



PendoTECH® PressureMAT® Sensor Transmitter

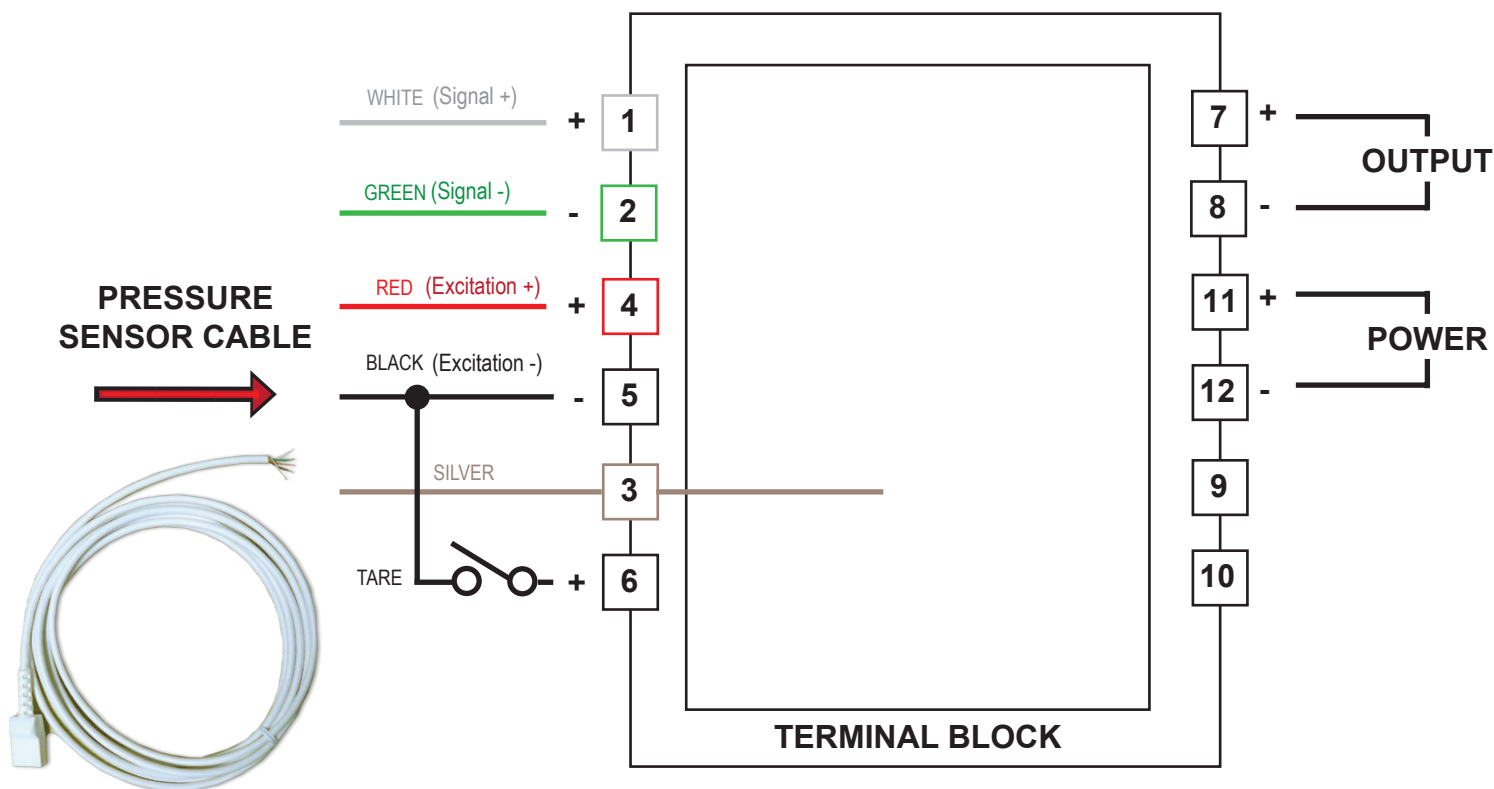
Background

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: ± 0.012 psi, PT-10: 0-2psi: ± 0.012 psi; 2-10psi: $\pm [0.01 + 0.1\%$ of reading] psi PT-30: 0-30psi: ± 0.08 psi, PT-60: 0-60psi: ± 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°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 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 Ω maximum
Burnout	≈ 22 mA (Output > 20 mA 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 ≤ 1 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°C (131°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 	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, 0-2psi (0.138bar) DIN Rail mount, 24VDC, with reusable sensor cable installed
PT-10	Pressure sensor transmitter with 4-20mA output, 10psi (.69bar) DIN Rail mount, 24VDC, with reusable sensor cable installed
PT-30	Pressure sensor transmitter with 4-20mA output, 30psi (2.07bar) DIN Rail mount, 24VDC, with reusable sensor cable installed
PT-60	Pressure sensor transmitter with 4-20mA output, 60psi (4.14bar) DIN Rail mount, 24VDC, with reusable sensor cable installed
PDKT-650-298-24	Cable Adapter for PendoTECH Single Use Pressure Sensor (24feet)