



## PendoTECH® PressureMAT® Sensor Transmitter

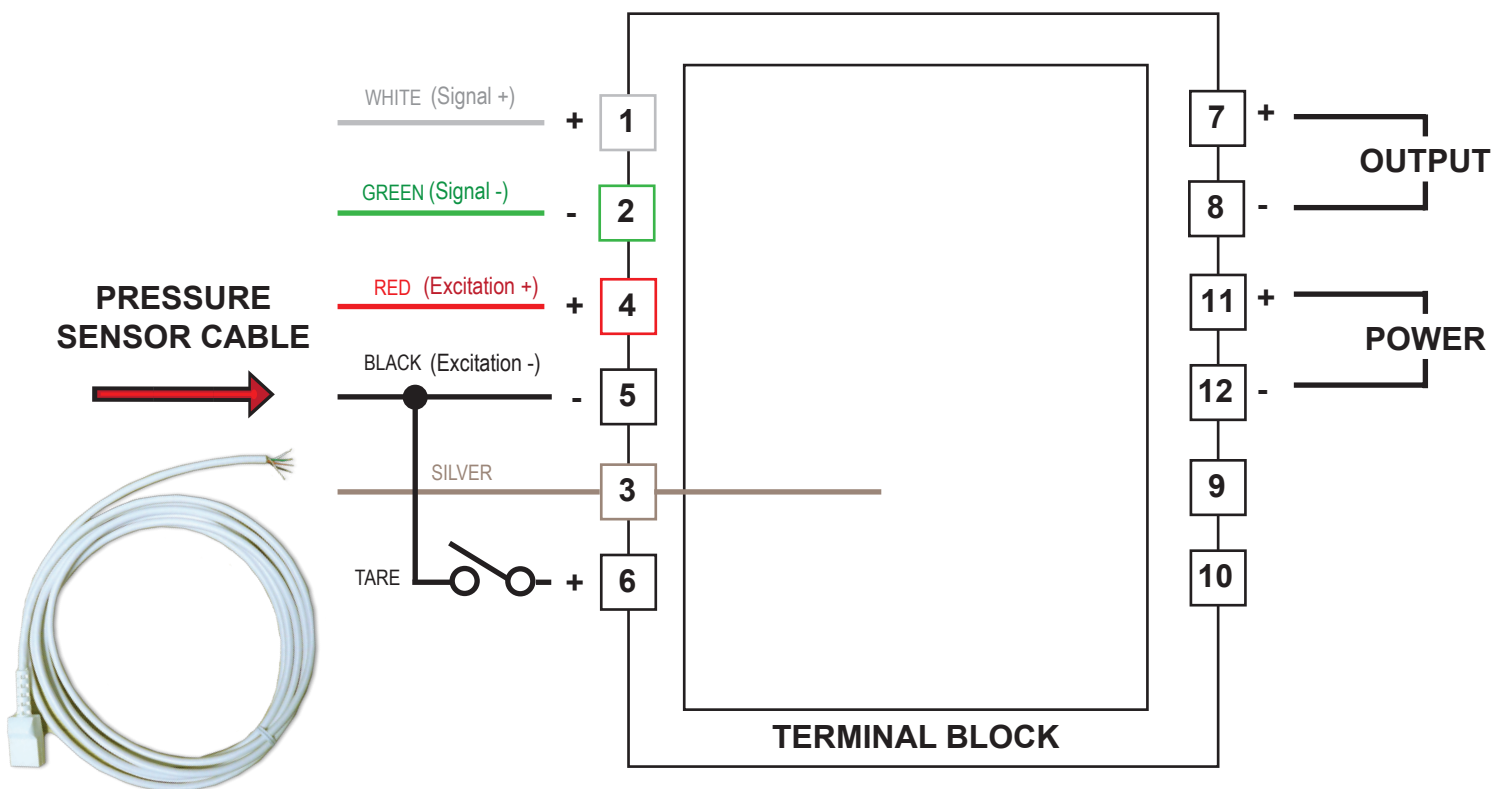
### Background

The PendoTECH PressureMAT® Sensor Transmitter connects to the PendoTECH Pressure sensor and produces a 4-20milliamp signal that is linear with pressure. It has a convenient DIN rail mounting design. Five options are available to deliver optimal performance based on pressure range. For lowest pressure applications, there is a transmitter device with a 4-20mA range of 0-2psi. For mid-range applications, there is a transmitter device with a 4-20mA range of 0-10psi. For higher pressure, there is a transmitter with a range of 0-30psi. Finally, there is a full range 0-60psi transmitter available. Better accuracy and repeatability are achieved by selecting the narrowest range that meets the application requirements.



### Transmitter Details

The re-usable pressure sensor monitor cable (part # PDKT-650-298) comes wired to the transmitter for quick and convenient installation. The cable may be removed and re-connected as required during installation.



### Reusable Monitor Cable

INPUT WIRING: The re-usable pressure sensor monitor cable (part # PDKT-650-298) is wired directly to the transmitter card. The length of the PendoTECH reusable monitor cables is 12ft/4M. Additional wire length also adds additional resistance which can impact accuracy so 24ft (8M) is the maximum extension recommended.

# Specifications

Performance Accuracy	Input accuracy + output accuracy
Input accuracy	PT-2: 0-2psi: $\pm 0.012$ psi, PT-10: 0-2psi: $\pm 0.012$ psi; 2-10psi: $\pm [0.01 + 0.1\%$ of reading] psi PT-30: 0-30psi: $\pm 0.08$ psi, PT-60: 0-60psi: $\pm 0.15$ psi
Output accuracy	$\pm [0.021 + 0.15\%$ of reading] mA
Temperature coefficient	$\pm 0.015\%/^{\circ}\text{C}$ ( $\pm 0.008\%/^{\circ}\text{F}$ ) of max. range at -5 to $+55^{\circ}\text{C}$ [23 to $131^{\circ}\text{F}$ ]; $\pm 0.03\%/^{\circ}\text{C}$ ( $\pm 0.02\%/^{\circ}\text{F}$ ) at $< -5^{\circ}\text{C}$ , $> +55^{\circ}\text{C}$
Response time	$\leq 10$ milliseconds (0 – 90%)
Line voltage effect	$\pm 0.1\%$ over voltage range
Insulation resistance	$\geq 100\text{M}\Omega$ with 500VDC
Dielectric strength	1500VAC @ 1-minute (input to output or power to ground) 500VAC @ 1 minute (output to power)
Regulatory Compliances	CE Mark EN61000-6-2:2015; EN61000-6-4:2011; EN61010-1:2010; EN13849-1:2015 UL and cUL Listed RoHS and REACH Compliant

\*Accuracy Specification applies to Full Pressure Range listed below

## 4-20mA Output Scaling and Full Pressure Range\*

Range 4 - 20mA	Output drive 12V maximum at 22mA
Load resistance	600 $\Omega$ maximum
Burnout	$\approx 22$ mA (Output > 20mA with no sensor connected)

Model	4-20mA Range	Full Pressure Range
PT-2	4mA=0psi 20mA=2psi	-0.3 to 2.3psi
PT-10	4mA=0psi 20mA=10psi	-1.5 to 11.5psi
PT-30	4mA=0psi 20mA=30psi	-4.5 to 34.5psi
PT-60	4mA=0psi 20mA=60psi	-9.0 to 69.0psi

\*Transmitters have a 15% of span under/over range that allows for a larger dynamic range














## Tare Command Input (Sets present signal to 4mA):

- Each single use pressure sensor must be tared upon connection. This can be done via dry contact terminals 5 and 6 or storing the offset (difference from 4.00mA) in the HMI/PLC, as 0psig/0barg
- TTL level (5V-CMOS level), open collector or dry contact (saturation voltage  $\leq 1\text{V}$ , sink current 0.5mA)

## Installation

Power input	Operational voltage range 9 – 36VDC; approx. 5W; ripple 10% p-p max
Operating temperature	-25 to $+65^{\circ}\text{C}$ (-13 to $+149^{\circ}\text{F}$ ) Max. $55^{\circ}\text{C}$ ( $131^{\circ}\text{F}$ ) for UL approval
Operating humidity	0 to 95% RH (non-condensing)
Mounting	DIN rail
Dimensions	W18 x H106 x D110.5mm (0.71inch x 4.17inch x 4.35inch)
Weight	150g (0.33lbs)

## Status Indicator LEDs After Installation

NORMAL OPERATION (RUN) MODE		ERROR MODE			
LD1 	<b>RUN Mode</b> The transmitter is in normal operating conditions	LD1 	<b>Device Error</b> Cycle Power	LD1 	<b>Over Range</b> (approximately below -15% or above +115%)
LD2 		LD2 		LD2 	
LD3 		LD3 		LD3 	
				 (A) Amber LED	
				 (G) Green LED	
				 OFF	
				 Blink	

## Ordering Information

PT-2	Pressure sensor transmitter with 4-20mA output, 0-2psi (0.138bar) DIN Rail mount, 24VDC, with calibration certificate and cable
PT-10	Pressure sensor transmitter with 4-20mA output, 10psi (.69bar) DIN Rail mount, 24VDC, with calibration certificate and reusable sensor cable installed
PT-30	Pressure sensor transmitter with 4-20mA output, 30psi (2.07bar) DIN Rail mount, 24VDC, with calibration certificate and reusable sensor cable installed
PT-60	Pressure sensor transmitter with 4-20mA output, 60psi (4.14bar) DIN Rail mount, 24VDC, with calibration certificate and reusable sensor cable installed
PDKT-650-298-24	Cable Adapter for PendoTECH Single Use Pressure Sensor (24feet)

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