PT-1

Pressure Transmitter

PT-LINE
PRESSURE TRANSMITTER

ORDERING CODE

TYPE	FAMILY	DIN PLUG	TRANSDUCER RANGE	RANGE TYPE	FITTING	CUSTOMER BRANDING
PT	1	X	0010	V	01	R01

SEE PAGE 130 FOR ORDERING OPTIONS

Application Examples

- Monitoring product, process and hydraulic pressures and triggering safety shutdowns when hazardous conditions are detected.
- **Mining Industries** - Monitoring of hydraulic pit props to indicate condition of the prop and ground strata.
  Monitoring of hydraulic pressure on cutting machinery using hydraulic systems.
- **Oil Rigs** - Monitoring ballast tanks levels and hydraulic pressure on jack-up drilling rigs.
  Monitoring pressure on platform flowlines.
  Monitoring pressure on additive metering pumps.
  Monitoring pressure on sub-sea injection valves / well cleanouts.
- **Refrigeration** - Monitoring compressor pressure of both low and high pressure sides.
- **Heavy Industry** - Modern industrial gas turbines use pressure transmitters for control and automatic start-up.
- **Electrical Industry** - Monitoring of steam pressures and distribution pressures within the generating station.
  Oil and nitrogen gas cooled systems are used on high voltage three phase cables. Local and telemetry monitoring of the coolant pressures are often required.

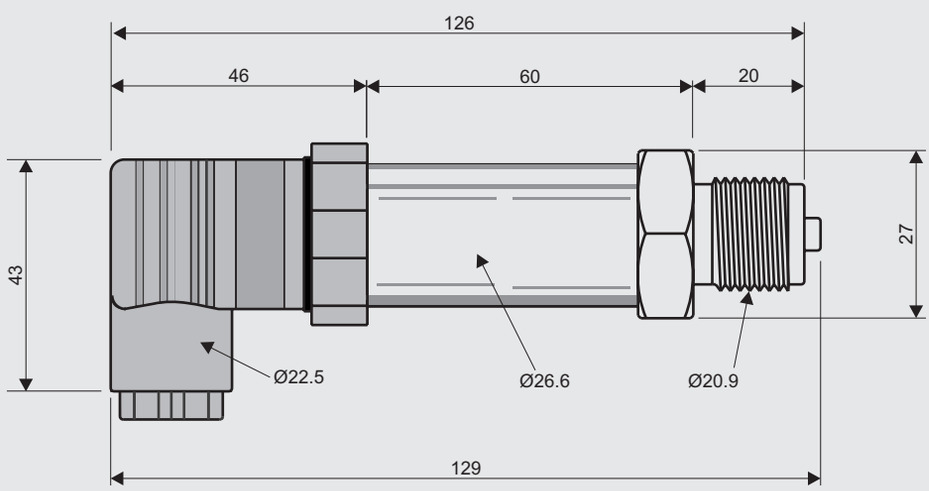
Features

- Accuracy to better than 0.5%FS (including linearity and repeatability).
- Transducer rated at 50 million cycles.
- Metalwork made of Type 316 Stainless Steel.
- Protected against reverse voltage and overvoltage.
- Protected against noise on the supply line.
- Wide supply range, 8 to 36V DC - allows a wide range of load resistance.
- Transducer is temperature compensated by means of laser-trimmed resistors.
- Operating temperature range from 0°C to +85°C.

Description of Operation

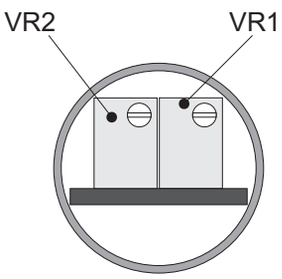
The **PT-Line PT-1** series are a range of precision 2-wire pressure transmitters. These units are factory calibrated to deliver an output of 4mA at 0 pressure and 20mA at full scale. If necessary, the units can be calibrated in the field (see figure 2). Pressure Ranges are from vacuum (-1 Bar) to 600 Bar.

Dimensional Diagram



NOTE: *All dimensions in mm*

Description of Controls



Connect as shown below and carefully remove the electrical connector, exposing the controls.

Vr1: Set pressure to 0 Bar. Adjust for a reading of 4mA. Turning the control counterclockwise increases the reading and clockwise reduces the reading.

Vr2: Set pressure to Full Scale. Adjust for a reading of 20mA. Turning the control counterclockwise reduces the reading and clockwise increases the reading.

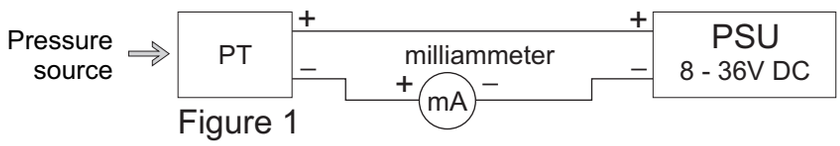
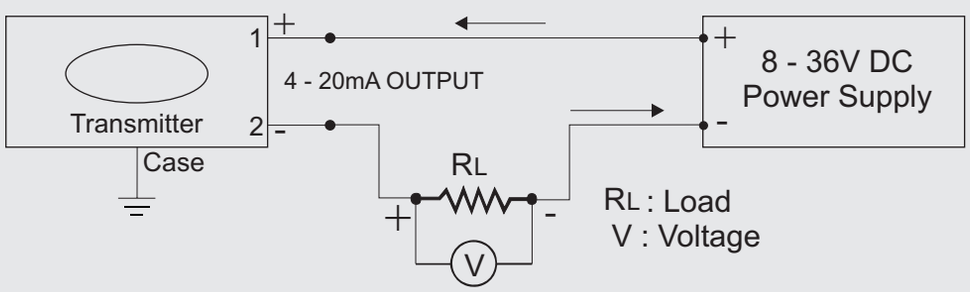


Figure 1

Note: *Precision of calibration is determined by the accuracy of the pressure source and the accuracy of the milliammeter.*

Wiring and Connection



Maximium load at 36V = 800Ω

Technical Specifications

General Specifications	
Output	4 - 20 mA
Excitation	8 - 36V DC
Accuracy (BFSL)	<0.5% FS
Compensated Temp. Range	0º to 85º C
Temperature error zero	< -0,02% FS / K
Temperature error span	< -0,01% FS/K (0-70ºC)
Ingress protection	IP65
Burst pressure	2.5 x FS (Except where indicated)
Wetted Parts/Connection	316 Stainless steel, ceramic, Nitrile (Specify media where Nitrile is not compatible).

Wiring Connections	
1 Red	+ Us
2 Black	- Vs
⏚ Yellow	GND

Ranges (Bar)				
-1	1.6	2.5	4	6
10	16	25	40	60
100 **(175)**	160 **(280)**	250 **(400)**	400 **(700)**	600 **(1050)**

( ) = Burst Pressure

Additional information in Section J, page 131.