

Combined pH/ORP sensor Memosens CPS76E

Memosens 2.0 combined electrode for chemical processes and poisoning media



More information and current pricing:

www.be.endress.com/CPS76E

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.
- Simultaneous measurement of pH, ORP and rH values (in rH mode) provides a better process overview and allows for a tighter process control.
- Its optional pressurized reference ensures reliable measurement in blocking media, such as dispersions.
- Unique ion trap prevents poisoning of the electrode's junction and reference ensuring a long sensor lifetime.
- Flexible installation thanks to optional upside-down mounting.
- Maximum process safety through non-contact, inductive signal transmission.
- Reduced operating costs thanks to minimized process downtime and extended sensor lifetime.

Specs at a glance

- **Measurement range** ORP: -1 500 to 1 500 mV Application B ■ pH: 0 to 14 Application H ■ pH: 0 to 12
- **Process temperature** Application B and H: 0 to 140 °C (32 to 284 °F) Version TB: 0 to 140 °C (32 to 284 °F) Version TU, TP (pressurized reference): 0 to 140 °C (32 to 284 °F) (140 °C (284 °F) for sterilization only) maximum 100 °C (212 °F) in continuous operation due to increasing pressure drop at T > 100 °C (212 °F)
- **Process pressure** Application B: 0.8 to 14 bar (11.6 to 203 psi) absolute Application H: 0.8 to 7 bar (11.6 to 101,5 psi) absolute

Field of application: Memosens CPS76E is the heavy-duty specialist for simultaneous pH and ORP measurement. Its unique, contamination-resistant reference guarantees stable measurement in polluted, poisoning media and in media with low conductivity. Thanks to Memosens 2.0 digital technology, CPS76E combines maximum process integrity with simple operation. It resists moisture, enables lab calibration and offers extended storage of calibration and process data providing the perfect basis for predictive maintenance.

Features and specifications

pH

Measuring principle

Potentiometric

Application

Process technology and monitoring of processes with:

- Rapidly changing pH values
- High levels of electrode poisons, such as H₂S

Characteristic

Digital pH/ORP electrode for chemical process with an ion trap for poison-resistant reference

Measurement range

ORP: -1 500 to 1 500 mV

Application B

- pH: 0 to 14

Application H

- pH: 0 to 12

Measuring principle

Gel compact electrode with ceramic junction and ion trap for simultaneous measurement of pH, ORP and rH value (in rH mode)

Design

All shaft lengths with temperature sensor

Advanced gel technology

pH

Material

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

Dimension

Diameter: 12 mm (0.46 inch)
Shaft lengths: 120, 225, 360 and 425 mm
(4.68, 8.77, 14.04 and 16,57 inch)

Process temperature

Application B and H:
0 to 140 °C (32 to 284 °F)
Version TB:
0 to 140 °C (32 to 284 °F)
Version TU, TP (pressurized reference):
0 to 140 °C (32 to 284 °F) (140 °C (284 °F) for sterilization only)
maximum 100 °C (212 °F) in continuous operation due to increasing
pressure drop at T > 100 °C (212 °F)

Process pressure

Application B: 0.8 to 14 bar (11.6 to 203 psi) absolute
Application H: 0.8 to 7 bar (11.6 to 101,5 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

pH

Connection

Inductive, digital connection head with Memosens 2.0 technology

Ingres protection

IP68

ORP / Redox

Measuring principle

Sensor ORP / Redox

Application

Process technology and monitoring of processes with:

- Rapidly changing pH values
 - High levels of electrode poisons, such as H₂S
-

Characteristic

Digital pH/ORP electrode for chemical process with an ion trap for poison-resistant reference

Measurement range

ORP: -1 500 to 1 500 mV

Application B

- pH: 0 to 14

Application H

- pH: 0 to 12
-

Measuring principle

Gel compact electrode with ceramic junction and ion trap for simultaneous measurement of pH, ORP and rH value (in rH mode)

Design

All shaft lengths with temperature sensor

Advanced gel technology

ORP / Redox

Material

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

Dimension

Diameter: 12 mm (0.46 inch)
Shaft lengths: 120, 225, 360 and 425 mm
(4.68, 8.77, 14.04 and 16,57 inch)

Process temperature

Application B and H:
0 to 140 °C (32 to 284 °F)
Version TB:
0 to 140 °C (32 to 284 °F)
Version TU, TP (pressurized reference):
0 to 140 °C (32 to 284 °F) (140 °C (284 °F) for sterilization only)
maximum 100 °C (212 °F) in continuous operation due to increasing
pressure drop at T > 100 °C (212 °F)

Process pressure

Application B: 0.8 to 14 bar (11.6 to 203 psi) absolute
Application H: 0.8 to 7 bar (11.6 to 101,5 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

ORP / Redox

Connection

Inductive, digital connection head with Memosens 2.0 technology

Ingres protection

IP68

More information www.be.endress.com/CPS76E