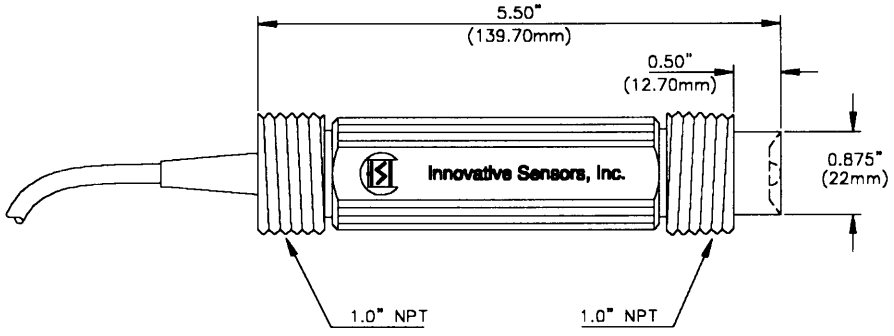
Innovative Sensors, Inc.

ISI SOLUTIONS - Specialty Sensors for Difficult Applications

Model 16 - Robust, General Purpose pH Sensor for flowing, viscous applications



The Model 16 is a combination pH sensor designed specifically for insertable use in process and waste water applications.

The outer body material is PPS (Ryton®) and has 1" NPT front and rear facing threads. The sensor is highly resistant to electrode poisoning solutions, while the use of the non-fouling patented POROUS TEFLON®** liquid junction ensures a steady presence of reference electrolyte. Coupled with the novel PLUNGER* pH glass electrode design, the Model 16 assures a low maintenance service life in most applications. The concave sensor configuration protects the pH bulb from particulate matter and provides a cleansing flow without affecting the critical line pressure characteristics. **SOLUTION:Model 16.** Use of the High Temperature version is recommended where service temperatures continuously exceed 80°C.

Applications

Ideal for pipelines with flow velocity greater than 30cm/sec. Typical applications include process control and batch processing in the chemical, petro-chemical, pulp and paper and electroplating industries. Also available for ORP or other ion measurements.

Specifications

Body Material	PPS (Ryton®)
pH Range	0 to 14 pH
Temperature Range	0°C to +80°C (Standard version) 0°C to +110°C (High Temperature version)
Pressure Range	0 to 100psig (Standard version) 0 to 150psig (High Temperature version)
Accuracy	±0.1% over full range
Sodium Error	Less than 0.05 pH in 0.1 Molar Na^+ ion @ 12.8 pH
Impedance	150Mohm @ 25°C
Reference Cell	Double Junction KNO_3 and KCl/AgCl
Zero Potential	7.0 pH ± 0.2 pH
Wetted Materials	PPS (Ryton®), Teflon®, Viton®, Glass
Response Time	95% of reading in 10 seconds
Drift	Less than 2 mV per week

PML Monitoring and Treatment Systems for Industry.
Process Technology
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INNOVATIVE SENSORS INC.
REGISTERED TO ISO 9002
CERTIFICATE NO. A2865

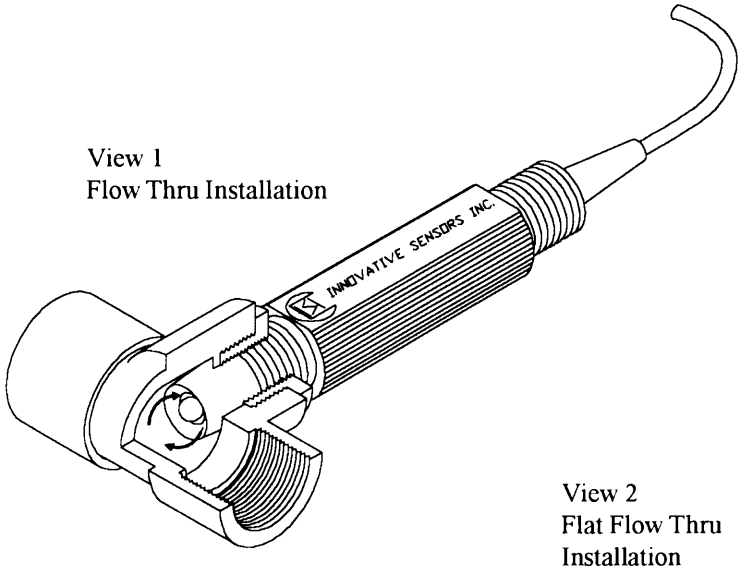
Available Options

M-16	Designed specifically for insertable use in process and waste water applications. Ideal for pipelines with flow velocity greater than 30cm/sec.
M-16-AMP	Integral unity gain amplifier boosts the signal to a noise free level allowing the signal to be transmitted hundreds of feet.
M-16-HT	For use in temperatures above 80°C, **except** where ethers, ketones and most aromatic hydrocarbons are present. If these solvents are present the standard version should be used, regardless of the temperature.
M-16-HpH	High pH (high alkalinity) version for use where pH is consistently above pH 11.
M-16-HT-HpH	High Temperature version of the M-16-HpH.
M-16-PT100	Includes DIN standard PT100 RTD.
M-16-PT1000	Includes DIN standard PT1000 RTD.
M-16-3KTC	Includes standard 3000 ohm temperature compensator.
M-16-FLAT	Optimum use in extremely viscous liquids.
M-16-ISE	Refer to specific ion series datasheet.

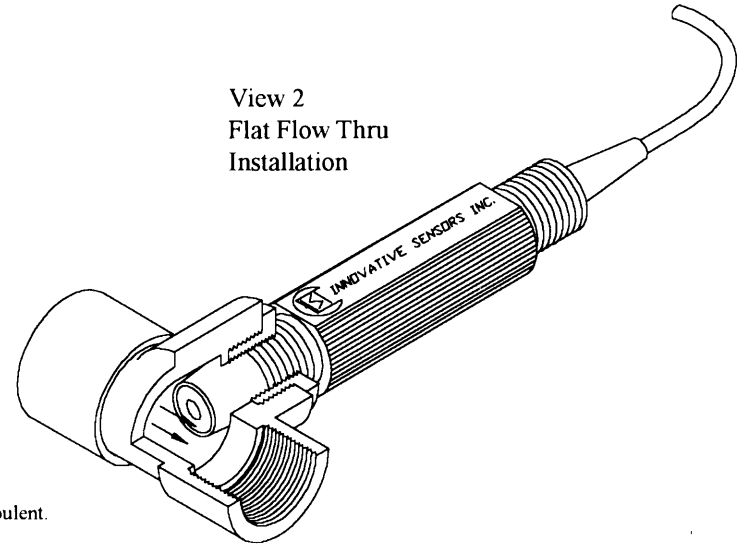
The Model 16 is supplied with a 15 foot TPE high temperature/ultra low noise cable and a BNC connector as standard.

Installation Guide

View 1
Flow Thru Installation



View 2
Flat Flow Thru
Installation



The sensing tip should be installed just inside the pipe where the flow is least turbulent.

* Patent No. 4,333,812
** Patent No. 4,128,468
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Ryton® is a registered trademark of Phillips 66 Co.
Kynar® is a registered trademark of Elf Autochem North America.

Mounting Tees are available in PVC, PVDF (Kynar®) and Stainless Steel