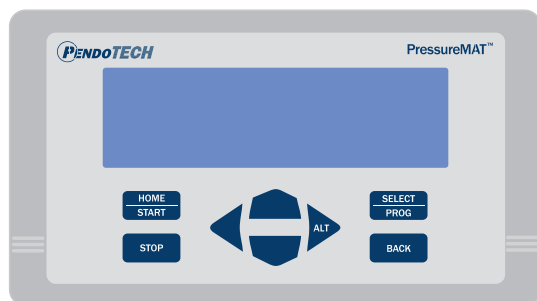


PressureMAT® Sensor Monitor



- Designed for PendoTECH Single Use Pressure Sensors™
- Perfect for use with filtration and chromatography processes, as well as bioreactor pressure monitoring
- Data output capability to a PC or control system
- User configurable min/max set-points with alarm output signal
- Panel mount option with IP66/NEMA4X Front Panel
- High Resolution (HR) model available for low pressure applications that achieves 10x the accuracy of the standard unit
- IQ/OQ Protocol available
- Range of regulatory approvals

The PressureMAT (PMAT) is a monitor, alarm, and transmitter unit designed for use with the PendoTECH Single Use Pressure Sensors. This lightweight, portable unit can easily be moved around a lab or pilot plant to the location where pressure measurement is required. The monitors use state of the art, solid state electronics, which require no calibration or maintenance. The output options simplify integration to PCs or higher level control systems and a relay switch enables interfacing with pumps and valves. Options include models with up to four pressure sensor inputs. The PMAT3 and PMAT4 models can optionally display Delta-Pressure of P1-P2 or trans-membrane pressure (TMP) for filtration processes. These calculated values can also have alarm set-points and the values can be transmitted.

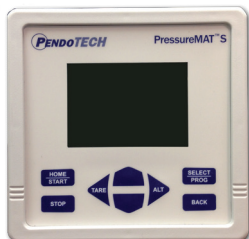
Monitor - pressure values are displayed on the LCD. There is one-touch zero tare to atmospheric pressure.

Alarm - minimum and maximum pressure values are entered on the key pad and if the process pressure goes below the minimum setting or above the maximum setting, the system will go into an alarm state. The alarm state may be tied to the relay output to help safeguard the integrity of a process.

Transmitter - the transmitter function delivers a 4-20 milliamp output signal corresponding to the pressure reading on the display. The RS-232 data output to a PC is available for data collection to the PendoTECH PMAT Data Acquisition Software.

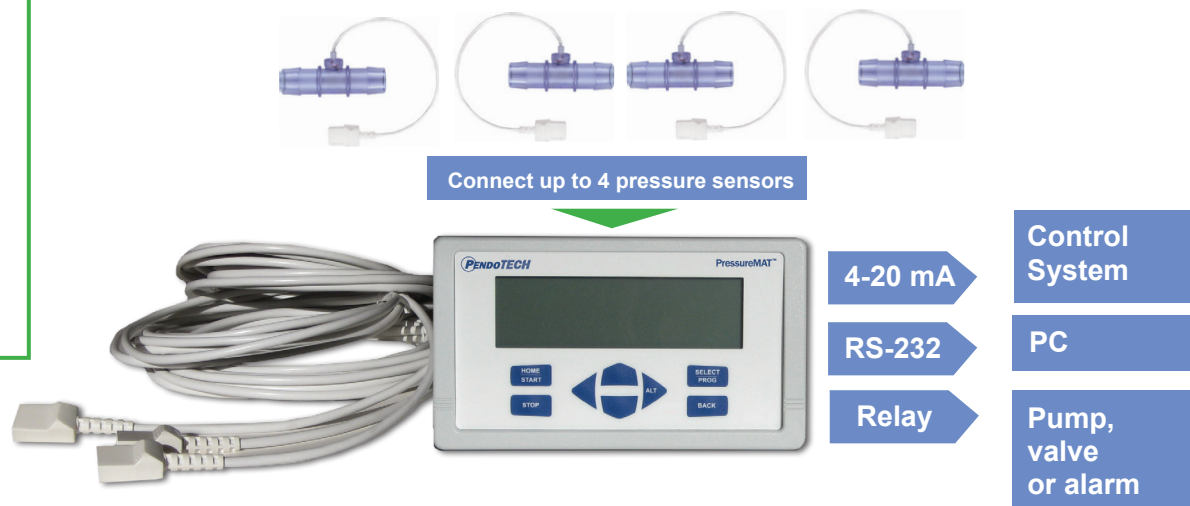
Applications - there are numerous applications in biopharmaceutical production processes where the unit can be used to monitor pressure, including filtration, chromatography, bioreactor monitoring, perfusion, and fill finish operations.

PressureMAT S



For 1 sensor only in a compact design

PressureMAT - for Monitoring up to Four Sensors



Each PressureMAT Model Includes:

- PressureMAT Unit
- Cable(s) for connection of pressure sensor(s) - 12ft / 4 meters
- Power Supply with blades for country
- Connectors for field wiring
- Mounting Screws
- User Guide

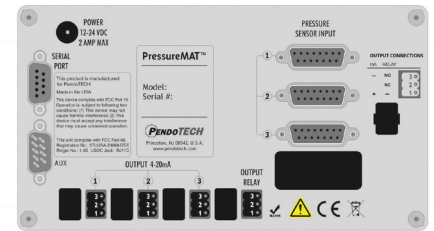
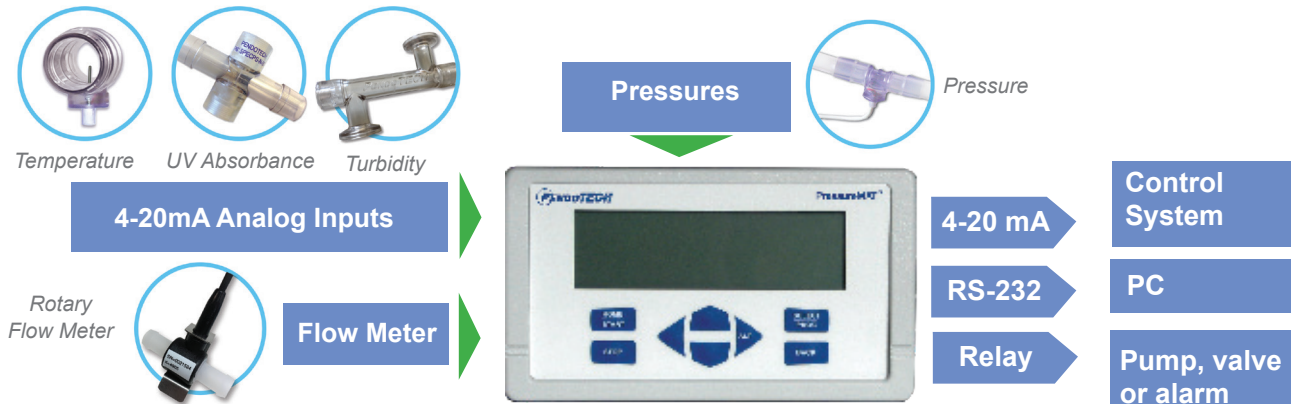


Illustration: Back panel schematic of PMAT3

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 PMAT-S: 4.70inch x 4.70inch x 2.25inch (11.94 x 11.94 x 5.72cm) Approx weight: 0.86 lbs (0.39 kg)
Keypad	8 button keypad with LEXAN® overlay
Display	8 line LCD backlit blue, pressure displayed as X.X psi/X.XX bar; PMAT2HR & PMAT-SHR X.XXX psi/X.XXX bar
Power Inlet	2.5 mm Circular Power Jack (center post positive) or D9 12-24 volts DC, 4 watts (powered by wall supply)
Pressure Sensors Input (s) Models offered with 1-4 inputs	Range of -11.5 to 75.0 psi; (-0.793 bar to 5.171 bar) PMAT2HR & PMAT-SHR -0.7 to 7.5 psi (-0.0483 bar to 0.510 bar) Configured for PendoTECH Single Use Pressure Sensors™, Connector: DA15 (includes 12 ft reusable cables)
Relay Outputs(s) [Up to 4 outputs available as a combination of Relay and Analog outputs]	Specifications for relay used for the alarm output: • Normally CLOSED or OPEN via wiring • 1 amp closure, 2 amps maximum current • Screw terminal connector • 28 Volt AC/DC Maximum • 20 millisecc 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); PMAT2HR & PMAT-SHR -1 to 3 psi (-0.069 bar to 0.207 bar) Accuracy: 0.1% of full scale Sourcing with Maximum Load: 400 ohms Load Impedance: Zero Ohm minimum resistance, 22 mA maximum output
RS232 Output	Data output to a PC at frequency up to approx every 2 seconds Optional Internal Data Logger: Part# PDKTP-DLOG (logger not available with PMAT-S)
Regulatory Compliances	CE Mark EN61326-1:2021; EN61010-1:2010/A1:2016/C2019; EN/ISO13849-1:2015; EN60204:2018 FCC Part 15 Class B verified FCC Part 68 5TUUSA-23969-DT-E RoHS and REACH Compliant UL Listed

Also Available the PressureMAT Plus



Accessories

A variety of water-tight enclosures available:



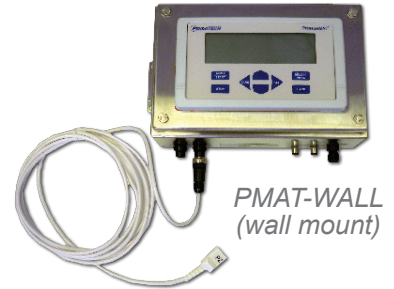
PMAT-WALL-2
(wall mount for pressure
and conductivity monitor)



PMAT-BNCH-IP-L
(benchtop model)



PMAT-ULT4X-W1
(window kit)



PMAT-WALL
(wall mount)



PMAT-STND



PMAT-S-DIN: DIN rail
mounting kit for PMAT



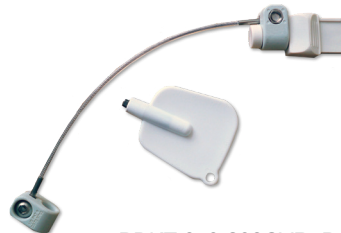
PMAT-STND-MFLS:
PressureMAT stand to mount on
top of Masterflex L/S Pump



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	OUTPUTS
PMAT-S*	1	2	1 Relay / 1 Analog
PMAT-SHR*	1	2	1 Relay / 1 Analog
PMAT2	2	4	2 Relays / 2 Analog or 4 Relays
PMAT2HR	2	4	2 Relays / 2 Analog or 4 Relays
PMAT3	3	4	3 Analogs / 1 Relay (for all sensors)
PMAT4A	4	4	4 Analogs
PMAT4R	4	4	4 Relays

*Comes standard with remote tare input

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 (not available with PMAT-S)

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 PMAT 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 PMAT
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 (6 feet / 2M) for USB input to PC
PMAT-650-298	Cable adaptor with D15 for Single Use Pressure Sensor for PMAT (12ft/4M)
PMAT-650-298-24F	Cable Adapter with D15 for Single Use Pressure Sensor for PressureMAT(24 feet/7M)
PMAT-EXT-12F	Pressure Sensor Extension Cable (12ft)
PMAT-WALL-RS232USB	RS232 Serial to USB adapter, for PMAT Wall/ Benchtop box, 7 FT
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 PMAT to start/stop function, 6 feet (2meters)
PMAT-CB-MF15	Interface cable for Masterflex LS pump- D15 connector to PMAT to start/stop function, 6 feet (2meters)
PMAT-CB-MF18	Interface cable for Masterflex IP pump- 18 pin connector to PMAT to start/stop function, 6 feet (2meters)
PMAT-CB-MF25	Interface cable for Masterflex LS pump- D25 connector to PMAT to start/stop function, 6 feet (2meters)
PMAT-CB-MF31	Interface cable for Masterflex IP pump- 31 pin connector to PMAT to start/stop function, 6 feet (2meters)
PMAT-CB-WM15	Interface cable for Watson Marlow 120U/DV pump- D15 connector to PMAT to start/stop function, 6 feet (2meters) (Also works on the 101 model)
PMAT-CB-WM25	Interface Cable for Watson Marlow pump D25 connector to PMAT to start/stop function, 6 ft (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-S-DIN	DIN rail mounting kit for PMAT-S
PMAT-IQ/OQ	Installation qualification/operation qualification protocol documentation
PMAT-PANEL-2-C	PMAT Panel mount kit - 2 gaskets, 4 mounting brackets, 2 sensor cables, and input connectors for sensors and power
PMAT-PANEL-3-C	PMAT Panel mount kit - 2 gaskets, 4 mounting brackets, 3 sensor cables, and input connectors for sensors and power
PMAT-PANEL-4-C	PMAT Panel mount kit - 2 gaskets, 4 mounting brackets, 4 sensor cables, and input connectors for sensors and power
PMAT-PANEL-S-C	PMAT Panel mount kit - 2 gaskets, 4 mounting brackets, 1 sensor cable, and input connectors for sensor 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-PANEL-S-U	PMAT-S Panel mount kit UPGRADE- 2 gaskets, 4 mounting brackets, sensor cable (in replacement of standard cable), input connectors for sensor 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

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