

# Digital combined pH/ORP sensor Memosens CPS16E

Memosens 2.0 glass electrode for standard applications in process and water & wastewater industries



More information and current pricing:

[www.ch.endress.com/CPS16E](http://www.ch.endress.com/CPS16E)

## Benefits:

- Memosens 2.0 offers extended storage of calibration and process data, enabling better trend identification and providing a future-proof basis for predictive maintenance and enhanced IIoT services.
- The additional platinum electrode enables constant monitoring of reference impedance and is a reliable indicator of the sensor quality.
- Simultaneous measurement of pH, ORP and rH values (in rH mode) offers a better process overview and allows for a tighter process control.
- Robust: Large PTFE ring junction and reference with ion trap prevent poisoning of the sensor.
- Suitable for harsh applications: Process glass for highly alkaline media and pressure-stable up to 17 bar (246 psi).
- Reduced operating costs: Lab calibration and fast sensor exchange on site minimize process downtime. Sensor regeneration in the laboratory extends the sensor lifetime.
- Non-contact, digital signal transmission ensures reliable measurements resulting in maximum process safety.

## Specs at a glance

- **Measurement range** ORP: -1 500 to 1 500 mV Application A ▪ pH: 1 to 12 Application B ▪ pH: 0 to 14
- **Process temperature** Application A: -15 to 80 °C (5 to 176 °F) Application B: 0 to 135 °C (32 to 275 °F)
- **Process pressure** 0.8 to 17 bar (11.6 to 246,5 psi) absolute

**Field of application:** Memosens CPS16E is suitable for simultaneous pH and ORP measurement in applications with long-term stable conditions. Thanks to its pH and ORP elements, the sensor offers a better process overview and enables tighter process control. Memosens CPS16E features Memosens 2.0 digital technology, offering extended data storage for predictive maintenance. The pH/ORP sensor resists moisture and enables lab calibration which makes the operator's daily tasks easier and maximizes process integrity.

## Features and specifications

pH

### Measuring principle

Potentiometric

### Application

Long-term monitoring and limit control in processes with stable process conditions

- Chemical processes
- Pulp and paper industry
- Waste incinerators and gas scrubbers
- Mining
- Wastewater

### Characteristic

Combination of pH and ORP electrode for standard applications in process technology and environmental engineering

Poison-resistant reference with ion trap

### Measurement range

ORP: -1 500 to 1 500 mV

Application A

- pH: 1 to 12

Application B

- pH: 0 to 14

## pH

**Measuring principle**

Gel compact electrode with PTFE ring-junction and with ion trap  
Pt-disc as additional ORP element  
rH measurement and control of the reference impedance

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**Design**

All shaft lengths with temperature sensor  
Advanced gel technology

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**Material**

Sensor shaft: Glass to suit process  
pH membrane glass: Type A, B  
Metal lead: Ag/AgCl  
Open aperture: PTFE junction, sterilizable  
ORP measuring element: Platinum  
O-ring: FKM  
Process coupling: PPS fiber-glass reinforced  
Nameplate: Ceramic metal oxide

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**Dimension**

Diameter: 12 mm (0.47 inch)  
Shaft lengths: 120, 225 and 360 mm  
(4.72, 8.86, 14.17 and 16.73 inch)

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**Process temperature**

Application A: -15 to 80 °C (5 to 176 °F)  
Application B: 0 to 135 °C (32 to 275 °F)

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**Process pressure**

0.8 to 17 bar (11.6 to 246,5 psi) absolute

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**Temperature sensor**

NTC 30k

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**Ex certification**

With ATEX, IECEx, CSA C/US, NEPSI, Japan Ex and INMETRO approvals  
for use in  
hazardous areas Zone 0, Zone 1 and Zone 2

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pH

**Connection**

Inductive, digital connection head with Memosens 2.0 technology

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**Ingres protection**

IP68

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ORP / Redox

**Measuring principle**

Sensor ORP / Redox

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