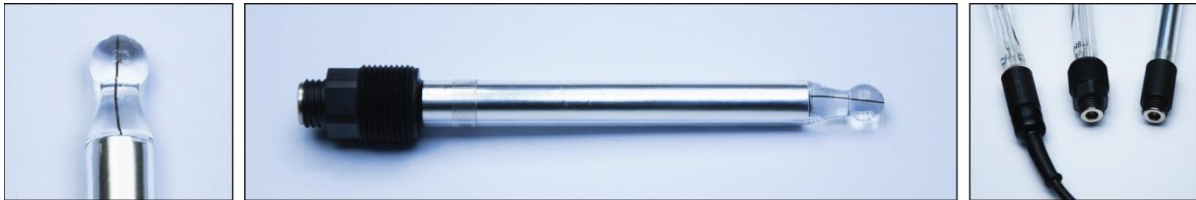# pH Electrodes

pH determination by means of a single rod measuring cell

The pH electrodes without integrated reference system (also called pH half-cell) can be used as a measuring or reference electrode by the use of a suitable counter-electrode.

It can be individually adjusted to the specific task and conditions by a wide-ranged modular configuration system including various types of sensor designs and available materials.

Features

- hemispheric membrane made of various types of special-purpose glass for the application in difficult conditions (e. g. in fluids containing hydrogen fluoride)
- automatic temperature compensation by PT100, PT1000 or NTC possible
- high accuracy and long-term stability
- low maintenance required in combination with long service life
- robust, shock-protected design (depending on shaft material)
- installation length individually selectable
- universally applicable at temperatures up to +90 °C (depending on shaft material)
- electrical connection by threaded plug head connector PG 13.5, plug head connector S+ or fixed connection
- appropriate for installation in armatures

Application fields

- pH measurements in combination with reference electrode / REDOX measurements in combination with metal electrode
    - for industrial applications, laboratories and swimming pools
    - operation in waste water treatment, water purification and exhaust air plants
    - application even in demanding conditions such as fluctuating pressure and temperature within the fluid or highly abrasive slurry
    - utilization in emulsions and suspensions requiring a high measuring rate
    - preferred use in stand and running through systems

Technical data

Parameter		Description	
measuring sensor	membrane design	hemispheric	
	zero point E_o	7.00 pH (4.66 pH)	
	internal resistance	approx. 150 MΩ (at 25 °C)	
	membrane glass and measuring ranges	hydrofluoric acid resistant (<2000ppm free fluoride):	pH 0 to pH 12
		special-purpose glass, high alkaline:	pH 0 to pH 14
shaft material		normal-purpose glass	
shaft diameter		12 mm	
installation length		fabrication according to customer request	
temperature compensation (optional)		PT100	
		PT1000	
		NTC	
electrical connection		threaded plug head connector PG 13.5	
		plug head connector S+	
		fixed connection	
permitted temperature range		normal-purpose glass shaft: 0 to +90 °C	
conductivity		>50 µS/cm	
max. permitted pressure		6 bar	

Order options

Order Example

Type of reference		Membrane type		Electrolyte		Electrical connection					Membrane shape		Tempera-ture comp.		Shaft properties		Installation lenght	
G1				H		PA					H		O		D		12	
by glass membrane	G1	special-purpose glass, high alkaline	F	Inner buffer, E_0 pH7	H	no thread	connector	plug head connector S+[1]	S+	hemispheric	H	none	O	Normalglas	D	variable, indication in cm	XX
		special-purpose glass, HF acid resistant	A					plug head connector S+, 4-pin[2]	S4			PT100	P				
							fixed connection, X=cable length in m, measuring transducer with...	no connector[1]	FX			PT1000	L				
								no connector[2]	AX			NTC	N				
								BNC connector staight[1]	FXG								
								BNC connector angled[1]	FXB								
								DIN connector[1]	FXD								
						thread PG 13.5	connector	threaded plug head connector PG 13.5[1]	PA								
								threaded plug head connector PG 13,5, 4-pin[2]	C4								
							fixed connection, X=cable length in m, measuring transducer with...	no connector[1]	EX								
								no connector[2]	EAX								
								BNC connector staight[1]	EXG								
								BNC connector angled[1]	EXB								
								DIN connector[1]	EXD								

[1] electrode without automatic temperature compensation

[2] electrode with automatic temperature compensation

Not all options are combinable. We will be pleased to assist you by selecting the suitable options that meet your requirements. In addition to the displayed order options special customized designs are certainly possible. Please contact us!

We also offer the necessary accessories such as connecting cables, armatures and wetting caps. They can be found in the respective technical data sheets.

Specifications are subject to modifications.