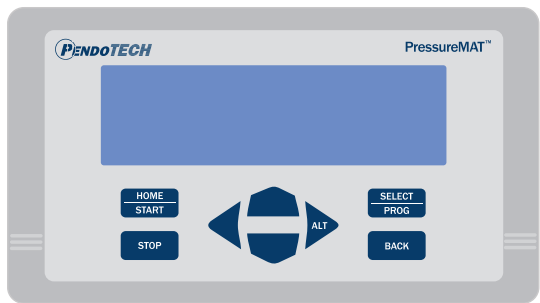# PressureMAT Plus™ System

- For PendoTECH Single Use Pressure Sensors & Flow Meters
- One model includes 4-20mA input function to read an external transmitter
- Perfect for use with filtration and chromatography processes
- Ability to measure total flow volume via the flow meter
- Data output capability to a PC into PendoTECH Data Aquisition Software or control system
- User configurable min/max alarm set-points with alarm output signal
- Panel mount option with NEMA4X Front Panel

The PressureMAT PLUS is a monitor, alarm, and transmitter system designed for use with the PendoTECH Single Use Pressure Sensors along with other process sensors. It is comprised of the control system box with user interface and the connectors on the back panel where input and output components can be interfaced. To measure flow rate, the system has a precise digital pulse accumulator and the measured pulses/second from the flow meter are converted to flow rate via the user entered pulse constant (pulses/mL). It also has the ability to measure total flow volume in addition to flow rate. The model PMAT2P input can be used interface other sensors such as temperature, UV, conductivity, pH and turbidity.

Alarm - minimum and maximum values are entered on the key pad and if the process value goes below the minimum setting or above the maximum setting, the system will go into alarm state.

Monitor - the process pressures and flow rate (or total flow) are displayed on the LCD display. There is a zero tare to atmospheric pressure for the pressure sensors and zero reset of the flow meter total via the flow meter menu. For the 4-20 mA input, the corresponding external transmitter min/max values and units of measure are entered to the unit. The remote transmitter value are displayed on the PMAT and also maybe recorded to a PC with other data.

Transmitter - the transmitter function delivers a 4-20 milliamp output signal corresponding to the pressure and flow reading on the display (there is no 4-20 mA output for the 4-20 mA input on the PMAT2P). The RS-232 data output to a PC is available for data collection to the PMAT Data Acquisition Software.

Applications - there are numerous applications in biopharmaceutical production processes where the system can be used to monitor pressure, including filtration and chromatography processes.

PressureMat 3PLUS™ - for Monitoring 3 Pressure Sensors and a Flow Meter

Rotary Flowmeter

Coriolis Flowmeter

Connect 1 flow meter & 3 pressure sensors

4-20 mA → **Control System**

RS-232 → **PC**
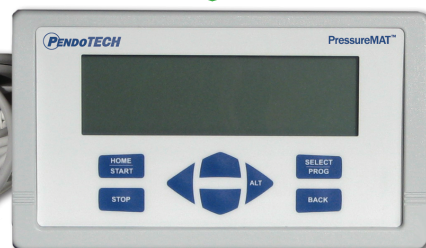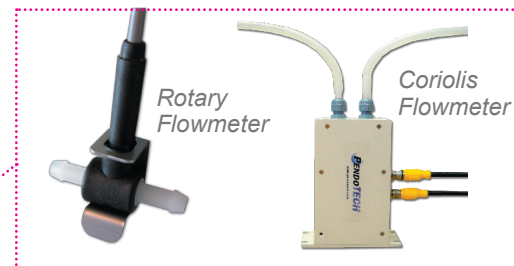
Relay → **Pump, valve or alarm**

Connect 1 flow meter, 2 pressure sensors & 1 External Transmitter

PressureMat 2PLUS™ - for Monitoring 2 Pressure Sensors, Flow Meter & 1 External Transmitter
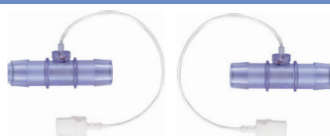
PressureMAT Plus™ System Includes:

- Control System
- Cables for connection of pressure sensors to the control system
- Power Supply
- Connectors for field wiring/flow meter
- Mounting Screws
- CD with User Guide
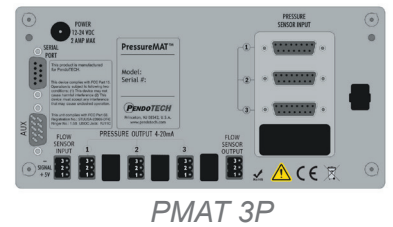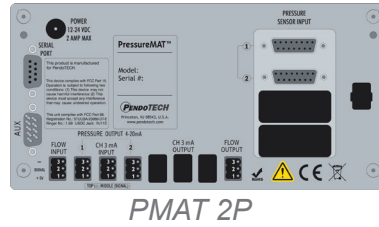
NOTE: Flow Meter NOT included - purchased separately

PMAT 2P

PMAT 3P

System Specifications

System Component	Specifications
Enclosure	WxHxD: 7.86 x 4.47 x 2.25" (19.96 x 11.35 x 5.72 cm) Material: ABS Plastic Approximate weight: 1.3 lbs (0.65 kg) NEMA 4X front panel; panel and wall mount optional
Keypad	8 button keypad with LEXAN® overlay
Display	8 line LCD backlit blue, pressure displayed as X.XX psi. X.XX bar, flow and external transmitter with 2 fixed decimals
Power Inlet	2.5 mm Circular Power Jack (center post positive) 12-24 Volts DC (15 VDC supply included which can be plugged into 100-250 VAC) 4 Watts (powered by included wall supply)
Pressure Sensor Inputs	Range of -7.0 to 75.0 psi Connector: DA15 Configured for PendoTECH Single Use Pressure Sensors™
Flow Sensor Input	5V Pulse/Frequency input with programmable pulse constant, Connector: Screw Terminal
Relay Output(s) [up to 4 outputs available as a combination of Relay and Analog outputs]	Specifications fo relay used for the alarm output: • Normally CLOSED or OPEN via wiring • 28 Volt AC/DC Maximum • 1 amp closure, 2 amps maximum current • 20 mS max turn on/off time • Screw terminal connector
Analog Outputs	Screw terminal connector 4-20 mA Range: -10 to 75 psi (0.689 bar to 5.171 bar) Accuracy: 0.1% of full scale Sourcing with Maximum Load: 400 Ohms Load Impedence: Zero Ohm minimum resistance, 20 mA maximum output (even if pressure exceeds 5.17 bar)
RS232 Output	Data output to a PC at frequency up to 1/sec.; Optional Internal Data Logger: Part # PDKTP-DLOG
Regulatory Compliances	CE Mark EN61326-1; FCC Part 15 Class B verified, FCC Part 68 5TUUSA-23969-DT-E

Ordering Information

Model Number	Number of Pressure Inputs	Number of Outputs
PMAT 2P	2 pressure sensor inputs plus 1 flowmeter input plus 4-20mA input	4 Analog Outputs
PMAT 2A	2 pressure sensor inputs plus 2 4-20mA inputs	4 Analog Outputs
PMAT 2F	2 pressure sensor inputs plus 2 flowmeter inputs	4 Analog Outputs
PMAT 3P	3 pressure sensor inputs plus 1 flowmeter input	4 Analog Outputs
PMAT 3A	3 pressure sensor inputs plus 1 4-20mA input	4 Analog Outputs
PMATF3P	3 pressure sensor inputs with hardware filter & 1 flowmeter input	4 Analog Outputs

PMAT-STND	PressureMAT Benchtop Stand
PMAT-GUI	Data Acquisition and Trending Software for PressureMAT
PDKTP-RS232U	RS232 Cable for PressureMAT data output (6 feet / 2M) for USB input to PC
PDKTP-DLOG	PressureMAT Internal Data Logger
PMAT-WALL4	PressureMAT water-tight wall mount box with water-tight cable connections for PMAT4

For warranty information see our website at http://www.pendotech.com/warranty

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