Schneider Electric Smart pH Product Portfolio

PH10 and PH12 Smart Sensors
876PH-S Transmitter

876PH-S


PH10-S


PH12-S

Schneider Electric has expanded its Smart pH product offering into a broad global portfolio. Now the Model PH12-S 12-mm pH Sensor and enhanced Model 876PH-S transmitter join the Model PH10-S ¾-inch NPT pH sensor to provide Smart pH measurement solutions across a wider array of industries, applications, and geographies.

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What's New?

876PH-S Smart Transmitter

- Backlit display
- Operable in 7 languages
- Sensor service prediction
- Sensor response time calculation

PH12-S Smart, 12-mm, PG 13.5 sensor family

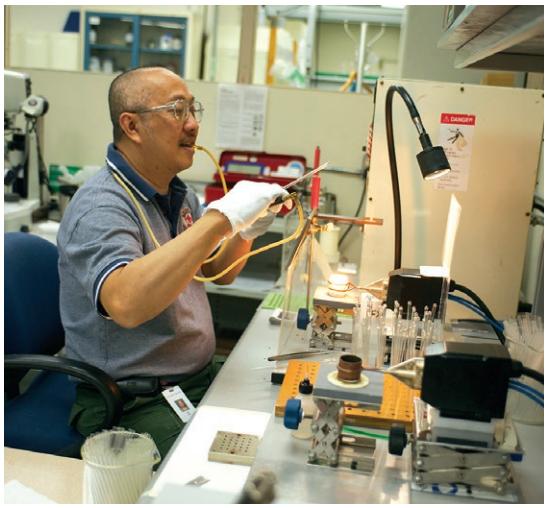
- Integral electronics with digital communications
- Manufacturing, calibration, and diagnostic data stored in sensor memory
- Smart ORP and simultaneous Smart pH and ORP options

PH10-S

- Enhanced with new PC Interface features

PC Interface

- "1-click" email of sensor history to Schneider pH expert
- Operable in 9 languages



Glass blowing in Neponset Factory in Foxboro, MA USA

Clean-in-Place Application

Smart pH Value Proposition

Smart sensors that are also robust!

- Longer service life and reduced need for cleaning with NAFION™ ion barrier in both PH10-S and PH12-S
- Rugged plastic bodies and abrasion-resistant flat glass membranes for harsh process fluids
- No metallic process-wetted parts

PH12-S

NAFION™ Internal Reference

Advanced Transmitter Features

- Backlit LCD display
- Lower maintenance costs by servicing only when needed using Sensor Service Prediction
- Operation in 7 languages

876PH-S with Backlit LCD

Lab Calibration with Sensor PC Interface and DTM

- Less measurement down time by exchanging a shop calibrated sensor instead of calibrating in the process environment
- Operable in English, French, German, Spanish, Portuguese, Italian, Russian, Chinese, and Japanese

Lab calibration with Smart Sensor PC Interface (BS814ME)

Full Line of Installation Accessories

- Faster, safer sensor insertion and removal with FIT12 Insertion/Retraction and BVA Ball Valve Insertion assemblies, bushings and tees

BVA
Adjustable Ball Valve Insertion Assembly

Specifications

	PH12-S	PH10-S
Product Specification Sheet	PSS 6-1C5 A	PSS 6-1C3 A
Model Code for Smart Option	PH12-**2 S**	PH10-**S 2** or PH10-**S 4**
Process Connection	PG 13.5	¾-in NPT
Measurement Electrode Types	• Domed glass • High-temperature domed glass • Rugged flat glass • Platinum (Pt) ORP • Combination pH/ORP any glass/Pt	• Domed glass • Rugged flat glass • Antimony
Reference Electrode	• Double-junction • NAFION™ ion barrier	• Double-junction • NAFION™ ion barrier
Measurement Performance	• Range: 0 – 14 pH • Slope: 98.5 ±1.5% • Accuracy and Stability ±0.02 pH/24 hrs • Response Time: <15 s • Sodium <0.2 pH in 0.5 M Na at pH 12.4 (Domed) or 12.0 (Flat) • ORP: -1800 to +1800 mV	• Range: 0 – 14 pH • Slope: 99.3 ±0.7% • Accuracy and Stability ±0.02 pH/24 hrs • Response Time: <15 s • Sodium <0.2 pH in 0.5 M Na at pH 12.4
Body	• PEEK (120, 225, 360, or 425 mm) • Glass (120 mm only)	PVDF
Temperature Sensor	Pt 1000	Pt 1000
Sensor Termination	Smart connector	Smart connector
Cable	• High temperature -25 to 150 C • Length up to 100 m	• High temperature -25 to 150 C • Length up to 100 m
Hazardous Location Certifications	Intrinsically Safe FM, CSA, ATEX, IECEx	Intrinsically Safe FM, CSA, ATEX, IECEx
Process Temperature Limits	-25 to 140 °C (-13 to 284 °F)	0 to 121 °C
Process Pressure Limits	-48 to 1034 kPag (-7 to 150 psig)	0 to 700 kPag (0 to 100 psig)
Wetted Materials	• PEEK or glass body • Glass sensor • PEEK/ceramic reference junction • PVDF solution ground • VITON, EPDM, or FFKM O-ring	• PVDF body • Glass sensor • Ceramic reference junction • PVDF solution ground • VITON, EPDM, or Chamraz O-ring
Sanitary Compliance	• 3-A (74-xx), FDA • Steam-sterilizable • Autoclavable	No
Biocompatibilty Certificate	ISO 10993-5 and USP 87	No
Installation Accessories	• Adjustable Retraction/Insertion • Adjustable Ball Valve • Flow chamber • Various bushings and fittings	• Adjustable Ball Valve • Flow chamber • Various bushings and fittings

Specifications

	876PH-S
Product Specification Sheet	PSS 6-1A4 A
Measurements	• Smart pH • Smart ORP and Simultaneous pH and ORP (PH12 only) • Temperature • Glass electrode resistance • Reference electrode resistance
Outputs	• 4 to 20 mA analog mappable to pH, ORP, or Temperature • 4 Hart 7 digital outputs independently mappable to pH, ORP, mV, solution temperature, temperature sensor resistance, glass electrode resistance, reference electrode resistance
Configuration	• Local display and keypad • HART handheld configurator • PC-based Field Device Tool (FDT)-certified DTM (Device Type Manager)
Local Interface	• Membrane-covered keypad • Backlit LCD display • Operable in 7 languages (English, French, German, Italian, Spanish, Portuguese, Russian) with local interface plus Japanese and Chinese with DTM
Sensor and Transmitter Diagnostics	• Measurement, compensation, and analog output overrange and underrange • Coated reference electrode • Aging glass and broken glass electrode • Calibration required • Liquid leakage into sensor body • Temperature measurement short or open • Sensor response time • Sensor service prediction
Power Requirements	Loop-powered, 13.5 to 42 V dc
Environmental	• Operating and storage temperature: -30 to +70 °C (-22 to +158 °F) • Relative humidity: 5 to 90% non-condensing • Vibration: 2.5 m/s^2 (0.25 g) 5 to 200 Hz (panel-mount) • Vibration: 10 m/s^2 (1 g) 5 to 200 Hz (pipe- or surface-mount)
Enclosure	• Aluminum (copper content 1%) • Hinged bezel with captive screws • IP66 ingress protection per IEC 60529 • NEMA 4X • Optional storm door • Surface-, panel-, or pipe-mounted
Hazardous Location Certifications	• High temperature -25 to 150 C • Length up to 100 m
Hazardous Location Certifications	ATEX, FM, IECEx, CSA Intrinsically Safe Zones 0 or 2

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