

## Summary

The Foxboro Model 876PH is a full featured transmitter for pH, ORP or ISE applications. It offers easy configurability, a rugged field-mounted enclosure for the most challenging industrial environments, and agency certifications for hazardous electrical areas. HART communications and a time saving HART Device Type Manager integrates with your plant asset management strategies.

## Business Value

Unlike other pH measurement solutions, Foxboro's offering provides the widest choice of sensing and configuration selections, resulting in the best possible match for your application. The result is long service life, quick and easy application set changes, and savings in both material and labor costs.

Foxboro

# Model 876PH Transmitter for pH, ORP and ISE Measurement

## FEATURES / BENEFITS

### Application Flexibility

Transmitter can be rapidly customized to specific application requirements. One basic transmitter handles all applications, simplifying inventory.

### Simultaneous pH and ORP Measurement

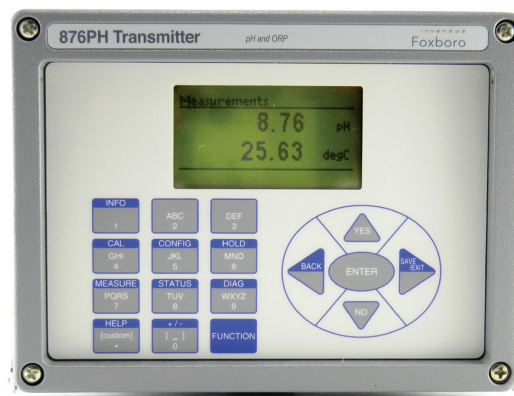
One transmitter handles two measurements, and outputs both measurements digitally via HART, greatly reducing cost and space requirements.

### Sensor and Transmitter Diagnostics

Sensor faults such as broken glass and coated reference are continuously checked. This feature allows maintenance to be better managed, reducing costs and ensuring asset availability.

### Save and Restore Configurations

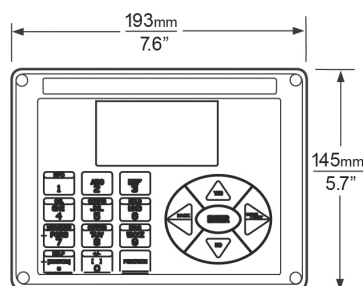
Up to two unique configuration profiles can be saved, facilitating a quick and easy change, saving operator time and cost.



## DESCRIPTION

The Foxboro® brand Model 876PH is a 2-wire loop powered intelligent transmitter that, when used with appropriate electrochemical sensors, provides measurement, local display, and transmission of pH, ORP (Oxidation-Reduction Potential), or ISE (Ion Selective Electrode) concentration. The transmitter outputs a HART digital signal and a 4 to 20 mA analog output.

For pH, ORP or ISE applications requiring a two-wire, loop powered transmitter, the InvenSys Foxboro brand Model 876PH with Foxboro sensors provides the most flexible solution for wide ranging application conditions.



Unlike other pH measurement solutions, Foxboro's offering provides the widest choice of sensing and configuration selections, resulting in the best possible match for your application. The result is long service life, quick and easy application set changes, and savings in both material and labor costs.

## SPECIFICATIONS

Accuracy:

Stability (After 6 Months):

NAMUR Compliance:

Electromagnetic Compatibility (EMC):

Measurement Range (Selectable):

Temperature Inputs:

Output Hold:

Auto Buffer Recognition:

History Log:

Environmental and Corrosion Resistance:

Electrical Safety Specifications:

+/- 0.009 pH with 3-wire, 1000 ohm RTD

+/- 0.009 pH with 3-wire, 1000 ohm RTD

NAMUR NE 43 for analog overrange and underrange

NAMUR NE 21 for interference immunity requirements

Complies with European EMC Directive 2004/108/EC by conforming to EN 61326-1:2006

-2 to +16 pH

-2000 to +2000 mV ORP

0 to 9999 ppm Ion Selective Electrode concentration

100 ohm platinum RTD, 2 or 3 wires

1000 ohm platinum RTD, 2 or 3 wires

3000 ohm Balco RTD, 2 wires

Hold OFF, Hold at PRESENT value, or Hold at MANUAL value

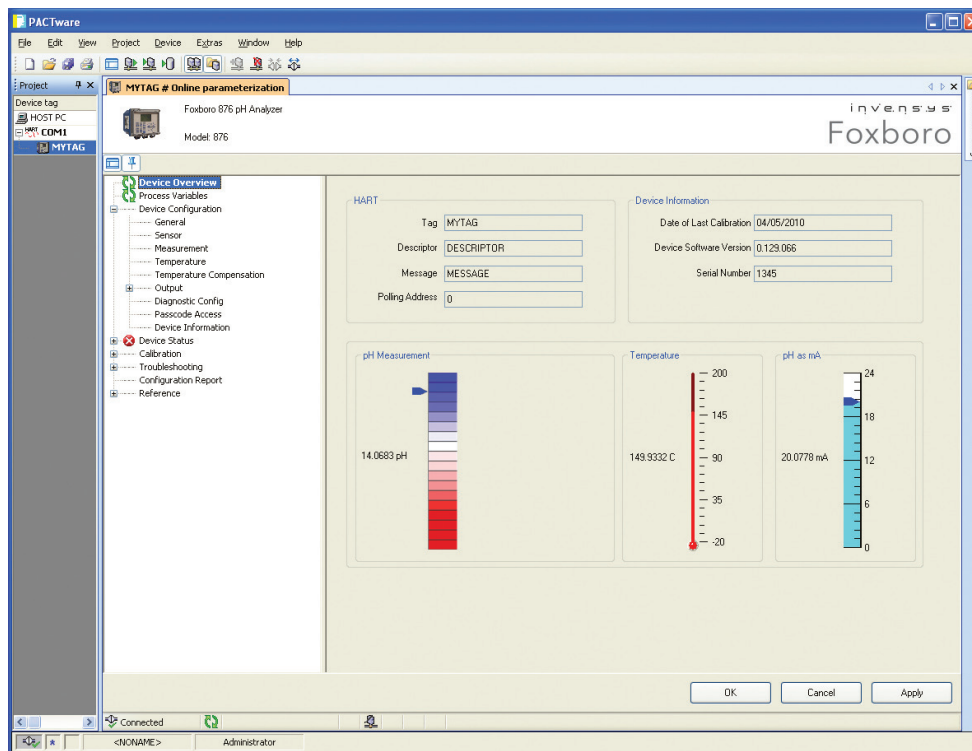
Six (6) tables of preprogrammed buffer values

100 most recent events stored in nonvolatile memory

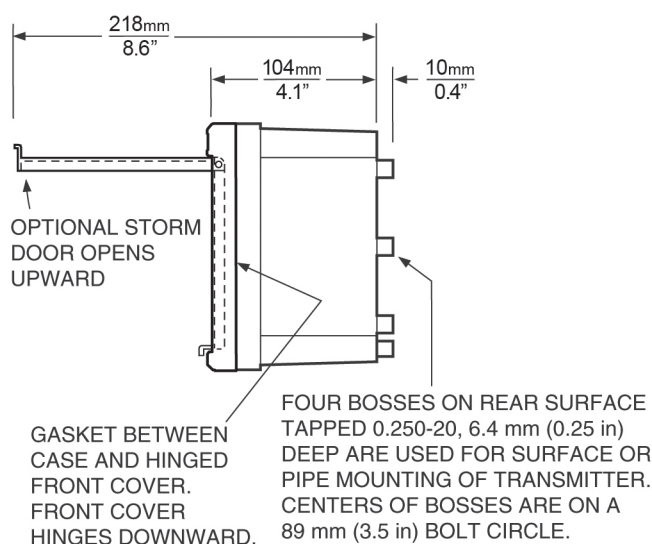
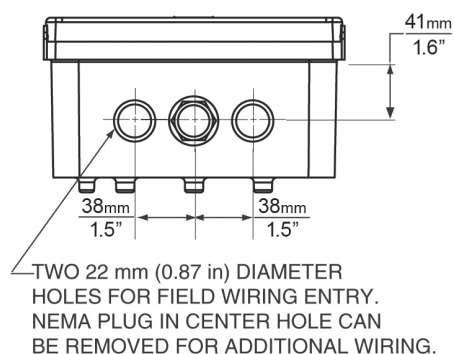
IP66 and NEMA 4X

FM approved for Zone 0 and Zone 2, Divisions 1 and 2

ATEX, CSA and IECEx pending



**HART DTM:** A time-saving HART Device Type Manager (DTM) simplifies configuration and troubleshooting, and provides trend graph capabilities.



## MODEL CODE

### Description

Intelligent Transmitter for pH, ORP and ISE Measurement. . . . .876PH

### Output Signal

Intelligent; Digital HART and 4 to 20 mA . . . . .-T

### Enclosure Mounting

Panel Mounting . . . . .W  
Surface Mounting. . . . .X  
Pipe Mounting (Horizontal or Vertical Pipe) . . . . .Y

### Electrical Safety (contact Foxboro for the current status of certifications)

ATEX intrinsically safe; II 1 G, Ex ia IIC, Zone 0. . . . .AA

ATEX energy limited for II 3 G, Ex nL IIC, Zone 2; and intrinsically safe for II 3 G, Ex ic IIC, Zone 2 . . . . .AN

CSA intrinsically safe; Class I, II, III, Division 1; and Ex ia IIC, Zone 0 . . . . .CA

CSA for Class I, II, III, Division 2; and energy limited for Ex nL IIC, Zone 2 . . . . .CN

FM intrinsically safe; Class I, II, III, Division 1; and AEx ia IIC, Zone 0. . . . .FA

FM nonincendive for Class I, II, III, Division 2; and energy limited for AEx nL IIC, Zone 2. . . . .FN

IECEx intrinsically safe; II 1 G, Ex ia IIC, Zone 0 . . . . .DA

IECEx energy limited II 3 G, Ex nL IIC, Zone 2; and intrinsically safe II 3 G, Ex ic IIC, Zone 2 . . . . .DN

No Certification . . . . .ZZ

### Optional Selections

Special per Engineering Order (a) . . . . .-1

Storm Door (b) . . . . .-7

Detailed Instruction Manual (c) . . . . .-M

(a) Provides ability to preconfigure the instrument with custom temperature compensation.

(b) Used to protect front panel controls, particularly in field mounting applications.

(c) A CD-ROM is shipped as standard with each transmitter.



Invensys Operations Management • 5601 Granite Parkway III, #1000, Plano, TX 75024 • Tel: (469) 365-6400 • Fax: (469) 365-6401 • [iom.invensys.com](http://iom.invensys.com)

Invensys, the Invensys logo, ArchestrA, Avantis, Eurotherm, Foxboro, IMServ, InFusion, SimSci-Esscor, Triconex, and Wonderware are trademarks of Invensys plc, its subsidiaries or affiliates. All other brands and product names may be the trademarks or service marks of their representative owners.

© 2010 Invensys Systems, Inc. All rights reserved. No part of the material protected by this copyright may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, broadcasting, or by any information storage and retrieval system, without permission in writing from Invensys Systems, Inc.

Rel. 05/10

PN FX-0107