

# Sensors for pH Measurement



## Type 18 Differential pH Sensor

Rugged Glasteel, electrolyte-free sensor for high temperature/pressure applications

The Type 18 differential pH electrode changes the nature of pH measurement by eliminating the need for internal electrolyte solutions and reference junction. This design virtually does away with the problems caused by aging and pollution of the reference sensor. It uses a rugged enamel Glasteel™ probe and integral temperature sensor to measure pH or high-resolution pH compensated ORP. The probes construction allows them to be directly installed into the process (product flow) thus sensing the pH immediately and directly, without a protective cage.

### Facts

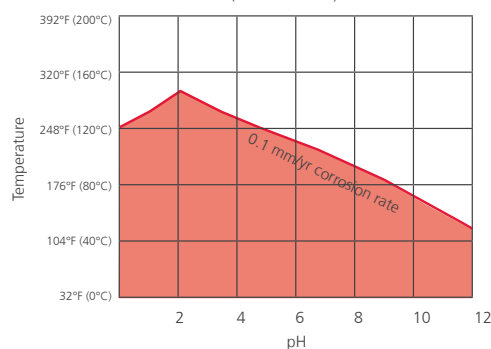
- Robust Glasteel™ construction
- No internal or external electrolyte
- No drift
- Dry storage
- Clean-in-place
- Minimal maintenance and low cost operation
- In-line "one-point" process calibration
- Not affected by steam sterilization
- Resistant to poisoning and fouling
- Improved accuracy for tighter pH control
- Mounted in any orientation

### Specifications

pH:	3 ... 10 pH
Temperature:	32 ... 284°F (0 ... 140°C), Verify transmitter compatibility
Pressure:	Full vacuum to 215 psig (-1...15 bar)
Temperature detector:	PT 100
Sensor material:	Glasteel and Rhodium (holder and seal material selectable)
Length:	5.5"... 7.5" (140...190 mm)
Diameter:	0.7" (18 mm)
Cable length:	3, 5 and 10 meter with LEMO connector, 212°F (100°C) max. temperature
Iso thermal point:	3.0 pH
Measuring error:	max 0.1 pH

### Isocorrosion Curve of Ion Sensitive Yellow Glass

(mean values)



# ETA Process Instrumentation

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Product Range		Order No.			
		1619221 -	<input type="checkbox"/>	- <input type="checkbox"/>	- <input type="checkbox"/>
Holder material of construction	316 SS Titanium Polypropylene Kynar (PVDF)	SS TT PP PV			
Connection Size/Type*	1-1/4" BSP Ingold (25 mm), available only in metal 3/4" MNPT 3/4" FNPT 1" MNPT 1" FNPT 1-1/2" MNPT 1-1/2" FNPT 1-1/2" Tri-clamp, available only in metal 2" Tri-clamp, available only in metal		25IN 12NM 12NF 16NM 16NF 24NM 24NF 24TC 32TC		
Gasket material	<b>Wetted O-Ring</b> EPDM Kalrez (6375 Grade) Kalrez (6375 Grade) Viton	<b>Non-Wetted O-Ring</b> EPDM EPDM Viton Viton			EE KE KV VV

\*) Special materials and connection sizes available upon request.

## Calibration

The Type 18 is calibrated on process and does not require the use of buffer solutions. It uses sodium ions present in the process fluid as a reference allowing for a single-point calibration.

## Transmitters

The Type 18 can only be used in combination with pH transmitters that feature dual high impedance inputs, an adjustable setting for isothermal point, and an adjustable temperature coefficient.

Cable (ordered separately)	Part Number
3 m	2546343
5 m	2546345
10 m	2546340