



PendoTECH® PressureMAT® Sensor Transmitter

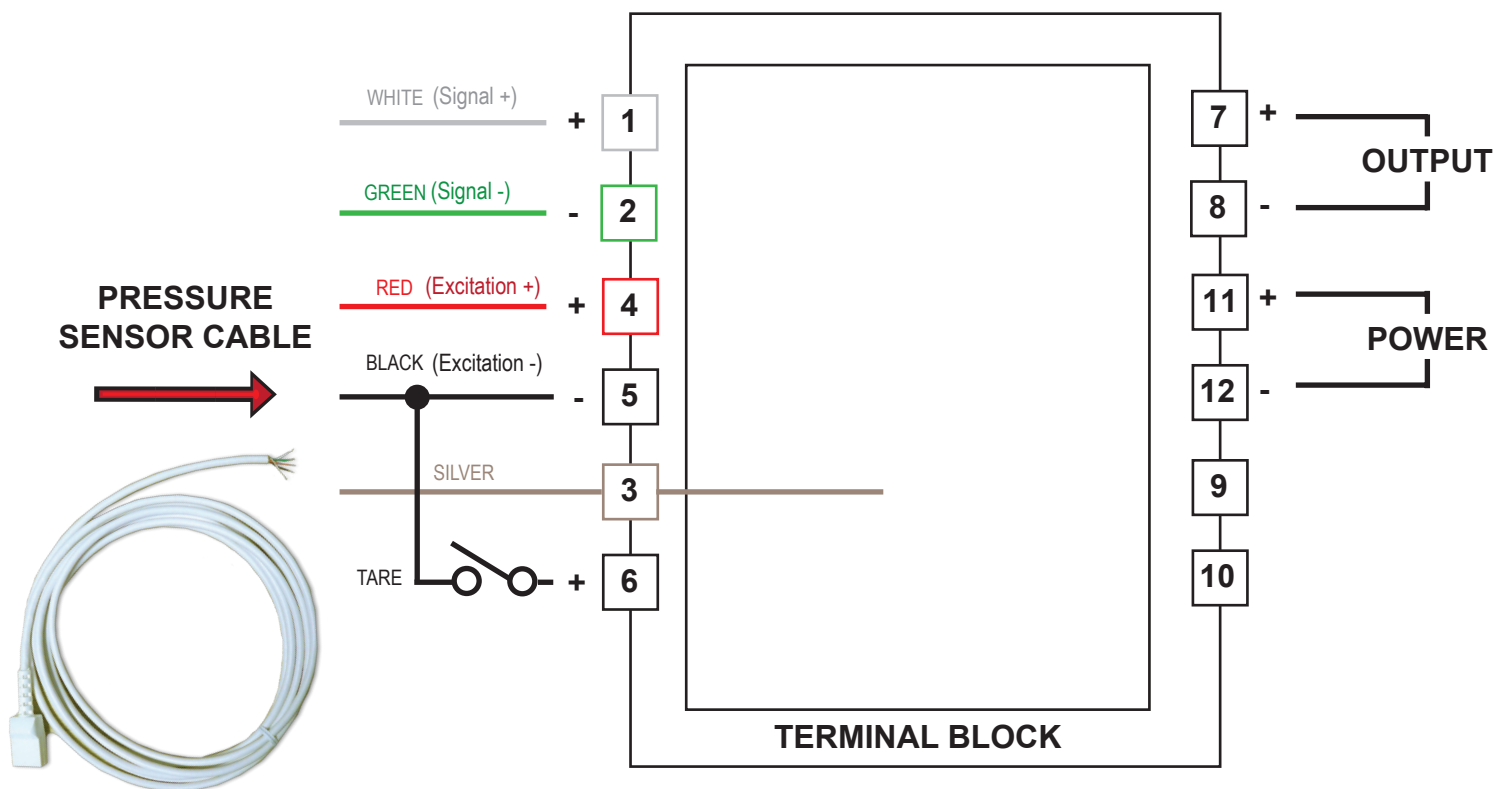
Background

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  |
| LD2  | | LD2  | | LD2  |
| LD3  | | LD3  | | LD3  |
| | | | | Over Range (approximately below -15% or above +115%) |
| | | | |  (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-650-298-24F | Cable Adapter for PendoTECH Single Use Pressure Sensor (24feet) |

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