

# IMV25 Multivariable Transmitter with Modbus Communications



With Low Profile structure LP2

With Low Profile structure LP1

With Traditional structure

## IMV25 Multivariable Description

Now all the benefits of a flexible, economical multivariable transmitter are available in a model offering the popular Modbus® digital communications protocol. The Foxboro IMV25 multivariable transmitter also provides a new process interface structure, extended measurement ranges and PC-based software for easy configuration.

This instrument's design enables users to replace separate static pressure, differential pressure and temperature transmitters with a single unit that digitally communicates all three measurements. It saves costs for purchase, installation, wiring and setup.

Modbus communications capability allows remote monitoring, configuration and calibration. Additionally, a configurator software package (PCMM) provides convenient transmitter setup. Process connection design flexibility is provided by a choice of Traditional or Low Profile structures. Two Low Profile structures are provided to facilitate both direct manifold mounting and bracket mounting.

Low Profile structures have compact sensor bodies with process connections facing downward and are ideal for mounting above horizontal pipelines. They also permit easy installation on mountings designed for third-party Coplanar™ devices.

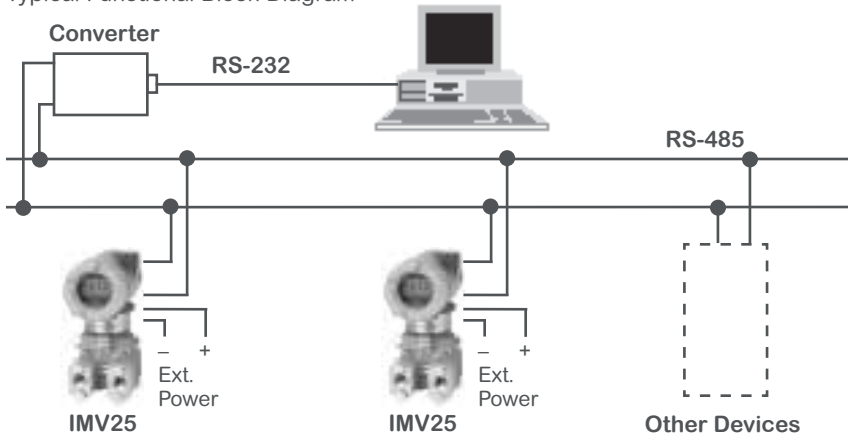
The intelligent Foxboro IMV25 multivariable transmitter supplies precise and reliable measurement for many applications — including natural gas flow rate and other applications that rely on accurate measurement of pressure, differential pressure, and process temperature.

## Features/Benefits

- Modbus digital communications protocol over a 2-wire RS-485 multidrop serial connection
- Easy interface to RTUs and other host systems using Modbus communications
- Economy and flexibility with one transmitter, three measurements
- Replacement for separate static pressure, differential pressure, temperature transmitters
- Cost savings versus separate purchases, installation, wiring, setup
- Traditional or Low Profile process interface structure reduces installation costs
- Extended measurement ranges
- PC-based configuration software
- Ideal for applications such as natural gas flow rate measurement
- Also available with HART/4-20mA or FoxCom/4-20mA electronics versions

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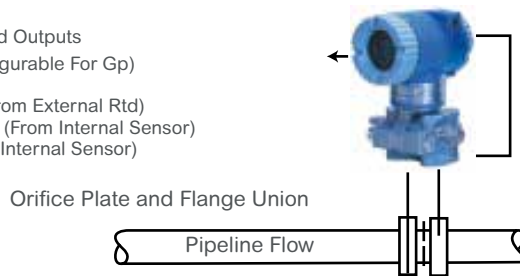
Typical Functional Block Diagram



Typical Flow Rate Measurement Application

Measured And Transmitted Outputs

- Absolute Pressure (Configurable For Gp)
- Differential Pressure
- Process Temperature (From External Rtd)
- Sensor Temperature Rtd (From Internal Sensor)
- Electronics Temp. (From Internal Sensor)



## Specifications

Ranges (available combinations of DP and AP)

Sensor Code	DP (a)		AP (b)	
	in H <sub>2</sub> O	kPa	psia	MPaa
LG	0-0.5 to 0-10	0-0.12 to 0-2.5	0-10 to 0-500	0-0.07 to 0-3.4
AG	0-3 to 0-30	0-0.75 to 0-7.5	0-10 to 0-500	0-0.07 to 0-3.4
BD	0-2 to 0-200	0-0.5 to 0-50	0-3 to 0-300	0-0.02 to 0-2.1
BE	0-2 to 0-200	0-0.5 to 0-50	0-30 to 0-1500	0-0.21 to 0-10
GG	0-2 to 0-400	0-0.5 to 0-100	0-10 to 0-500	0-0.07 to 0-3.4
GE	0-2 to 0-400	0-0.5 to 0-100	0-30 to 0-1500	0-0.21 to 0-10
CD	0-10 to 0-840	0-2.5 to 0-210	0-3 to 0-300	0-0.02 to 0-2.1
CE	0-10 to 0-840	0-2.5 to 0-210	0-30 to 0-1500	0-0.21 to 0-10

(a) Elevated and suppressed zero ranges are also acceptable — refer to product specification sheet for details.

(b) Higher pressure ranges available on request.

### Supply Voltage

9 to 30 V dc.

### Output Signal and Configuration

Digital output. Configurable using the Host Processor, Model PCMM Configurator, or optional LCD Indicator with on-board pushbuttons.

### Process Cover and Connector Material

316 ss or Hastelloy C

### Sensor Material

316 L ss or Hastelloy C

### Sensor Fill Fluids

Silicone oil or Fluorinert oil

### Electronics Enclosure

Epoxy-coated aluminum or 316 ss

Weatherproof per IEC IP66 and NEMA 4X

Explosionproof and Flameproof certifications

### Process Temperature Measurement and Limits

Measurement

DIN/IEC, 2-, 3-, or 4-wire, 100 ohm, Platinum Resistance-Temperature-Detector (RTD)

Range Limits

-200 and +850°C (-328 and +1562°F)

### Exceptionally High Performance

- Accuracy to ±0.05% of span
- Long term stability is excellent as drift is less than ±0.05% of URL per year over a 5-year period for both DP and P measurements
- Minimized static pressure effect on DP by using pressure to compensate the DP measurement
- Excellent ambient temperature effect compensation due to characterization and microprocessor-based compensation

### Product Specification Sheets

IMV25 (Modbus) Transmitter: PSS 2A-1C15D

PCMM Configurator: PSS 2A-1Z3H