



# SIHPT1x

## Insertion Stainless Steel sensor fitting for pH or ORP measures

Sensor fitting with stainless steel AISI 316L body, designed to install pH or ORP electrodes in processes with high temperature, high pressure conditions, e.g. where the process line needs steam sterilization.

The probe includes a pressurized electrolyte reservoir which assures long operating periods without any refilling requirements.

The design of this probes allows installation without the need of any tool and makes electrolyte refill (when needed) very simple.

Typical applications of the SIHPT sensor fittings are the measure of pH or ORP in reactors, fermenters and bioreactors, in the pharmaceutical industry, in food and beverage industry, in chemical processes.

### Advantages

- Suitable to house pH or ORP electrodes
- Electrolyte reservoir can be pressurized
- Operating temperature limits -10 to 130°C
- Operating pressure up to 6 bar
- The line can be sterilized with steam without the need to remove the probe
- Simple to install, no tool is required
- Very little maintenance requirements



### Operating principle and realization

Mod.SIHPT sensor fitting is completely made of AISI316L stainless steel, with silicon rubber seals at contact and pressure resistant glass reservoir. Process connections are weld-in socket with R 1 ¼" BSP threads. A connection for compressed air allows to pressurize the electrolyte inside the reservoir.

### Electrodes that can be installed into the SI/HPT sensor fitting

pH Combined electrode .....	101HPTxZxx0Fx
ORP Combined electrode.....	201HPTxxxx0Fx

### Technical Specifications

Allowed sensors:.....	refer to the given list
Body material:.....	AISI 316L stainless steel, silicone rubber seals
Electrolyte reservoir material: .....	pressure resistant glass
Operating temperature limits: .....	-10 to 130°C
Storage temperature limits:.....	-10 to +70 °C
Operating pressure limits:.....	0 to 6 bar
Process connections:.....	nut for weld-in socket 1 ¼" BSP
Insertion depth : .....	68 mm
Compressed air connection :.....	q.ty 1 connection Ø 4
Cable outlet: .....	S7 threaded connector
Dimensions:.....	see figure
Weight: .....	approx.1,5 Kg

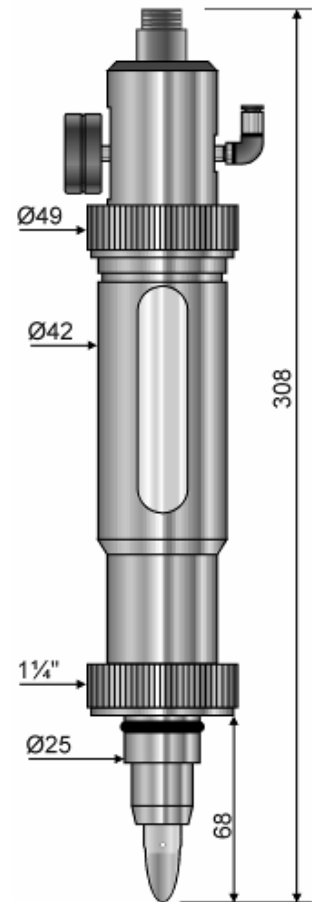
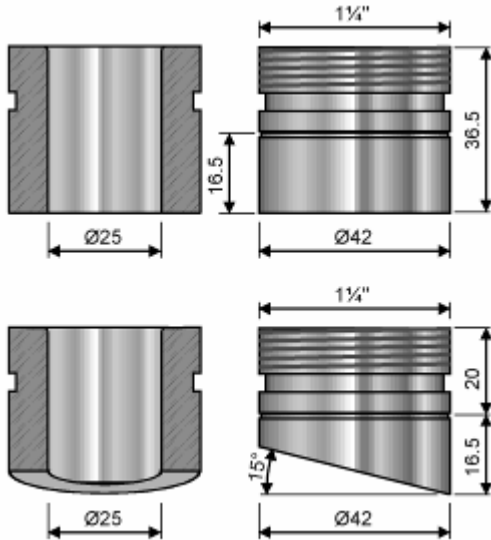
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## Installation, Calibration & Maintenance

Before calibrating the measuring chain or immersing the probe for the measure make sure the sensor protection cap has been removed.

If required calibrate the measuring chain with proper standard solutions.

Then install the probe on the plant through the weld-in socket, pressurize electrolyte into its reservoir by connecting the compressed air to proper connection.



## Order code breakdown

### AISI 316 SS Insertion probe

#### Process connetions

Sanitary type 1 1/4"

Special execution

SI/HPT	x	x
SI/HPT		
	1	
	9	
		A
		B
		C
		Z

### AISI 316 SS Weld-in socket

Not required

Straight

Raking

Special execution

## Optional Accessories

Calibration solutions, to be chosen according to measured parameter.

pH 7,00 buffer solution..... T/101-7x

pH 4,00 buffer solution..... T/101-4x

pH 9 buffer solution..... T/101-9x

where x= A : 250 ml bottle; x = B : 500 ml bottle; x = C: 1000 ml bottle.

Known ORP value standard solution, 468 mV, 250 ml bottle.....T/201-468A

Known ORP value standard solution, 220 mV, 250 ml bottle.....T/201-220A

pH and ORP electrodes may be selected with a wide range of options. The order code breakdown is shown in the following pages.

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## Order code breakdown for 101HPT pH electrode

	101	HPT	x	Z	x	x	0	F	x
<b>Industrial combined pH electrode</b>	101								
<b>Type of pH electrode</b> For installation in SI/HPT probe		HPT							
<b>Use at low/high temperature</b>									
Not suitable			0						
Suitable for 0°C ÷ -30°C			1						
Suitable for 0°C ÷ +130°C			2						
<b>Integral temperature sensor</b> Not included				Z					
<b>Reference version</b>									
Standard					0				
Salt bridge, external salt KCl					2				
Salt bridge, external salt KCl gel					4				
Salt bridge, external salt KNO <sub>3</sub>					5				
Salt bridge, external salt NaCl					6				
<b>Porous diaphragm version</b>									
Reserved						Z			
Standard (ceramic diaphragm Ø 1mm)						A			
Increased area porous diaphragm						B			
Synthetic annular diaphragm						C			
<b>Fixed code</b>							0		
<b>Cable and connector</b> S7 Screw connector								F	
<b>Plug</b>									
No plug									0
BNC, coaxial									1
DIN standard coaxial									2

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## Order code breakdown for 201HPT ORP electrode

	201	HPT	x	x	x	x	0	F	x
<b>Combined industrial ORP electrode</b>	201								
<b>Type of ORP combined electrode</b> Installation in SI/HPT probe		HPT							
<b>Use at low/high temperature</b>									
Not suitable			0						
Suitable for 0°C ÷ -30°C			1						
Suitable for 0°C ÷ +130°C			2						
<b>Metal</b>									
Reserved				Z					
Gold				A					
Silver				B					
Platinum				C					
Platinum, annular				D					
<b>Reference version</b>									
Standard					0				
Salt bridge, external salt KCl					2				
Salt bridge, external salt KCl gel					4				
Salt bridge, external salt KNO <sub>3</sub>					5				
Salt bridge, external salt NaCl					6				
<b>Diaphragm version</b>									
Reserved						Z			
Standard (ceramic diaphragm Ø 1 mm)						A			
Increased area porous diaphragm						B			
Annular synthetic diaphragm						C			
<b>Fixed code</b>							0		
<b>Cable and connector</b>									
S7 Screw connector								F	
<b>Plug</b>									
No plug									0
BNC coaxial									1
DIN standard coaxial									2