz	400 MHz	250 MHz	120 MHz	400 MHz	250 MHz	120 MHz
Probe Risettime (10 % - 90 %)	900 ps	1.4 ns	2.4 ns	900 ps	1.4 ns	2.4 ns	900 ps	1.4 ns	2.4 ns
Input Capacitance (System) (± 1%)	50 MΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ
Input Capacitance (System)	7.5 pF	7.5 pF	9.5 pF	7.5 pF	7.5 pF	9.5 pF	7.5 pF	7.5 pF	9.5 pF
Compensation Range	10 pF - 50 pF	10 pF - 50 pF	10 pF - 50 pF	10 pF - 50 pF	10 pF - 50 pF	10 pF - 50 pF	10 pF - 50 pF	10 pF - 50 pF	10 pF - 50 pF
Input Coupling of the Measuring Instrument	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC
Maximum Rated Input Voltages, CAT II, CAT III (2)									
Pollution Degree	2	2	2	2	2	2	2	2	2
Measurement Category II	1000 V CAT II	1000 V CAT II	1000 V CAT II	1000 V CAT II	1000 V CAT II	1000 V CAT II	1000 V CAT II	1000 V CAT II	1000 V CAT II
Maximum Rated Input Voltages, No Measurement Category, not in CAT II, III, IV (2)									
Pollution Degree	2	2	2	2	2	2	2	2	2
No Measurement Category (2)	2000 V peak	2000 V peak	2000 V peak	4000 V peak	4000 V peak	4000 V peak	4000 V peak	4000 V peak	4000 V peak
Maximum Pulse Rating, No Measurement Category, not in CAT II, III, IV (2)									
Upulse (3)	Upulse(3) 2000 V (Step 0 V to 2000)		Upulse(3) 4000 V (Step 0 V to 4000 V)		Upulse(3) 4000 V (Step 0 V to 4000 V)				
Mechanical Specifications									
Weight (probe only)	67 g	82 g	120 g	67 g	82 g	120 g	67 g	82 g	120 g
Cable Length	2 m	3 m	5 m	2 m	3 m	5 m	2 m	3 m	5 m
Probe Tip Diameter	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm
Environmental Specifications									
Altitude	operating	up to 2000 m							
	non-operating	up to 15000 m							
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							
	non-operating	95 % relative humidity for temperatures up to +40° C							

Typical Voltage Derating (4)



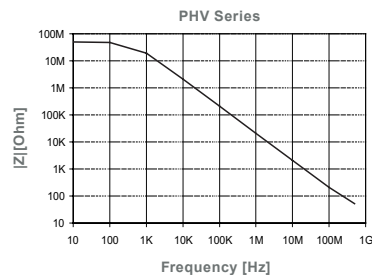
Note that the maximum input voltage rating of the probe decreases as the frequency of the applied signal increases.



Typical Input Impedance (4)

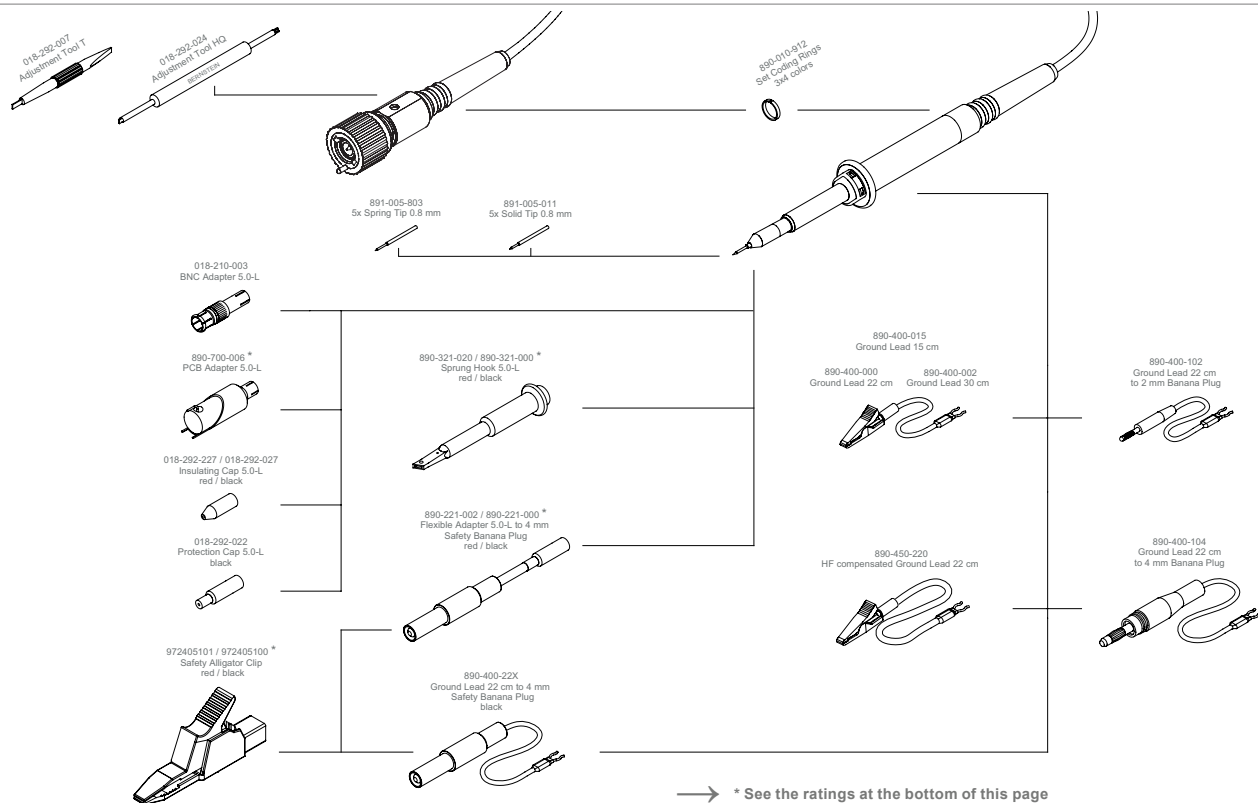


Note that the input impedance of the probe decreases as the frequency of the applied signal increases.



(1) Connected to oscilloscope with an input impedance of 1 MΩ ± 1 %. (2) As defined in IEC 61010-031. (3) No overshoot permitted. (4) The charts given here are valid for no measurement category, not in CAT II, III, IV

Probe Accessories



→ * See the ratings at the bottom of this page

Scope of Delivery

Items	Qty	Items	Qty
Instruction Manual	1	Sprung Hook 5,0 L	1
Spring Tip 0.8 mm	1 (1)	Ground Lead 22 cm	1
Protection Cap 5.0-L	1 (2)	Probe	1
Solid Tip 0.8 mm	1	Adjustment Tool T	1
Insulating Cap 5.0-L	1	-	-
Additional Items with Case Option		Items	Qty
BNC Adapter 5,0 L	1	Case	1
Flexible Adapter 5.0-L	1	Ground Lead 22 cm to 4 mm Bananaplug	1
Coding Rings (set) 3x4 Colors	1	Safety Alligator Clip (red)	1
Overview - Optional Probe Accessories			
See at the beginning of the page			
PHV(S) Options			
Option	Expansion compensation range 65 pF	Option	Steel cable (strain relief) per meter. Only possible in conjunction with additional silicone hose insulation
Option	Additional insulation of the probe divider cable with silicone tube per meter	Option	Partial ratio customer-specific, for example: 200:1 on request



Use ground lead only for connections to earth ground.



The accessories provided with the probe have been safety tested. Do not use any other accessories than those "originally" provided.

Rating Accessories

PCB Adapter 5,0-L

(890-700-006)

Maximum Rated Input Voltages, No Measurement Category, not in CAT II, III, IV (3)

Pollution Degree: 2

No Measurement Category: 2000 V, 6000 V peak

Maximum Pulse Rating, No Measurement Category, not in CAT II, III, IV (3)

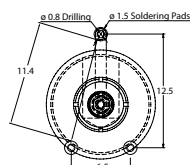
Upulse (4) = 6000 V (Step 0 V to 6000 V)



Drilling / Soldering Template



The minimum distance between all solder pads of 11.4 mm (see adjacent template) must not be undercut under any circumstances. Undercutting this distance will void the rating.



Safety Alligator Clip 5,0-L

(972-405-101 / 972-405-100)

Maximum Rated Input Voltages, CAT II (3)

Pollution Degree: 2

Measurement Category II: 1000 V CAT II

Sprung Hook 5,0-L

(890-321-020 / 890-321-000)

Maximum Rated Input Voltages, CAT II (3)

Pollution Degree: 2

Measurement Category II: 1000 V CAT II

Flexible Adapter 5,0-L to 4 mm Safety Banana Plug

(890-221-002 / 890-221-000)

Maximum Rated Input Voltages, CAT II (3)

Pollution Degree: 2

Measurement Category II: 1000 V CAT II

(1) Plugged on probe. (2) Installed in probe. (3) As defined in IEC 61010-031 (4) No overshoot permitted

Manufacturer

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