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.ca.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 µS/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

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

Features and specifications

ORP / Redox

Measuring principle
Sensor ORP / Redox

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

Measurement range
–1 500 to 1 500 mV

Measuring principle
Liquid-KCl filling and ceramic junction

Design
All shaft lengths with temperature sensor

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

ORP / Redox

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)

Process temperature
–15 to 135 °C (5 to 275 °F)

Process pressure
0.8 to 11 bar (11.6 to 159.5 psi) (absolute)

Temperature sensor
NTC 30k

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.

Connection
Inductive, contactless connection head with Memosens 2.0 technology

Ingres protection
IP68

Additional certifications
Additional certifications

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