

# Digital pH sensor Memosens CPS41E

## Memosens 2.0 pH electrode for demanding applications in the chemical and process industries



More information and current pricing:

[www.at.endress.com/CPS41E](http://www.at.endress.com/CPS41E)

### Benefits:

- Memosens 2.0 for perfect support of IIoT, digital transformation and predictive maintenance: It provides enhanced storage of calibration and process data, enabling better trend identification.
- Suitable for harsh conditions: Continuous refilling of KCl bridge electrolyte and a separate reference lead prevent poisoning of the electrode.
- Application in quickly changing media: Memosens CPS41E offers a fast response time thanks to its liquid KCl electrolyte and ceramic junction.
- Liquid KCl electrolyte enables reliable measurement even at very low conductivities ( $> 0.1 \mu\text{S}/\text{cm}$ ).
- Suitable for cleaning in place (CIP) and sterilization in place (SIP)
- Inductive signal transmission eliminates any interference by moisture, leading to safer processes.
- Reduced operating costs: Sensor calibration and regeneration in the lab allows for less process downtime and extends the sensor lifetime.

### Specs at a glance

- **Measurement range** 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  $11$  bar ( $11.6$  to  $159.5$  psi) absolute

**Field of application:** Memosens CPS41E features a liquid KCl electrolyte and a ceramic junction making it extremely suitable for harsh chemical applications, fast-changing media and liquids with low conductivity or high organic content. Its integrated Memosens 2.0 digital technology

enables extended data storage and lab calibration which results in easier operation and more process uptime and provides the perfect basis for predictive maintenance. The non-contact signal transmission ensures integrity of your process.

## Features and specifications

pH

### Measuring principle

Potentiometric

### Application

Media with very low conductivity or a high proportion of organic solvents or alcohol:

- Chemical industry
- Organic chemicals
- Power stations
- Laboratory measurements

### Characteristic

Digital pH electrode for process engineering with ceramic junction and KCl liquid electrolyte

### Measurement range

Application A

- pH: 1 to 12

Application B

- pH: 0 to 14

### Measuring principle

Liquid-KCl compact electrode with ceramic junction

### Design

All shaft lengths with temperature sensor

## pH

**Material**

Sensor shaft: Glass to suit process  
pH membrane glass: Type A and B  
Metal lead: Ag/AgCl  
Open aperture: Ceramic junction, zirconium dioxide  
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 length: 120, 225, 360 and 425 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 11 bar (11.6 to 159.5 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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**Connection**

Inductive, digital connection head with Memosens 2.0 technology

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**Ingres protection**

IP68

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**Additional certifications**

Additional certifications

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