Sensors for Reactor Systems

Continuous monitoring with in-line H_2, N_2O, H_2S and O_2 sensors

Install H_2, N_2O, H_2S, and O_2 sensors directly in reactors and flow-through systems with multiple mounting options.

The sensors for reactors and flow-through systems offer

- Direct gas and liquid measurements in closed systems
- Continuous monitoring
- Easy mounting
- High precision
- Digital or analog data output

Measure directly in your reactor or flow-through system with sensors in steel tubes, flow cells, and needles.

Multiple mounting options allow you to position the sensors in the liquid phase or in the headspace of a reactor and to measure directly in gas- and liquid flows.

Mounting options

1/4-inch steel tube with Swagelok© fittings

12 mm OD steel tubes with PG13.5 or M20x2.5 threads

Needle for piercing

Flow cell based on a Swagelok© T-piece for either 1/4" or 1/8" OD tubing

PEEK flow cell for 1/8" or 1/16" OD tubing

Mounting options

Sensor	Description	Mounting option	Dimensions	Option
XX-ST-12	Sensor in 12 mm OD steel tube	PG13.5 Thread or M20x2.5 Thread	Standard length of steel tube: 20 cm	Contact us for lengths over 20 cm
XX-ST-1/4	Sensor in 1/4'' OD steel tube	Swagelok Ferrule and nut	Standard length of steel tube: 4 cm	Steel tube length up to 9 cm
XX-SL-1/4 or 1/8	Sensor in 1/4'' or 1/8'' Swagelok Tee		1/4'' or 1/8'' Swagelok Tee	
XX-NP	Needle sensor for piercing		1.6x40 mm needle	2.1x80 mm needle (OX, H_2, H_2S, SULF sensors)
XX-PEEK-1/8 or 1/16	Sensor in 1/8" or 1/16" PEEK Tee		1/8" or 1/16" PEEK Tee	

Specifications for standard ST 1/4, ST-12, SL, and NP variants

Sensor type (standard range*)	Detection limit	Measurement Range	Response time (90%)	Pressure tolerance	Temperature range
OX	0.3 µM 225 ppm (vol/vol)	0-1,400 µM 0-1,000,000 ppm (vol/vol)	< 15 s	20 bar	0-60 °C
H_2	0.3 µM 375 ppm (vol/vol)	0-2,000 µM 0-2,500,000 ppm (vol/vol)	< 15 s	20 bar	0-60 °C
H_2-X	0.3 µM 375 ppm (vol/vol)	0-2,000 µM 0-2,500,000 ppm (vol/vol)	< 30 s	3 bar	0-50 °C
H_2S	0.3 µM 2.6 ppm (vol/vol)	0-300 µM 0-2,600 ppm (vol/vol)	< 20 s	10 bar	0-60 °C
SULF	0.3 µM 2.6 ppm (vol/vol)	0-300 µM 0-2,600 ppm (vol/vol)	< 10 s	20 bar	0-60 °C
N_2O	0.1 µM 3.5 ppm (vol/vol)	0-50 µM 0-1,700 ppm (vol/vol)	< 65 s	2 bar	0-50 °C

*Low range and high range options are also available. Please visit the specific sensor site for more information.

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