

# Model OPS71 pH Model OPS72 ORP Electrodes



## All purpose pH / ORP electrode with double chamber gel filled reference system and integrated temperature sensor

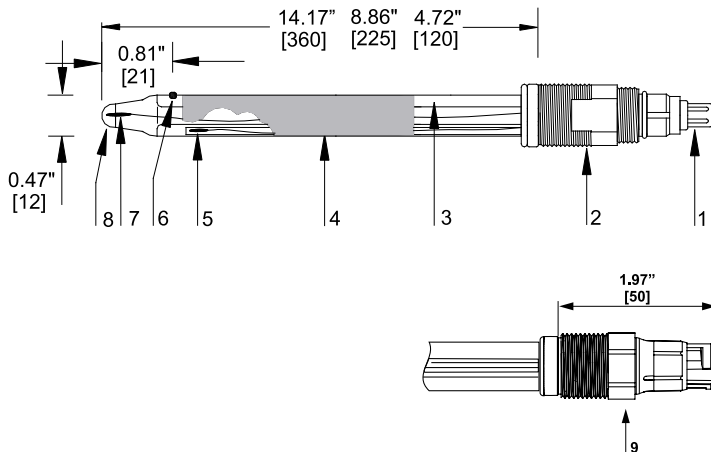
- Memosens technology with intelligent data storage and contactless cable connection as option
- FDA approved, polyacrylamide free gel delivers high performance and low maintenance
- Advanced reference configuration featuring triple ceramic diaphragms resists fouling in harsh industrial conditions
- Durable 0-14 pH sensitive glass can withstand SIP and CIP treatment and operating temperatures up to 135 °C (275 °F)
- HF version is resistant to concentrations up to 1 ppm HF
- Pressurized reference system for fermenter applications
- Upside-down option
- Pt 100 or Pt 1000 RTD in Model OPS71 pH electrode increases measurement accuracy at extreme temperatures
- Model OPS72 and OPS72D ORP sensor has platinum ring electrode as standard
- 12 mm diameter design allows for modular installation in fixed or retractable housings
- Each electrode is serialized and performance tested at the factory



**For use in industrial measurement applications including acid-base neutralization, chemical stream monitoring, boiler feed water monitoring, pigment and dye manufacturing**

### Specifications

Measurement range	pH: 0 - 14 pH ORP: -1500 to + 1500 mV
Maximum measurement error	± 0.05 pH (OPS71 and OPS71D) ± 3 mV (OPS72 and OPS72D)
Pressure range	up to 13 bar (190 psig)
Temperature range	- 15 to 135 °C (5 to 275 °F)
Minimum conductivity	10 µS/cm
Electrolyte	3 mol KCl Gel, AgCl-free
Response time (@ 25 °C / 77 °F)	98 % of reading in 30 seconds



1. NEMA 6 waterproof connector
2. PG13.5 mounting threads
3. Gel electrolyte
4. Reference protector
5. Ag/AgCl reference element
6. Ceramic diaphragms
7. Ag/AgCl measuring element
8. pH membrane glass
9. Memosens connector

**Dimensions**

<b>OPS71</b>			<b>ESA</b> (select from below for complete order code)
		<b>Electrode Type</b>	
	<b>2</b>	pH combination electrode with Pt 100 temperature element	
	<b>3</b>	pH combination electrode with Pt 1000 temperature element	
		<b>Measuring Element</b>	
	<b>BC</b>	pH 0-14, 0 to 130 °C, 13 bar, triple ceramic diaphragm	
	<b>FB</b>	pH 0-14, 0 to 70 °C, 13 bar, max. 1 ppm HF, single ceramic diaphragm	
	<b>BP</b>	pH 0-12, 0 to 135 °C, 6 bar, single ceramic diaphragm, prepressurized reference	
	<b>BU</b>	pH 0-14, 0 to 135 °C, 10 bar, single ceramic diaphragm, upside-down mounting	
		<b>Electrode Length</b>	
	<b>2</b>	120 mm	
	<b>4</b>	225 mm	
	<b>5</b>	360 mm	

**Order Code**

**Intelligent sensor with Memosens technology**

<b>OPS71D</b>			<b>1</b> (select from below for complete order code)
		<b>Electrode Type</b>	
	<b>7</b>	Memosens technology with built-in temperature element	
		<b>Measuring Element</b>	
	<b>BC</b>	pH 0-14, 0 to 130 °C, 13 bar, triple ceramic diaphragm	
	<b>FB</b>	pH 0-14, 0 to 70 °C, 13 bar, max. 1 ppm HF, single ceramic diaphragm	
	<b>BP</b>	pH 0-12, 0 to 135 °C, 6 bar, single ceramic diaphragm, prepressurized reference	
	<b>BU</b>	pH 0-14, 0 to 135 °C, 10 bar, single ceramic diaphragm, upside-down mounting	
		<b>Electrode Length</b>	
	<b>2</b>	120 mm	
	<b>4</b>	225 mm	
	<b>5</b>	360 mm	

<b>OPS72</b>	<b>0</b>	<b>PB</b>	<b>ESA</b> (select from below for complete order code)
			<b>Electrode Length</b>
			<b>2</b> 120 mm
			<b>4</b> 225 mm
			<b>5</b> 360 mm

**Intelligent sensor with Memosens technology**

<b>OPS72D</b>	<b>7</b>	<b>PB</b>	<b>1</b> (select from below for complete order code)
			<b>Electrode Length</b>
			<b>2</b> 120 mm
			<b>4</b> 225 mm

<b>Cables</b>	
<b>Shielded pH cable with NEMA 6 waterproof connector, stripped and tinned ends</b>	
OPK9-NPA1A	1.5 meter
OPK9-NQA1A	3 meter
OPK9-NAA1A	5 meter
OPK9-NBA1A	10 meter
OPK9-NCA1A	15 meter
OPK9-NDA1A	20 meter
<b>Shielded pH cable with NEMA 6 waterproof connector, BNC and tinned ends</b>	
OPK9B-NPA1A	1.5 meter
OPK9B-NQA1A	3 meter
OPK9B-NAA1A	5 meter
OPK9B-NBA1A	10 meter
OPK9B-NCA1A	15 meter
OPK9B-NDA1A	20 meter
<b>Shielded pH cable with Memosens connector, stripped and tinned ends</b>	
OYK10-A031	3 meter
OYK10-A051	5 meter
OYK10-A101	10 meter
OYK10-A201	20 meter
<b>Calibration solutions</b>	
OPY21	NIST traceable pH calibration solution, 4.00 pH, 1000 ml
OPY23	NIST traceable pH calibration solution, 7.00 pH, 1000 ml
OPY30	NIST traceable ORP calibration solution, value: +220 mV @ pH 7.00, 1000ml
OPY31	NIST traceable ORP calibration solution, value: +468 mV @ pH 7.00, 1000 ml
<b>Installation housings</b>	
OPA442, 640	Fixed housing
B60x	In-line hygienic
OPA475	Hygienic retractable
OPA450, 471, 472, 473	Industrial retractable
OPA111	Industrial submersible