Summary

The Foxboro Model 876EC is a full featured transmitter for electrodeless conductivity 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 electrodeless conductivity measurement solutions, the Foxboro 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.

Model 876EC Transmitter for Electrodeless Conductivity Measurement

DESCRIPTION

The Foxboro brand Model 876EC is a 2-wire loop powered intelligent transmitter that, when used with appropriate electrochemical sensors, provides measurement, local display and transmission of electrodeless conductivity or concentration. The transmitter outputs a HART digital signal and a 4 to 20 mA analog output.

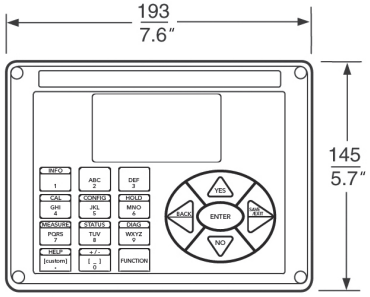
For electrodeless conductivity applications requiring a two-wire, loop powered transmitter, the Invensys Foxboro brand Model 876EC with Foxboro sensors provides the most flexible solution for wide ranging application conditions. Unlike other electrodeless conductivity measurement solutions, the Foxboro 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.

FEATURES & BENEFITS

Application Flexibility
Transmitter can be rapidly customized to specific application requirements, including conductivity and concentration. Conductivity measurements as low as single digit uS/cm can be resolved; however the transmitter can also measure as high as 2000 mS/cm. One basic transmitter handles all applications, simplifying inventory.

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

Customize and Employ up to Three Applications
Transmitter can be preconfigured for up to three different applications, each with its own display format, temperature compensation curve, chemical concentration curve (if applicable) and output configuration. Easy switching of applications saves significant time.

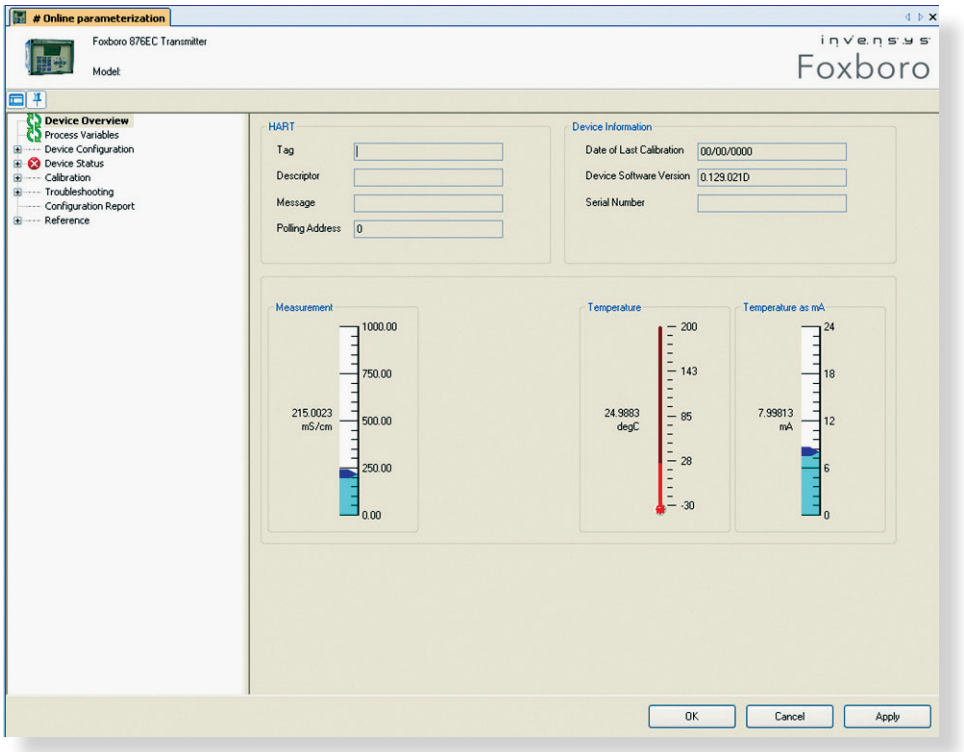


Auto-switching
Applications can be auto-switched using user-programmable switch limits. For example, the transmitter can switch from a wide range conductivity application to a very sensitive one without the need to recalibrate the system for the new range. This results in tremendous time savings for operators, and eliminates common sources of error in critical applications.

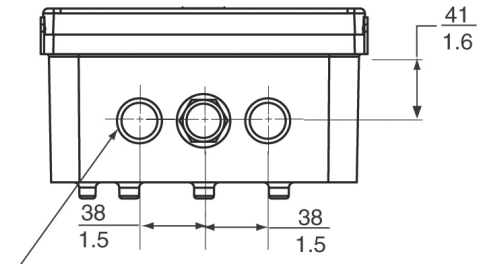
Foxboro®

SPECIFICATIONS

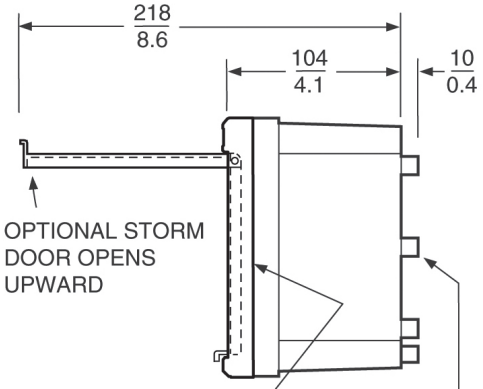
Accuracy:	±1% of absolute reading within specified range for sensor
Stability (After 6 Months):	Twice the absolute measurement accuracy value
NAMUR Compliance:	NAMUR NE 43 for analog overrange and underrange NAMUR NE 21 for interference immunity requirements
Electromagnetic Compatibility (EMC):	Complies with European EMC Directive 2004/108/EC by conforming to EN 61326-1:2006
Display Format (Selectable):	From 9.999 uS/cm to 9999 mS/cm Available display format depends on sensor type and units of measurement selected
Temperature Inputs:	100 ohm or 1000 ohm platinum RTD, 100 kohm thermistor
Temperature Compensation:	Absolute, NaCl, H2SO4, NaOH, linear, custom and several other standard types
Sensor Compatibility:	871EC, 871FT, EP307 and FT10 Series
Output Hold:	Hold OFF, Hold at PRESENT value, or Hold at MANUAL value
History Log:	100 most recent events stored in nonvolatile memory
Environmental and Corrosion Resistance:	IP66 and NEMA 4X
Electrical Safety Specifications:	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.



TWO 22 mm (0.87 in) DIAMETER HOLES FOR FIELD WIRING ENTRY. NEMA PLUG IN CENTER HOLE CAN BE REMOVED FOR ADDITIONAL WIRING.



GASKET BETWEEN CASE AND HINGED FRONT COVER. FRONT COVER HINGES DOWNWARD.

FOUR BOSSES ON REAR SURFACE TAPPED 0.250-20, 6.4 mm (0.25 in) DEEP ARE USED FOR SURFACE OR PIPE MOUNTING OF TRANSMITTER. CENTERS OF BOSSES ARE ON A 89 mm (3.5 in) BOLT CIRCLE.

MODEL CODE

Description	Model
Intelligent Transmitter for Electrodeless Conductivity Measurement	876EC
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 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; Class I, II, III, Division 2; and energy limited for AEx nC IIC, Zone 2	FN
IECEx intrinsically safe; II 1 G, Ex ia IIC, Zone 0	DA
IECEx intrinsically safe II 3 G, Ex ic IIC and Ex nL 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.

SENSORS AVAILABLE FOR THE 876EC TRANSMITTER:

FT10 Non-Invasive, Nonmetallic Flow-Through Sensor

871FT Sanitary and Industrial Flow-Through Sensors

871EC Insertion/Submersion Sensors

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

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