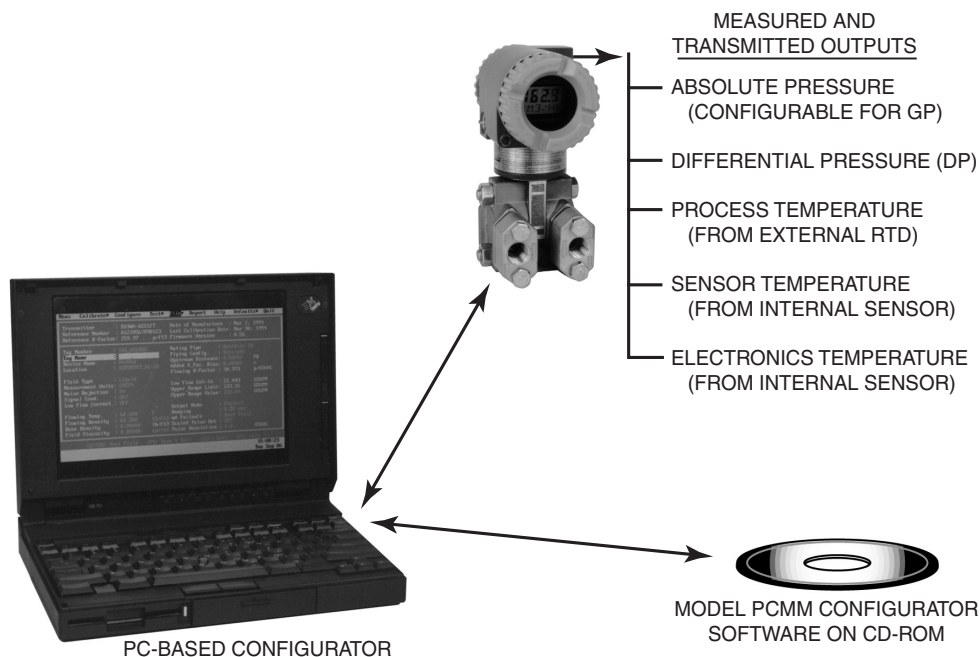


**Model PCMM Configurator
for use with I/A Series® IMV25 Multivariable Transmitter
with Modbus® Communication Protocol**



The Model PCMM Configurator is a Windows-based software package for use with a Model IMV25 Multivariable Transmitter using Modbus communication protocol. It displays measurements, and has full configuration and calibration capability. An RS-232 to RS-485 converter or a USB Port to RS-485 converter is required for communication with the transmitter.

FEATURES

- ▶ Windows-based PC software.
- ▶ Provides full configuration capability of the primary (DP), secondary (AP), and tertiary (process temperature) variables.
- ▶ Displays measurements of:
 - Differential pressure (DP)
 - Absolute pressure (AP)
 - Process temperature
- ▶ Performs calibration functions, and the upload and download of database parameters.
- ▶ Eighteen static and differential pressure units, and four temperature units selectable for configuration and calibration.
- ▶ Numerous easy-to-use menu-driven screens provided to simplify operation of the IMV25 Transmitter using the Model PCMM Configurator.

GENERAL DESCRIPTION

The Model PCMM Configurator is a software package providing remote bidirectional communication with a Model IMV25 Multivariable Transmitter with Modbus communication protocol. The Configurator reads a file of current transmitter configuration and calibration information, and allows user input of specific data unique to a new desired application. Features of the Configurator include:

- ▶ Configure RS-485 serial communication parameters and Modbus station address
- ▶ Read device data for DP, AP, and process temperature from the RTD
- ▶ Configure the process variable parameters
- ▶ Calibrate the transmitter, if necessary
- ▶ Full screen device database display
- ▶ Enhanced device diagnostic capability
- ▶ Communication that does not affect output when reading measurements
- ▶ Configure transmitter indicator to display DP, AP, or process temperature with automatic scrolling of any combination of these measurements (display time also configurable).

The software package utilizes an external converter that allows operation with a Windows-compatible PC with a serial or USB communication port. Communication with the transmitter uses proven frequency shift keying (FSK) techniques that do not affect the device output signal.

The Model PCMM is not configurable for multidrop communication and must therefore be connected to only one transmitter at a time. See PSS 2A-1C15 D for IMV25 Transmitter description and specifications. See Figure 1 for a typical functional block diagram.

MINIMUM SYSTEM REQUIREMENTS

- ▶ Operating System:
Windows 98, Windows ME, Windows NT 4.0, Windows 2000, or Windows XP
- ▶ CPU:
Pentium 130 MHz or better; must meet minimum requirements for OS installed
- ▶ Video:
800 by 600 resolution minimum;
1024 by 768 resolution recommended
- ▶ Free RAM Required:
32 MB minimum; 64 MB recommended;
Must meet minimum requirements for OS installed
- ▶ Free Hard Drive Space Required:
5 MB

Figure 1. Typical Functional Block Diagram

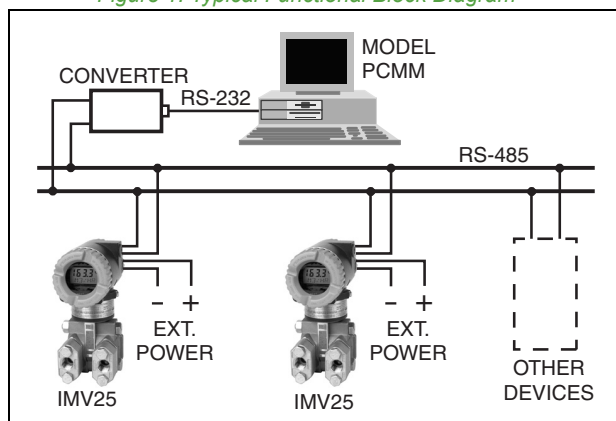


Table 1. Measurements

Parameter	Measurement	Configurable
Primary Variable	DP	YES
Secondary Variable	AP	YES
Tertiary Variable	Process Temp.	YES
Sensor Temperature	°C	NO
Electronics Temperature	°C	NO

Table 2. Available Units For Calibrated Range

Pressure					Temp.
inH ₂ O	mH ₂ O	Pa	mbar	psi	C
ftH ₂ O	inHg	kPa	bar	atm	F
mmH ₂ O	mmHg	Mpa	g/cm ²		R
cmH ₂ O	cmHg	torr	kg/cm ²		K

CONFIGURATOR MENUS

- ▶ File Menu — contains the Exit command that closes the program (PCMM is a transmitter configurator and only saves to the transmitter).
- ▶ Configuration Menu — contains the commands for editing the configuration of the IMV25 Transmitter.
- ▶ Maintenance Menu — includes Calibration, Status/Information, Diagnostics, and Communications screens.
- ▶ Options Menu — contains commands for editing the communication settings.
- ▶ Help Menu — provides information about the Configurator.

Refer to the Instruction Manual (MI 020-384) for details relative to Model PCMM Configurator menus. Also see Figures 2, 3, 4, and 5 for typical configurator screens.

Figure 2. Transmitter Communication Settings -Serial Tab

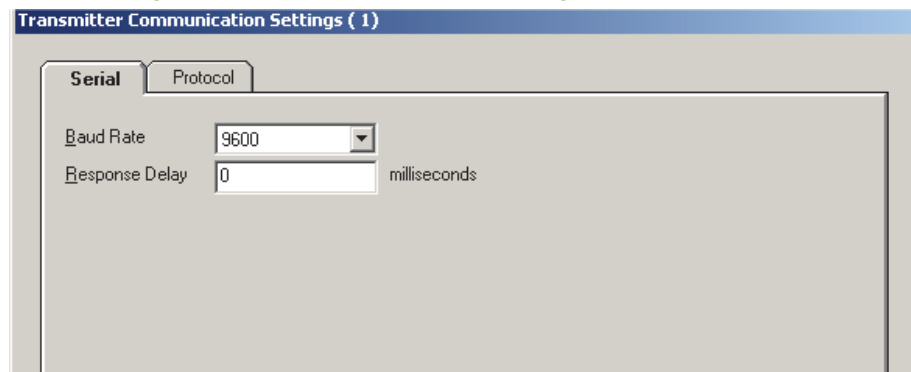
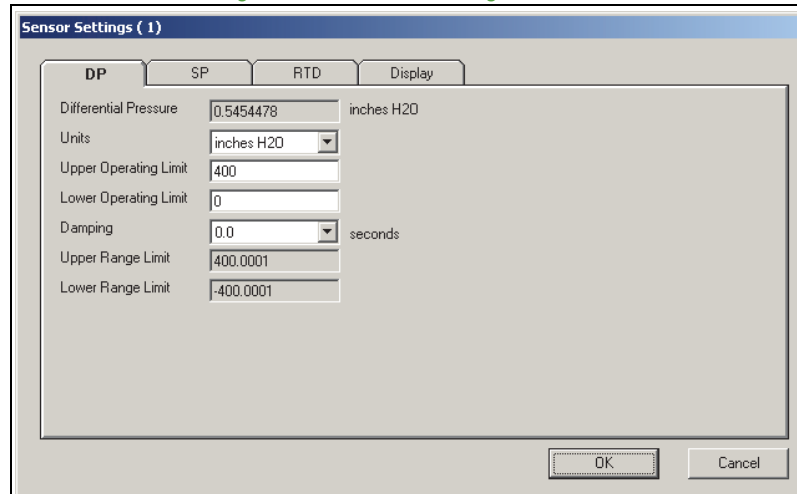


Figure 3. DP Sensor Settings - DP Tab

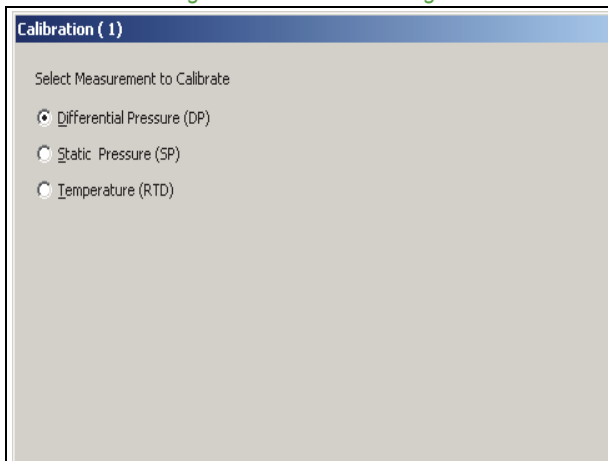


The 'Sensor Settings (1)' dialog box has four tabs: DP, SP, RTD, and Display. The DP tab is active. It contains the following fields:

Differential Pressure	0.5454478	inches H2O
Units	inches H2O	
Upper Operating Limit	400	
Lower Operating Limit	0	
Damping	0.0	seconds
Upper Range Limit	400.0001	
Lower Range Limit	-400.0001	

Buttons: OK, Cancel

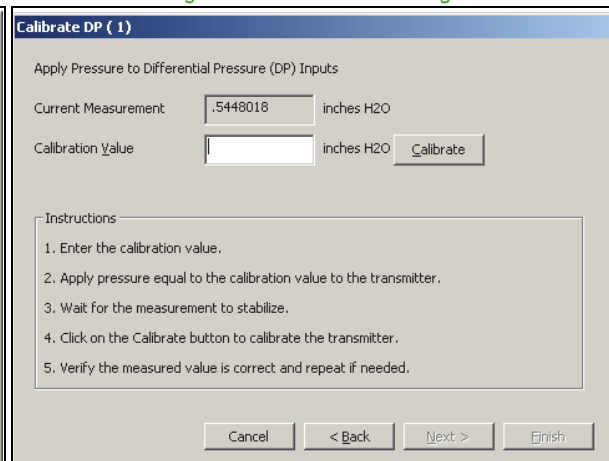
Figure 4. Calibration Dialog



The 'Calibration (1)' dialog box has a section titled 'Select Measurement to Calibrate' with three radio button options:

- Differential Pressure (DP)
- Static Pressure (SP)
- Temperature (RTD)

Figure 5. Calibrate DP Dialog



The 'Calibrate DP (1)' dialog box has a section titled 'Apply Pressure to Differential Pressure (DP) Inputs' with the following fields:

Current Measurement	.5448018	inches H2O
Calibration Value		inches H2O

Buttons: Calibrate, Cancel, < Back, Next >, Finish

Instructions:

1. Enter the calibration value.
2. Apply pressure equal to the calibration value to the transmitter.
3. Wait for the measurement to stabilize.
4. Click on the Calibrate button to calibrate the transmitter.
5. Verify the measured value is correct and repeat if needed.

MODEL CODE

<u>Description</u>	Model
PCMM Configurator for use with IMV25-M (Modbus) Multivariable Transmitter (a)	PCMM
Software Language English	-AE
Converter Selection (b) RS-232 to RS-485 Converter for Serial Port USB Port to RS-485 Converter None - User Supplied	2 3 N
Optional Selection Power Supply (c)	-C

- a. The configurator program is supplied on CD.
- b. Resale Converter manufactured by:
 B&B Electronics
 Ottawa, IL, USA
 Telephone: 815-433-5100
 Web Site: www.bb-elec.com
 Serial Port Converter:
 B&B Model 485SD9TB
 USB Port Converter:
 B&B Model USOTL4; complete with cable and diskette with converter driver.
- c. Power supply for transmitter is 120 V ac, 60 Hz to 24 V dc converter; for use during calibration and configuration.

NOTES

ORDERING INSTRUCTIONS

1. Model Number
2. Tag and Application

OTHER FOXBORO PRODUCTS

The Foxboro product lines offer a broad range of measurement and instrument products, including solutions for pressure, flow, analytical, temperature, positioning, controlling, and recording. For a list of these offerings, visit our web site at:

www.fielddevices.foxboro.com