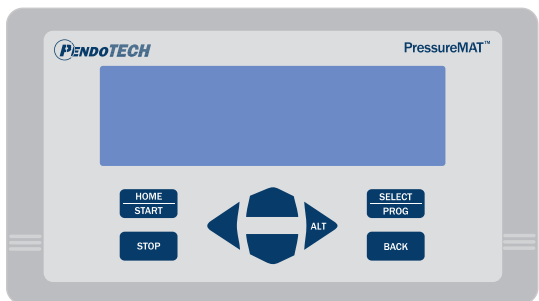




PressureMAT® Plus Monitor



- For PendoTECH® Single Use Pressure Sensors™ & Flow Meters
- Models available with a 4-20mA analog 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 Acquisition Software or control system
- User configurable min/max alarm set-points with alarm output signal
- Panel mount option with IP66/NEMA4X Front Panel
- Range of regulatory approvals (CE, UL)

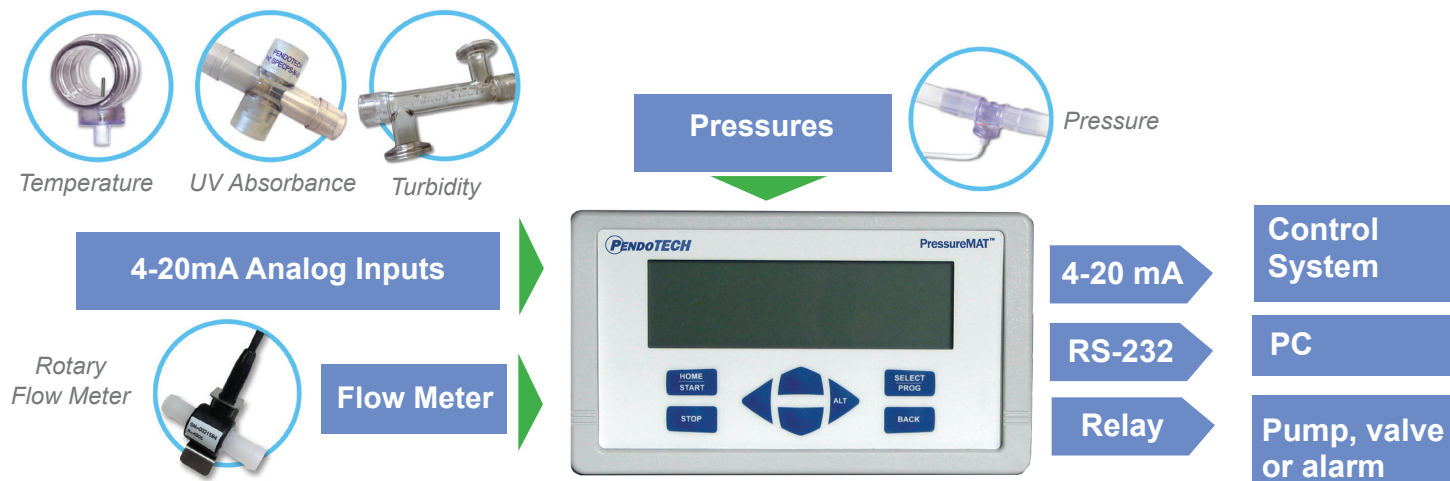
The PressureMAT PLUS is a monitor, alarm, and transmitter system designed for use with the PendoTECH Single Use Pressure Sensors along with other process sensors. It is comprised of the monitor with user interface, and connectors on the back panel where input and output components can be interfaced. To measure flow rate, the models with the flow meter input have 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 models with an analog input can be used to interface other sensors with a 4-20 mA output, 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 values including pressures, flow rate (or total flow), and analog inputs are displayed on the LCD. 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 values are displayed on the PMAT and also maybe recorded to a PC with other system data.

Transmitter - the transmitter function delivers a 4-20 milliamp output signal corresponding to the process values on the display. The RS-232 data output to a PC is available for data collection to the PMAT Data Acquisition Software (PMATP-GUI).

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



Each PressureMAT® Plus Model Includes:

- PressureMAT Plus Unit
- Cables for connection of pressure sensors to the control system
- Power Supply with blades for country
- Mounting Screws
- User Guide

NOTE:

**Connectors for field wiring/flow meter.
Flow meter NOT included - purchased separately**

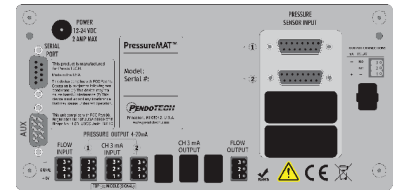


Illustration Back Panel:
PMAT2P

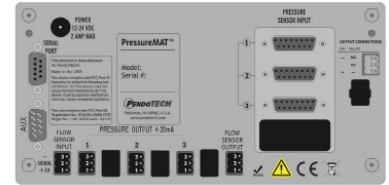


Illustration Back Panel:
PMAT3P

System Specifications

System Component	Specifications
Enclosure	WxHxD: 7.86inch x 4.47inch x 2.25inch (19.96 x 11.35 x 5.72cm) Approximate weight: 1.3 lbs (0.65 kg), Material: ABS Plastic IP66 / 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.X psi/X.XX bar; flow and external transmitter with 2 fixed decimals
Power Inlet	2.5 mm Circular Power Jack (center post positive) or D9 12-24 volts DC, 4 watts (powered by wall supply)
Pressure Sensor Inputs	Range of -11.5 to 75.0 psi; (-0.793 bar to 5.171 bar) Configured for PendoTECH Single Use Pressure Sensors™, Connector: DA15 (includes 12 ft reusable cables)
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 for relay used for the alarm output: <ul style="list-style-type: none"> • Normally CLOSED or OPEN via wiring • 1 amp closure, 2 amps maximum current • Screw terminal connector • 28 Volt AC/DC Maximum • 20 mS max turn on/off time
Analog Output(s) [4-20 mA] [up to 4 outputs available as a combination of Relay and 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 Impedance: Zero Ohm minimum resistance, 22 mA maximum output
Analog Inputs	Screw terminal connector 4-20mA range +/- 0.01% of full scale; 100 ohms
RS232 Output	Data output to a PC at frequency up to 2/sec.; Optional Internal Data Logger: Part# PDKTP-DLOG
Regulatory Compliances	CE Mark EN61326-1:2013; EN61010-1:2010; EN/ISO13489-1:2009; EN60204-1:2009 FCC Part 15 Class B verified FCC Part 68 5TUUSA-23969-DT-E RoHS and REACH Compliant UL Listed

Accessories

A variety of water-tight enclosures available:



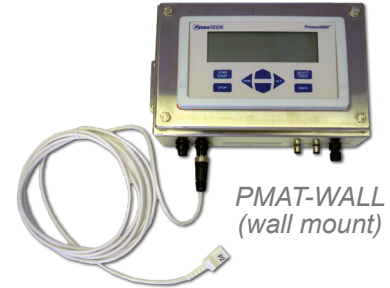
PMAT-WALL-2
(wall mount for pressure and conductivity monitor)



PMAT-BNCH-IP-L
(benchtop model)



PMAT-ULT4X-W1
(window kit)



PMAT-WALL
(wall mount)



PMAT-STND



PMAT-STND-MFLS:
PressureMAT stand to mount on top of Masterflex L/S Pump



PMAT
Cart



PDKT-650-950: PressureChecker™ Pressure Sensor and Monitor Verification Tool



PDKT-650-298CVR: Pressure sensor cable dust cover / zero simulator for PressureMAT



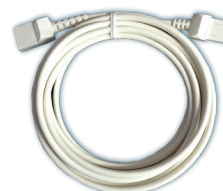
PMAT-TCA: Test cable assembly for PressureMAT accuracy check



Pneumatic pinch valve with signal from PressureMAT and power supplied via connector on rear for remote control of valve



Electric pinch valve with signal from PressureMAT and power supplied via connector on rear for remote control of valve



PMAT-EXT-12F: Pressure Sensor Extension Cable (12ft)






Universal power supply included

Ordering Information

MODEL NUMBER	NUMBER OF INPUTS	NUMBER OF OUTPUTS
PMAT2P	2 pressure sensor inputs plus 1 flow meter input plus 4-20mA input	4 Analog Outputs
PMAT2A	2 pressure sensor inputs plus 2 4-20mA inputs	4 Analog Outputs
PMAT2F	2 pressure sensor inputs plus 2 flow meter inputs	4 Analog Outputs
PMAT3P	3 pressure sensor inputs plus 1 flow meter input	4 Analog Outputs
PMAT3A	3 pressure sensor inputs plus 1 4-20mA input	4 Analog Outputs

Accessories for Ingress Ratings

INGRESS RATING	EXAMPLE	NOTES
NEMA4X/IP66 (Front panel only)		Every PMAT model has a NEMA4X/IP66 rated front panel
NEMA4X/IP66 (When panel mounted)		Every PMAT model is NEMA4X/IP66 rated when panel-mounted with panel mounting kit (PMAT-PANEL) and additional silicone sealant (PDKT-SIL-SEAL1)
UL Type 4X		Every PMAT model is rated UL type 4X when mounted with a specific window kit accessory (PMAT-ULT4X-W1)

SOFTWARE

PMATP-GUI	Data Acquisition and Trending Software for PressureMAT and CMONT with 2 USB/serial cables to connect to a PC
PDKTP-DLOG	PressureMAT Internal Data Logger

STANDS/CART

PMAT-STND	PressureMAT Benchtop Stand for all models
PMAT-STND-MFLS	PressureMAT stand to mount on top of Masterflex L/S Pump
PMAT-STND-WM5	PressureMAT stand to mount on top of Watson Marlow 500 Series (green) Pump
PMAT-CART4	PressureMAT water-tight box (PMAT NOT included) with water-tight cable connections and cart with power strip & filter holder with optional touch-screen PC with Data Acq Software

WATER TIGHT ENCLOSURES

PMAT-WALL	PressureMAT water-tight wall mount box with water-tight cable connections
PMAT-BNCH-IP-L	PressureMAT water-tight bench top stainless steel box with water-tight cable connections for PressureMAT on left side
PMAT-WALL2	PressureMAT water-tight wall mount box with water-tight cable connections - holds 2 PressureMATs
PMAT-WALL-S	PressureMAT-S single channel water-tight wall mount box with water-tight cable connections for PressureMAT
PMAT-BNCH-COMBO	PressureMAT, CMONT with UV Optional water-tight bench top stainless steel box with water-tight cable connections on left side
PMAT-ULT4X-W1	PressureMAT UL Type 4X Deep-Hinged window kit with a viewing area of 8inch X 9inch (UL®)
PDKT-SIL-SEAL1	PressureMAT Silicone Sealant cartridge, clear, 10.1oz for panel mount installation

CABLES

PDKTP-RS232U	RS232 Cable for PressureMAT data output (6ft/2M) for USB input to PC
PMAT-650-298	Cable adaptor with D15 for Single Use Pressure Sensor for PressureMAT (12ft/4M)
PMAT-650-298-24F	Cable Adapter with D15 for Single Use Pressure Sensor for PressureMAT(24ft/7M)
PMAT-EXT-12F	Pressure Sensor Extension Cable (12ft)
PMAT-WALL-RS232USB	RS232 Serial to USB adapter, for PressureMAT Wall/ Benchtop box, 7ft
PMAT-PWR-WALL-24VDC	PMAT Enclosure Box replacement power supply, 12VDC w/ global plug blades



PUMP START/STOP CABLES

PMAT-CB-MF9B	Interface cable for Masterflex LS pump- D9 connector to PressureMAT to start/stop function, 6ft (2meters)
PMAT-CB-MF15	Interface cable for Masterflex LS pump- D15 connector to PressureMAT to start/stop function, 6ft (2meters)
PMAT-CB-MF18	Interface cable for Masterflex IP pump- 18 pin connector to PressureMAT to start/stop function, 6ft (2meters)
PMAT-CB-MF25	Interface cable for Masterflex LS pump- D25 connector to PressureMAT to start/stop function, 6ft (2meters)
PMAT-CB-MF31	Interface cable for Masterflex IP pump- 31 pin connector to PressureMAT to start/stop function, 6ft (2meters)
PMAT-CB-WM15	Interface cable for Watson Marlow 120U/DV pump- D15 connector to PressureMAT to start/stop function, 6ft (2meters) (Also works on the 101 model)
PMAT-CB-WM25	Interface Cable for Watson Marlow pump D25 connector to PressureMAT to start/stop function, 6ft (2meters)
PMAT-CB-Q1200HT	Interface cable for QuattroFlow Q1200HT to PMAT start/stop function, 6 feet (2meters)

ACCESSORIES

PDKT-650-950	Pressure Checker pressure sensor and monitor verification tool, psi
PDKT-650-950B	Pressure Checker pressure sensor and monitor verification tool, millibar
PMAT-TCA	Test cable assembly for PressureMAT accuracy check
PDKT-650-298CVR	Pressure sensor cable dust cover / zero simulator for PressureMAT
PMAT-IQ/OQ	Installation qualification/operation qualification protocol documentation
PMAT-PANEL-2-C	PressureMAT Panel mount kit - 2 gaskets, 4 mounting brackets, 2 sensor cables, and input connectors for sensors and power
PMAT-PANEL-3-C	PressureMAT Panel mount kit - 2 gaskets, 4 mounting brackets, 3 sensor cables, and input connectors for sensors and power
PMAT-PANEL-4-C	PressureMAT Panel mount kit - 2 gaskets, 4 mounting brackets, 4 sensor cables, and input connectors for sensors and power
PMAT-PANEL-2-U	PMAT2 Panel mount kit UPGRADE - 2 gaskets, 4 mounting brackets, 2 sensor cables (in replacement of standard cable), and input connectors for sensors and power
PMAT-PANEL-3-U	PMAT3 Panel mount kit UPGRADE - 2 gaskets, 4 mounting brackets, 3 sensor cables (in replacement of standard cable), and input connectors for sensors and power
PMAT-PANEL-4-U	PMAT4 Panel mount kit UPGRADE - 2 gaskets, 4 mounting brackets, 4 sensor cables (in replacement of standard cable), and input connectors for sensors and power
PMAT-PWR	PendoTECH PressureMAT Power supply with circular barrel connector, 12VDC, 1amp with plugs blades for destination
PDKT-PVE2-PMAT-S	Pinch Valve Pair- 24VDC supply & relay input for each normally closed valve- Small for 1/8inch ID
PDKT-PVE2-PMAT-M	Pinch Valve Pair- 24VDC supply & relay input for each normally closed valve- Medium for 1/4inch ID
PDKT-PVE-PMAT-S	Pinch Valve- 24VDC supply & relay input for normally closed valve- Small for 1/8inch ID
PDKT-PVE-PMAT-M	Pinch Valve- 24VDC supply & relay input for normally closed valve- Medium for 1/4inch ID