Reliable

Reliable measurement even with oxygen and hydrogen gasses

Cost effective

Precise measuring results for efficient regulation of the process
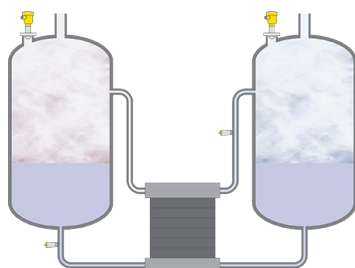
User friendly

Direct installation in small tanks with internal structures

PEM electrolyser

Level and pressure measurement in the PEM electrolyser

In the electrolyser, renewable energy is used to split water (H2O) into its individual components hydrogen (H) and oxygen (O). Green hydrogen is thus produced in a CO2-free cycle. The PEM electrolyser, uses a proton exchange membrane that is continuously flushed with ultrapure water. An electrical potential causes protons to migrate through the membrane. Hydrogen is produced on the cathode side and oxygen on the anode side. On the oxygen side, level measurement is used to regulate the ultrapure water. On the hydrogen side, it monitors the excess water. The pressure sensors monitor the pressure in the feed line on the oxygen side and in the discharge line on the hydrogen side.

More details

VEGABAR 28

Pressure measurement in the inlet and outlet of the PEM electrolyser

- Reliable measurement of hydrogen and oxygen
- Simple setup and commissioning via Bluetooth
- Resistance to internal ignition in oxygen applications available as per 'BAM assessment'

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VEGAPULS 6X

Level measurement with radar for regulation of water quantities

- Reliable measurement thanks to non-contact measuring principle
- High plant availability, because sensor is wear and maintenance free
- Sensor version for high-purity oxygen applications (EIGA 33/18 and ASTM G93) also available

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VEGABAR 28	VEGAPULS 6X
Measuring range - Pressure -1 ... 60 bar	**Measuring range - Distance** 120 m
Process temperature -40 ... 130 °C	**Process temperature** -196 ... 450 °C
Accuracy 0.3 %	**Process pressure** -1 ... 160 bar
Materials, wetted parts PVDF Duplex (1.4462) Ceramic 316/316L	**Accuracy** ± 1 mm
Threaded connection ≥ G¼, ≥ ¼ NPT	**Frequency** 6 GHz 26 GHz 80 GHz
Hygenic fittings Clamp ≥ 2", DN50 - DIN32676, ISO2852 Clamp ≥ 1" - DIN32676, ISO2852 Clamp ≥ 1½" - DIN32676, ISO2852 Slotted nut ≥ DN25 - DIN 11851 Slotted nut ≥ DN32 - DIN 11851 SMS 1145 DN51 SMS DN38 Hygienic fittings ≥ DN25 - DIN11864-1-A Hygienic fittings ≥ DN40 - DIN11864-1-A Varivent N50-40 SMS DN25 Ingold connection PN10 Varivent F25	**Beam angle** ≥ 3°
	Materials, wetted parts PTFE PVDF 316L PP PEEK
	Threaded connection ≥ G¾, ≥ ¾ NPT
	Flange connection ≥ DN20, ≥ ¾"
Seal material EPDM FKM FFKM	**Hygenic fittings** Clamp ≥ 1½" - DIN32676, ISO2852 Slotted nut ≥ 2", DN50 - DIN 11851 Varivent ≥ DN25 hygienic fitting with tension flange DN32 hygienic fitting F40 with compression nut Hygienic screw connections ≥ DN50 tube ø53 - DIN11864-1-A Hygienice flange connection ≥ DN50 DIN11864-2 Hygienic clamp connection ≥ DN50 pipe Ø53 - DIN11864-3-A DRD connection ø 65 mm SMS 1145 DN51
Protection rating IP65 IP68 (0,5 bar)/IP69	
Output 4 … 20 mA Three-wire (PNP/NPN, 4 … 20 mA) IO-Link	
Ambient temperature -40 ... 70 °C	