

*pHix[®] Compact
Innovative and
handy design,
pH, Redox and
temperature transmitter*





- The *pHix[®] Compact* is a new and innovative pH and Redox transmitter designed for easy installation and maintenance with electrode, transmitter, and mounting in one unit.

The unique design of *pHix[®] Compact* eliminates high impedance electrode connections and special hardware for mounting.

*pHix[®] for
Waste water treatment,
Water works,
and
Industry*

- The electrical connection of the *pHix[®] Compact* is very simple - a loop-powered display and a 12 - 30 V DC supply.
- The *pHix[®] Compact* can be submerged into the liquid for measuring in open channels and tanks. For measuring in pipes the *pHix[®] Compact* can be mounted in a 2" pipe T. *pHix[®] Compact* is in IP68 class enclosure and withstands a static pressure of 1 bar / 10 mWG.
- *pHix[®] Compact* is available with 4-20 mA output for pH / Redox or with 2 galvanically separated 4-20 mA outputs for both pH and temperature for direct connection to a PLC or indicator.
- All parameters can be set with HART[®] communication via the 4 - 20 mA signal.

WASTE WATER TREATMENT

A too high or too low pH will harm the bacteriological process in the plant. The pH of the final effluent must also be checked to ensure compliance with environmental regulations.



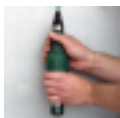
pHix[®]
compact

pHix[®] Compact can be mounted directly in process lines with a 2" union ring.

pHix[®] Compact can be calibrated in three different ways:



- A tilt switch, which is activated by turning the transmitter upside down.



- A switch ring, which can set to the three standard buffer values.
- HART[®] commands via the 4-20 mA loop.



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Specifications

Supply:	12 - 30 V DC, 2-wire loop supply.
Temperature range:	- 20 ... + 80 °C
Material:	PPS (Ryton [®])
Input impedance, pH:	> 2 x 10 ¹² Ω
reference:	> 2 x 10 ⁸ Ω
Measuring range:	0 - 14 pH (-1000 ... +1000 mV)
Output:	1 or 2 galvanically separated 4 - 20 mA
Communication:	HART [®] protocol.

WATER TREATMENT

Measuring pH will help determine how much chemical (aluminium or iron sulphate) to add to the incoming raw water. It also increases the efficiency of the flocculation in the filtering phase. A Redox measurement will indicate how much free chlorine is left in the treated water.



New electrode

- Low impedance and large membrane
- Less sensitivity to fouling and longer cleaning intervals.
- Better performance in liquids with low ion concentration like desalinated water or surface water.
- The low impedance, the large membrane and electrolyte volume have significant importance for longer sensor life.

HART® communication with commands for

- Temperature.
- Setup parameters.
- Selection between pH and redox measurement.
- Measuring range and -type (pH / redox / temperature).
- Alarm limits.
- Buffer calibration.

pH electrode specifications

Combined double junction with flat glass membrane.

pH glass: Low impedance.

Reference junction: Sintered PTFE.

Reference system: KCl gel, double junction.

Impedance: 50 M Ω / 25 °C.

Estimated lifetime: 1 - 2 years, depending on process conditions.



Redox electrode specifications

Combined double junction with platinum electrode.

Reference junction: Sintered PTFE.

Reference system: KCl gel, double junction.

Impedance: 2 K Ω / 25 °C.

Estimated lifetime: 1 - 2 years, depending on process conditions.



INDUSTRIAL PROCESSES

Production of chemicals, power, pulp and paper, and especially food processing (e.g. controlling yoghurt bacteria cultures) depend heavily on precise pH measurements.

pHix[®] Compact advantages:

- Simple to install and use.
- Electrode, transmitter, and mounting hardware are all in one unit.
- Typical humidity, corrosion and oxidation problems with high impedance connections are completely eliminated.
- Automatic calibration by tilting the transmitter or by turning the calibration ring.
- Less sensitivity to fouling and longer cleaning intervals.
- 2-wire 4 - 20 mA output for power supply and measuring signal.
- All parameters can be set via HART[®] commands.