

# General Specifications

Model PH21  
Wide body sensor for water and waste water

The PH21 is the newest wide body sensor in Yokogawa. This sensor is specially made for water- and waste water industry. This sensor has the following valuable features:

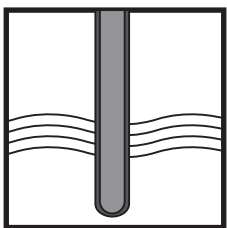
- The sensor body is made from recycled product.
- Preferred to work with SA11 SENCOM SMART Adapter model SA11.
- Our highly accurate instruments help you increase product efficiency, improve product quality and ensure process safety.
- Increase product efficiency due to the memory chip in the sensor.

The PH21 sensor is targeted for water and waste water industry where simplicity will result in accuracy and reliable pH measurement. This means that in 80% of the water- and waste water industry, this sensor will be an excellent choice.

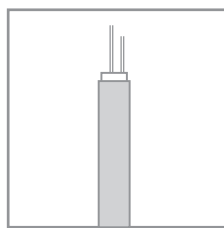
For more difficult applications than water, we refer you to other sensors in our pH portfolio.



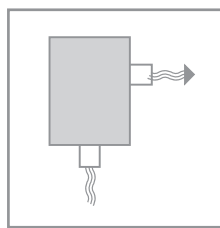
## System Configuration



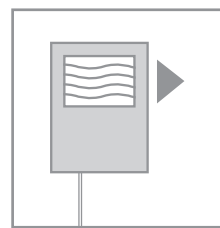
Sensors



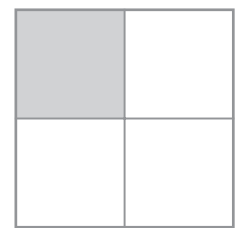
Cables



Fittings



Transmitters



Accessories

**GENERAL SPECIFICATIONS**

Measuring elements : pH glass electrode  
 : Silver Chloride reference  
 : Pt1000 temp sensor

**Construction materials**

**Wetted parts**

Sensor body : PPS- GF40  
 Measuring sensor : G-Glass  
 O-ring : Viton  
 Reference junction : PTFE

**Functional specifications (at 25°C)**

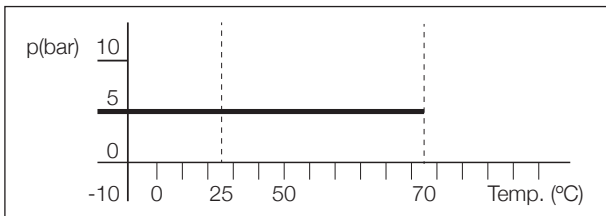
Isothermal point : pH7  
 Reference system : Ag/AgCl  
 Glass impedance : 100-300 MΩ  
 Junction resistance : < 1 KΩ  
 Temperature element : Pt1000 IEC 751  
 Asymmetry potential : 8 mV ± 15 mV  
 Linearity PH (Slope) : >96% in pH 2-12

**Dynamic specifications (at 25°C)**

Response time pH step 7 to 4 : 15 sec for 90%  
 Response time temp  
 step 10°C : 120 sec for 90%  
 Stabilization time  
 (0.02 pH unit/10 s) : < 2 minutes

**Operating range**

pH : 0-14  
 Temperature : +0°C ... +60°C  
 Pressure (at 25°C) : 0 to 5 Bar (0 to 72 PSIG)  
 Pressure (at 70°C) : 0 to 5 Bar (0 to 72 PSIG)  
 Conductivity : > 50 μS/cm



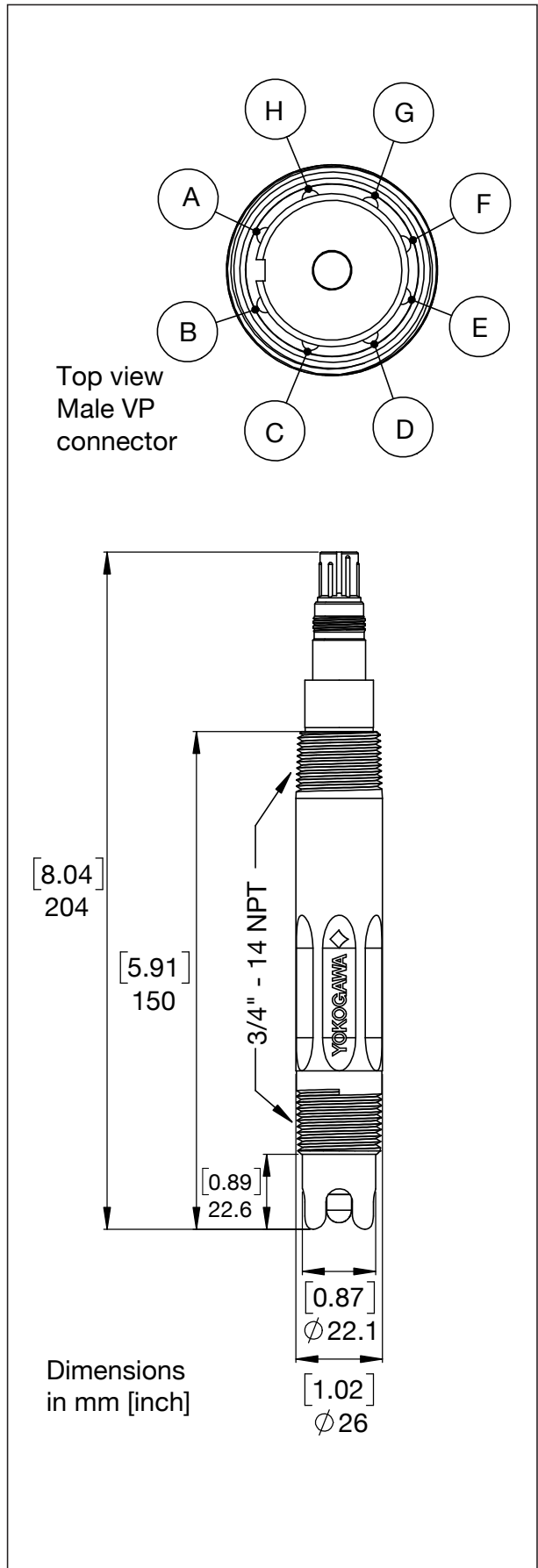
**Note:** The pH operating range at room temperature is 0-14pH, but at high temperatures, the lifetime will be seriously shortened outside 3-11 pH range.

**Note:** For detailed information about SENCOM SMART Adapter SA11 refer to current edition of GS12A06S01-01Z1x.

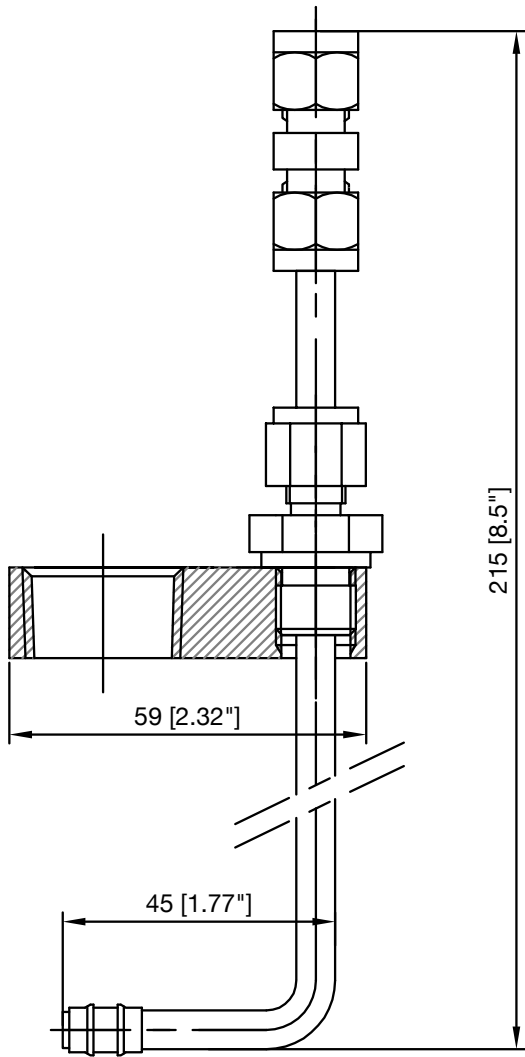
**Selection options**

PH21  
 Cable : WE10  
 Smart adapter extension  
 cable : WE10-003-V1  
 Flow fitting : FF40+ option /FPS or K1523DD  
 Immersion : FD40+option /FPS or K1523DD  
 Sub assembly : FS40+option /FPS or K1523DD  
 Option HCNF : K1547PJ

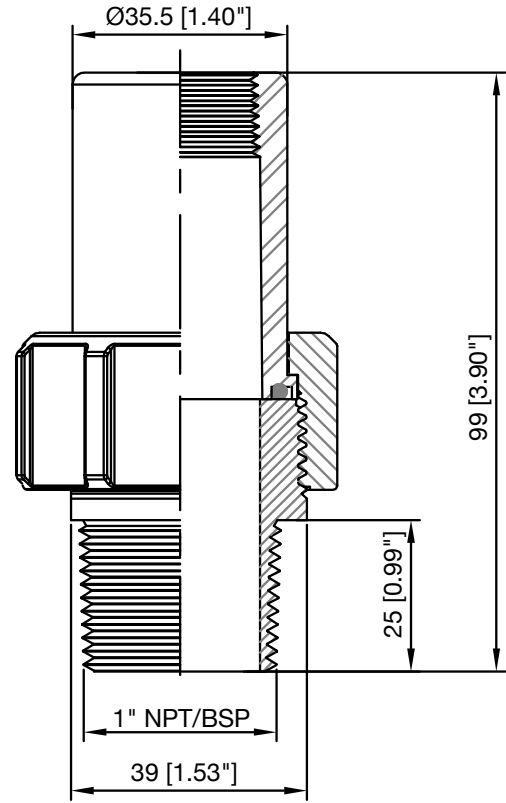
**Dimensions PH21**



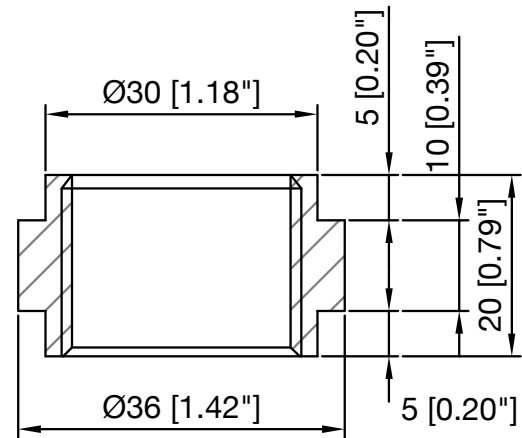
Dimensions PH21 option /HCNF



Option /HCNF



Option /NSS (NPT), /BSS (BSP)



Option /FPS (PPO)

**Model and suffix code PH21**

Model	Suffix code	Option code	Description
PH21			Wide Body sensor specially for water and wastewater applications
Connection	-VS		VarioPin with ID-chip for Sencom 4.0 connector (model SA11)
Type	-RTD		PPS body / Tapered Thread / Dome shaped
Style	-NN		Always -NN
Options		/HCNF /FPS /NSS /BSS	Complete Hastelloy cleaning system Adapter F*40 from PPO 1" NPT, SS316 1" BSP, SS316

**Spare parts PH21**

Part number	Part number
K1523DD	/FPS PH20-mounting in F*40
K1547PK	/NSS Adapter 1" NPT, SS 316 for PH21
K1547PL	/BSS Adapter 1" BSP, SS 316 for PH21
K1520BC	Buffer Solution (500 ml) pH 4.01
K1520BD	Buffer Solution (500 ml) pH 6.87

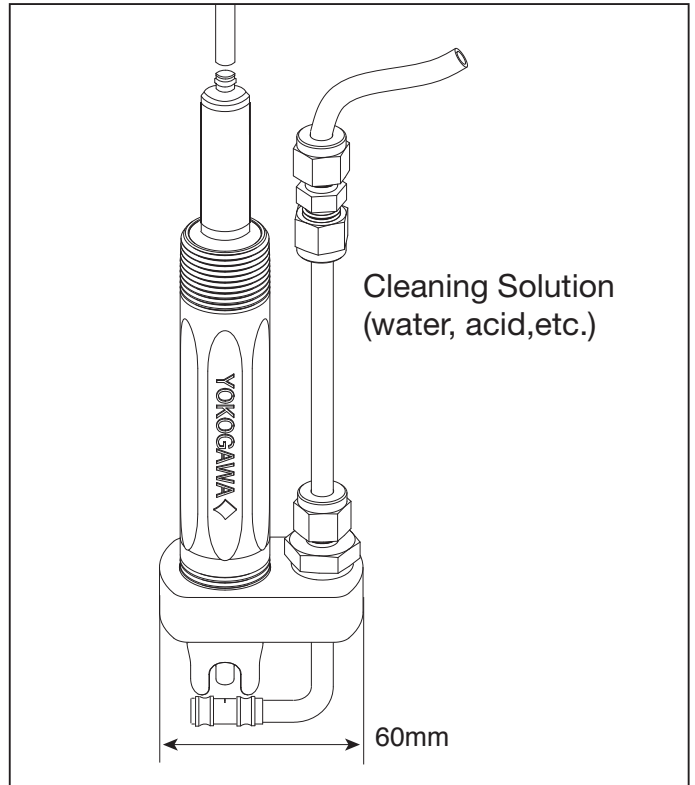
**Cleaning system for PH21**

Some applications require frequent cleaning of the electrode. For these applications Yokogawa designed a chemical cleaning system that can either be used in the Yokogawa fitting range (HCN2, HCN3 or HCN4) or as back-end mounting option for the PH21. The /HCNF option comes with a hastelloy cleaning nozzle, Stainless steel mounting and ferrules sets and a nylon tube of 10 meters.

**Connection equipment**

BA11	Active junction connection box
WE10	Multicore shielded cable with two low noise coaxes and four insulated wires, halogen free.
SA11	SENCOM SMART adapter

**Option /HCNF**



**YOKOGAWA HEADQUARTERS**

9-32, Nakacho 2-chome,  
Musashinoshi  
Tokyo 180  
Japan  
Tel. (81)-422-52-5535  
Fax (81)-422-55-1202  
www.yokogawa.com

**YOKOGAWA EUROPE B.V.**

Euroweg 2  
3825 HD AMERSFOORT  
The Netherlands  
Tel. +31-88-4641 000  
Fax +31-88-4641 111  
E-mail: info@nl.yokogawa.com  
www.yokogawa.com/eu

**YOKOGAWA CORPORATION OF AMERICA**

2 Dart Road  
Newnan GA 30265  
United States  
Tel. (1)-770-253-7000  
Fax (1)-770-251-2088  
www.yokogawa.com/us

**YOKOGAWA ELECTRIC ASIA Pte. Ltd.**

5 Bedok South Road  
Singapore 469270  
Singapore  
Tel. (65)-241-9933  
Fax (65)-241-2606  
www.yokogawa.com/sg

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