

## Digital ORP sensor Memosens CPS42E

Memosens 2.0 ORP sensor for applications with fast-changing medium compositions or low conductivity



More information and current pricing:

[www.at.endress.com/CPS42E](http://www.at.endress.com/CPS42E)

### 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.
- Resistant to poisoning due to permanent refilling of KCl bridge electrolyte and separate reference lead
- Perfectly suited for quickly changing media: Combination of liquid KCl electrolyte and ceramic junction enables fast response time
- Applicable at very low conductivities ( $> 5 \mu\text{S}/\text{cm}$ ) thanks to liquid KCl electrolyte
- Suitable for cleaning in place (CIP) and sterilization in place (SIP)
- Maximum process safety through non-contact inductive signal transmission
- Reduced operating costs due to minimized process downtime and extended sensor lifetime

### Specs at a glance

- **Measurement range**  $-1\ 500$  to  $1\ 500$  mV
- **Process temperature**  $-15$  to  $135$  °C ( $5$  to  $275$  °F)
- **Process pressure**  $0.8$  to  $11$  bar ( $11.6$  to  $159.5$  psi) (absolute)

**Field of application:** Memosens CPS42E is the high performer for harsh chemical applications, media with low conductivity or considerable organic content. The sensor is designed for fast response especially in applications with fast-changing media. Thanks to Memosens 2.0 digital technology, CPS42E combines maximum process integrity with simple operation. It resists moisture and enables lab calibration. It offers

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extended storage of calibration and process data providing the perfect basis for predictive maintenance.

## Features and specifications

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### ORP / Redox

**Measuring principle**

Sensor ORP / Redox

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**Application**

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

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

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

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**Measurement range**

-1 500 to 1 500 mV

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**Measuring principle**

Liquid-KCl filling and ceramic junction

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**Design**

All shaft lengths with temperature sensor

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## ORP / Redox

**Material**

Sensor shaft: Glass to suit process

ORP measuring element: Platinum

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**

-15 to 135 °C (5 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, contactless connection head with Memosens 2.0 technology

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ORP / Redox

**Ingres protection**

IP68

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**Additional certifications**

Additional certifications

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