



PendoTECH PressureMAT™ Sensor Transmitter

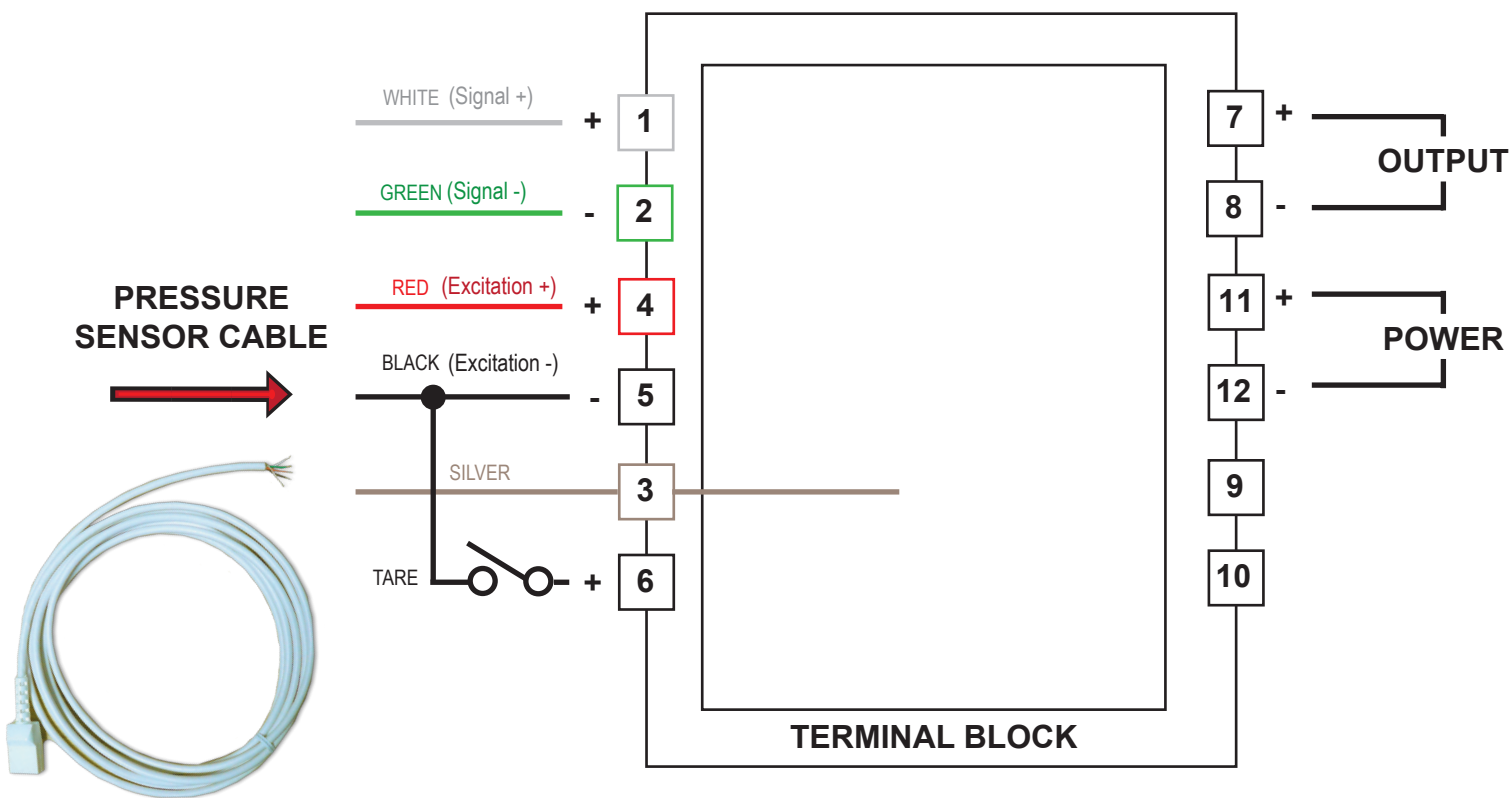
Background

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



Transmitter Details

Connections to the transmitter are quick and convenient. The Pressure Sensor Cable comes wired to the card 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 direct 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.

Performance Accuracy	Input accuracy + output accuracy
Input accuracy	PT - 2: 0-2 psi: ± 0.012 psi, PT - 10: 0-2 psi: ± 0.012 psi; 2-10 psi: $\pm [0.01 + 0.1\%$ of reading] psi PT - 30: 0-30 psi: ± 0.08 psi, PT - 60: 0-60 psi: ± 0.15 psi
Output accuracy	$\pm [0.021 + 0.15\%$ of reading] mA
Temp. 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°F]; $\pm 0.03\%/^{\circ}\text{C}$ ($\pm 0.02\%/^{\circ}\text{F}$) at $< -5^{\circ}\text{C}$, $> +55^{\circ}\text{C}$
Response time	≤ 10 milliseconds (0 – 90%)
Line voltage effect	$\pm 0.1\%$ over voltage range
Insulation resistance	$\geq 100\text{M}\Omega$ with 500V DC
Dielectric strength	1500V AC @1 minute (input to output or power to ground) 500V AC @1 minute (output to power)

4-20mA Output

Load resistance	Output drive 12V maximum at 22mA
(Range) 0 – 20mA	600 Ω maximum
Over range Output	~ 22 mA

















Tare Command Input (Sets current output 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 – 36V DC; approx. 5W; ripple 10% p-p max
Operating temperature	-25 to $+65^{\circ}\text{C}$ (-13 to $+149^{\circ}\text{F}$) Max. 55°C (131°F) for UL approval
Operating humidity	0 to 95% RH (non-condensing)
Mounting	DIN rail
Dimensions	W18xH106xD110.5 mm (0.71"x4.17"x4.35")
Weight	150 g (0.33 lbs)

Status Indicator LEDs After Installation

NORMAL OPERATION (RUN) MODE		ERROR MODE			
LD1 	RUN Mode The transmitter is in normal operating conditions	LD1 	Device Error Cycle Power	LD1 	Over Range (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, 0-2 psi (0.138 bar) DIN Rail mount, 24VDC, with calibration certificate and cable
PT-10	Pressure sensor transmitter with 4-20mA output, 10 psi (.69 bar) DIN Rail mount, 24VDC, with calibration certificate and reusable sensor cable installed
PT-30	Pressure sensor transmitter with 4-20mA output, 30 psi (2.07 bar) DIN Rail mount, 24VDC, with calibration certificate and reusable sensor cable installed
PT-60	Pressure sensor transmitter with 4-20mA output, 60 psi (4.14 bar) DIN Rail mount, 24 VDC, with calibration certificate and reusable sensor cable installed

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