

# Foxboro Model 84 (Style B) Vortex Flowmeter



## Foxboro Model 84 (Style B) Vortex Flowmeter Description

The Foxboro® brand I/A Series® Model 84F (Style B) is part of a family of intelligent, high performance vortex flowmeters. It transmits a 4 to 20 mA or digital multidrop, and a pulse output signal, as applicable, using HART communication protocol for remote configuration, calibration, and monitoring.

The Model 84F (Style B) Flanged Body Vortex Flowmeter is ideal for applications within the upstream and downstream Oil & Gas industries, specifically on high pressure pipeline applications for both gases (and vapors) and liquids.

The Model 84F sets the industry standards whether the application requires accuracy for totalizing and batching; utility metering of fluids in the process industries; fuel, air, steam, or gas metering for the measurement of energy in any high use application; or stability and repeatability for process control.

An on-board LCD Indicator/Configurator is offered for local configuration and is equipped with patented DirectSense™ sensing technology, which incorporates the sensor directly into the flow stream to maximize the vortex pulse strength. The result is wider rangeability and greater noise immunity. The simple, direct sensor design offers unmatched sensitivity, vibration immunity and reliability backed by a lifetime sensor warranty.

## Summary

The Foxboro brand I/A Series Model 84F (Style B) is part of a family of intelligent, high performance vortex flowmeters. It offers high accuracy measurement of liquid, gas and steam flows with the widest rangeability in its class.

## Business Value

The Model 84F (Style B) vortex flowmeter has no moving parts and is extremely durable and reliable. This simple design ensures low initial operating and maintenance costs, addresses many applications within the upstream and downstream Oil & Gas industries, and offers a overall lower cost of ownership.

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## Features / Benefits

- No moving parts or bearings to wear, reducing maintenance and downtime
- High accuracy flowmeter for measurement of liquid, gas and steam flows
- Best in class accuracy:
  - $\pm 0.5\%$  of reading in liquids
  - $\pm 1.0\%$  of reading in gas and steam
- Flanged body designs:
  - 3/4" to 12" (DN15 to DN300) flanged body
- Widest rangeability in class
- Direct sensing of the vortex shedding
- Lower power/super performance over competitive vortex meters
- Greater material selection
- Increased flange and connection options

## Specifications

|                                        |                                                                                                                                                                                                                                                                                          |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Communication Protocol:</b>         | HART                                                                                                                                                                                                                                                                                     |
| <b>Outputs:</b>                        | Analog (4 to 20 mA) and digital, with or without pulse output                                                                                                                                                                                                                            |
| <b>Remote Communications:</b>          | Direct digital with HART Multidrop                                                                                                                                                                                                                                                       |
| <b>Configuration:</b>                  | Can be configured from the LCD indicator, HART communicator, or PC-based configurator                                                                                                                                                                                                    |
| <b>Accuracy:</b>                       | $\pm 0.5\%$ of reading in liquids, 1.0% of reading in gas and steam                                                                                                                                                                                                                      |
| <b>Internal Flow Totalizer:</b>        | Standard                                                                                                                                                                                                                                                                                 |
| <b>Sensor:</b>                         | Replaceable without meter recalibration required                                                                                                                                                                                                                                         |
| <b>EMC Compatibility:</b>              | Complies with International and European Union 61326 standards                                                                                                                                                                                                                           |
| <b>EMI and RFI:</b>                    | The flowmeter the EMI and RFI requirements for EN 61326-1                                                                                                                                                                                                                                |
| <b>Voltage Supply:</b>                 | 2-wire 24 V dc loop powered                                                                                                                                                                                                                                                              |
| <b>Power Supply:</b>                   | 10 to 42 V dc                                                                                                                                                                                                                                                                            |
| <b>Supply Current:</b>                 | 10 mA dc nominal                                                                                                                                                                                                                                                                         |
| <b>Mounting:</b>                       | Electronics to accommodate integral or remote mounting                                                                                                                                                                                                                                   |
| <b>Electronics Housing:</b>            | Enclosed in a NEMA 4X/IP66 rated housing sealed with O-rings for protection against moisture or other contaminants. Aluminum housing with epoxy finish. 84F (Style B)/W; Remote or integrally mounted to flowtube. With remote mount, interconnecting cable up to 50 ft (15 m) required. |
| <b>Electronics:</b>                    | Digital microprocessor based electronics with optional integral LCD with onboard configuration pushbuttons.                                                                                                                                                                              |
| <b>Body and Shedder Bar Materials:</b> | 316 stainless steel, Nickel alloy CX2MW (equivalent to Hastelloy-C®) or Duplex SS                                                                                                                                                                                                        |
| <b>Flowmeter Sizing:</b>               | Foxboro sizing tools with free web site access at <a href="http://www.FlowExpertPro.com">www.FlowExpertPro.com</a>                                                                                                                                                                       |
| <b>Electrical Classification:</b>      | FM, CSA, Class I Division 1, Class 1 Division 2, ATEX IECEx zone 1, ATEX IECEx zone 2 hazardous locations, and conform to applicable European Union directives.                                                                                                                          |
| <b>Model Code:</b>                     | Foxboro Brand I/A Series Models 84F Series Vortex Flowmeters.                                                                                                                                                                                                                            |

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