



PT-400Y SERIES



Intrinsically Safe, Heavy Duty Pressure Transmitter

The PT-400Y offers high accuracy and reliability over a wide range of pressures. The small size, integrated electronics, wide operating temperature range, and durability make the PT-400Y the perfect instrument for static and dynamic pressure measurements with an amplified output signal.

FEATURES

- Available pressure ranges from 0 to 30,000 psi
- Standard Outputs:
 - 4-20 mA
 - 0 to 5 VDC
 - 0.5 to 4.5 VDC
 - 1 to 5 VDC
 - 0 to 10 VDC
 - 1 to 10 VDC
 - RS-485
- cCSAus hazardous location approved
- High overpressure capability
- Single seal for highest safety protection factor

COMMON APPLICATIONS

The PT-400Y is perfect for a variety of applications—anywhere durability is a concern. It's ideally suited for the following:

- Fracking
- Acidizing
- Cementing
- Wellhead pressure
- Pump monitoring
- Wastewater treatment
- Gas compressors
- Engine compression
- Gas pressure chambers
- Tank level
- Chemical processing



PT-400Y SPECIFICATIONS

PERFORMANCE

- **Pressure Ranges:** 0 to 30K psi
- **Output:**
 - 4-20 mA (2 wire, loop-powered)
 - 0-5, 0.5-4.5, 1-5, 0-10, 1-10 VDC (non-isolated 3 wire)
 - Modbus/RTU (RS-485) with temp. output
- **Over Pressure:** 2X Full Scale or limit of fitting, whichever is less
- **Burst Pressure:** 3X Full Scale or limit of fitting, whichever is less
- **Frequency Response:** Less than 5 ms for analog outputs *
- **Stability—One Year Zero Drift:** 17-4 / 316L: $< \pm 0.5\%$ FS

ACCURACY

- **Linearity, Hysteresis & Repeatability:** $\pm 0.25\%$ of Full Scale (BFSL) (1% for pressure ≤ 1 psi)
- **Thermal Zero Shift:** $[\pm 0.036\% \text{ FSO}/^{\circ}\text{C} \ (\pm 0.02\% \text{ FSO}/^{\circ}\text{F})]$
- **Thermal Span Shift:** $[\pm 0.036\% \text{ FSO}/^{\circ}\text{C} \ (\pm 0.02\% \text{ FSO}/^{\circ}\text{F})]$

ENVIRONMENTAL

- **Operating Temperature:** -40 to 80°C / -40 to 176°F
- **Compensated Temperature:**
 - ≤ 5 psi: No temperature specification
 - $5 < x \leq 10$ psi: 0° to 60°C / 32° to 140°F
 - $10 < x \leq 1000$ psi: -10° to 70°C / 14° to 158°F
 - > 1000 psi: -17° to 54°C / 0° to 130°F
- **Enclosure Protection:** IP65
- **Vibration:** 10g (55-2KHz) per IEC 60068-2-6
- **Shock:** 100G (6ms) per IEC 60068-2-27

* Modbus output response time depends on communication settings chosen.

ELECTRICAL

- **Supply Voltage (at sensor):**
 - 4-20 mA, 0 to 5 / 0.5 to 4.5 / 1 to 5 VDC: 9 to 28 VDC
 - 0 to 10 / 1 to 10 VDC: 12.5 to 28 VDC
 - Modbus/RTU (RS-485): 5 to 28 VDC
- **Output Signal @ 21°C / 70°F:**
 - 4-20 mA: 3-30 mA max
 - All VDC: 7.5 mA max
 - RS-485: 2 mA max
- **Electrical Connection:** Pigtail with cable or connector
- **Electrical Protection:** Protected against reverse polarity, surge per IEC 61000-4-5
- **Startup Time:**
 - 50 ms for 4-20 mA and VDC outputs
 - 200 ms for Modbus outputs

PHYSICAL

- **Wetted Materials:**
 - 316L Stainless Steel ($\leq 1,000$ psi)
 - 17-4 Stainless Steel ($> 1,000$ psi)
 - Incoloy (10,000 - 30,000 psi)
- **Enclosure:** 316L Stainless Steel
- **Incoloy conforms to NACE MR-01-75 and ISO 15156-3**
- **Pressure Connection:** See model number configurator for complete list
- **Weight:** Varies, approx. 250g (9oz)

CERTIFICATION

Class I, Div. 1, Groups C, D T4, Ex ia
 Class I, Zone 0, AEx ia IIB T4 Ga
 Ex ia IIB T4 Ga
 Ambient Range: -40°C < Tamb < +80°C
 Maximum Working Pressure: 10,000 psi



BUILT FOR HARSH CONDITIONS & HAZARDOUS LOCATIONS

Not all pressure measurements are simple. Changing weather, hazardous environments, intense shock, and severe vibration all wreak havoc on a pressure transducer. The PT-400Y heavy duty pressure transducer lives for these applications. It was built with havoc in mind.

IDEAL FOR EXTREME VIBRATION

To ensure maximum reliability, we zero-in on the details—like using the best steel and the strongest laser welds. We carefully tie all wiring down using a variety of methods. All soldering is done by certified technicians. The entire housing is filled with industrial potting to dampen vibrations.

ADJUSTABLE ZERO & SPAN

- Sealed access points
- Zero and span adjustment screws inside

FULLY SEALED ELECTRONICS

- Potted inside
- Shock and vibration cushions
- 2nd layer of protection for moisture and dust
- Pressure tested welds

REMOTE MONITORING OPTIONS

Pair your PT-400Y with Settler, our remote monitoring gateway.



SETTLER

Your Gateway to Smarter Monitoring

Settler, APG's next remote monitoring gateway, makes getting real-time level data easier than ever.

Settler seamlessly connects Modbus and 4-20 mA sensors—transmitting encrypted data securely to Explorer, APG's cloud-based interface. View tank and well levels anytime, anywhere, with reliable Ethernet connectivity and robust data security powered by MQTT with AES (Advanced Encryption Standard). Plus, with over-the-air (OTA) firmware updates, your system stays up to date without hassle.

Designed for general-purpose environments, Settler is not intended for use in hazardous areas.

Explorer makes monitoring simple. Access real-time readings, enable datalogging, and set up alarms so you're always informed of critical changes—right from your smartphone, tablet, or desktop.

Save time, reduce costs, and gain peace of mind with remote monitoring powered by Settler and Explorer. Contact us today to learn more or visit apgsensors.com/settler-remote-monitoring-gateway/.



COMMON MODEL CONFIGURATIONS

1/2" Male NPT with 5 ft. cable, 1/4" Male NPT or F250C High Pressure Process Connection, Standard Temperature Range

Model Number	Model Description
PT-400Y-L1-15-PSIA-E19-5-P0-N0-M1-S10	4-20 mA, 0-15 PSI, Absolute Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-5-PSIG-E19-5-P0-N0-M1-S11	4-20 mA, 0-5 PSI, Gauge Pressure, 316L SS, 0.25% Accuracy, No Temp Spec
PT-400Y-L1-15-PSIG-E19-5-P0-N0-M1-S10	4-20 mA, 0-15 PSI, Gauge Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-30-PSIG-E19-5-P0-N0-M1-S10	4-20 mA, 0-30 PSI, Gauge Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-50-PSIG-E19-5-P0-N0-M1-S10	4-20 mA, 0-50 PSI, Gauge Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-100-PSIG-E19-5-P0-N0-M1-S10	4-20 mA, 0-100 PSI, Gauge Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-200-PSIG-E19-5-P0-N0-M1-S10	4-20 mA, 0-200 PSI, Gauge Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-300-PSIG-E19-5-P0-N0-M1-S10	4-20 mA, 0-300 PSI, Gauge Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-500-PSIG-E19-5-P0-N0-M1-S10	4-20 mA, 0-500 PSI, Gauge Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-1000-PSIS-E19-5-P0-N0-M1-S10	4-20 mA, 0-1000 PSI, Sealed Gauge Pressure, 316L SS, 0.25% Accuracy, -10° - 70°C
PT-400Y-L1-5000-PSIS-E19-5-P0-N0-M2-S0	4-20 mA, 0-5000 PSI, Sealed Gauge Pressure, 17-4 SS, 0.25% Accuracy, -17° - 54°C
PT-400Y-L1-10000-PSIS-E19-5-P0-N0-M2-S0	4-20 mA, 0-10,000 PSI, Sealed Gauge Pressure, 17-4 SS, 0.25% Accuracy, -17° - 54°C
PT-400Y-L1-10000-PSIS-E19-5-P56-N0-M7-S0	4-20 mA, 0-10,000 PSI, Sealed Gauge Pressure, Incoloy, 0.25% Accuracy, -17° - 54°C
PT-400Y-L1-15000-PSIS-E19-5-P56-N12-M7-S0	4-20 mA, 0-15,000 PSI, Sealed Gauge Pressure, Incoloy, 0.5% Accuracy, -17° - 54°C

PT-400Y ACCESSORIES

Please order separately, by part number.

Description	Part Number
4 pin bayonet mating connector (E3) Connector Only	509010
4 pin bayonet mating connector (E3) with 2 ft cable (L1, L3, L10 only)	509010-1002
4 pin bayonet mating connector (E3) with 5 ft cable (L1, L3, L10 only)	509010-1005
4 pin bayonet mating connector (E3) with 10 ft cable (L1, L3, L10 only)	509010-1010
4 pin bayonet mating connector (E3) with 25 ft cable (L1 only)	509010-1025
4 pin bayonet mating connector (E3) with 50 ft cable (L1 only)	509010-1050
6 pin bayonet mating connector (E17) Connector only	509120
6 pin bayonet mating connector (E17) with 2 ft cable	509120-1002
6 pin bayonet mating connector (E17) with 10 ft cable	509120-1010
6 pin bayonet mating connector (E17) with 25 ft cable	509120-1025
6 pin bayonet mating connector (E17) with 50 ft cable	509120-1050
4 pin female micro connector (M12) mating connector (E4) Field wireable	509087
4 pin female micro connector (M12) mating connector (E4) with 2 m molded cable	135407-0002
4 pin female micro connector (M12) mating connector (E4) with 5 m molded cable	135407-0005

Model Number Configurator

Model Number: PT-400Y - - - - - - - - - -

A B C D E F G H I J

A. Operation / Output

- ☐ L1▲ 4–20 mA output
- ☐ L3 0–5 VDC output
- ☐ L10 0–10 VDC output
- ☐ L12 1–5 VDC output
- ☐ L20 0.5–4.5 VDC output
- ☐ L21 1–10 VDC output
- ☐ L5 RS-485 (Modbus/RTU), 4-wire
 - Pressure reading (psi) only
- ☐ L31 RS-485 (Modbus/RTU), 4-wire
 - Level calculations (mmH₂O), tank volume

B. Common Pressure Ranges - PSI*

- | | | | | |
|------|-------|-------|--------|----------|
| □ 5 | □ 50 | □ 200 | □ 1000 | □ 5000 |
| □ 15 | □ 60 | □ 300 | □ 2000 | □ 10000 |
| □ 30 | □ 100 | □ 500 | □ 3000 | □ 30000+ |

*Other ranges available. Please consult factory.

C. Units of Measure

- ☐ psi▲ ☐ bar ☐ kPa ☐ inH2O
☐ fH2O ☐ mmH2O ☐ inHG

D. Pressure Type

- ☐ A Absolute (10 to 200 psi)
- ☐ S▲ Sealed (200 psi to 30,000 psi)†
- ☐ G Gauge (≤ 500 psi)
- ☐ CG Compound Gauge (-1 to 1 psi or -15 to 15 psi)

E. Electrical Connection**

(Mating connector sold separately unless noted otherwise)

- ☐ E3 4 pin bayonet (PT 1H-8-4P or equiv.)
(Not currently available with L5/L31 Modbus outputs)
- ☐ E4 4 pin M12 micro connector
- ☐ E5▲ Pigtail with cable (specify cable length below)
- ☐ E6 4 pin per DIN 43650, short can
(mating connector included)
- ☐ E17 6 pin bayonet (PT02E-10-6P)
- ☐ E19 1/2 in male NPT with cable
- ☐ E36 1/2 in male NPT with 6 in flying leads
- ☐ E40 3 pin bayonet (L1 4-20 mA output only)
- ☐ E45 4 pin minifast Turck

**Other connectors available. Please consult factory.

† Note: Pressure ranges above 10,000 psi are not hazardous location certified.

F. Electrical Cable Length

- — Number represents cable length, in 1-ft increments, included on E5 and E19 options. (ex. E5-10 equals pigtail, 10 ft cable)

G. Process Connection

- ☐ P0▲ 1/4 - 18 male NPT (≤ 10,000 psi)
- ☐ P1 1/2 - 14 male NPT (≤ 10,000 psi)
- ☐ P5 1/4 - 18 female NPT (≤ 15,000 psi)†
- ☐ P6 1/2 female NPT (≤ 10,000 psi)
- ☐ P38 1 1/2 in. tri-clover with 3/4 in. diaphragm (≤ 1,000 psi)
- ☐ P52 1 1/2 in. male NPT (≤ 1,000 psi)
- ☐ P54 7/16 - 20 UNJF-3A Male w/ Cone (≤ 1,000 psi)
- ☐ P56 F250C High Pressure (10,000 psi to 30,000 psi)†
- ☐ P57 F562-C40 High Pressure (10,000 psi to 30,000 psi)†

H. Accuracy

1-5,000 PSI

- N0*▲ ±0.25% (1% for pressure ≤ 1 psi)
- N1* ±0.25% with NIST certification
- N2 ±0.1% with NIST certification.

*Note: $\pm 0.25\%$ available at 10,000 psi for 4-20 mA output only

10,000 PSI

- N12 ±0.5%
- N13 ±0.5% with NIST certification

I. Materials

- **M1▲** 316L SS (≤ 1,000 psi)
- **M2** 17-4 SS (> 1000 psi)
- **M7** Incoloy (10,000 psi to 30,000 psi; P56/P57 only)

J. Compensated Temperature Range

- **S0▲** -17° to 54°C / 0° to 130°F (> 1000 psi)
- **S1** -40° to 82°C / -40° to 180°F (> 1,000 psi)*
- **S3** -34° to 77°C / -30° to 170°F (> 1,000 psi)
- **S9▲** 0° to 60°C / 32° to 140°F (5 < x ≤ 10 psi)
- **S10▲** -10° to 70°C / 14° to 158°F (10 < x ≤ 1000 psi)
- **S11▲** No Temperature Specification (≤ 5 psi)

*Hazloc ratings only valid to ambient temperature of 80°C or 176°F

▲ This option is standard