



PT-400 SERIES



Intrinsically Safe, Heavy Duty Pressure Transmitter

The PT-400 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-400 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-400 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-400 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:** 3.0X 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): 9 to 28 VDC
- **Output Signal @ 21°C / 70°F:**
 - 4-20 mA: 3-30 mA max
 - All VDC: 7.5 mA max
 - RS-485: 5 mA max
- **Electrical Connection:** Pigtail with cable or connector
- **Electrical Protection:** Protected against reverse polarity, surge per IEC 61000-4-5
- **Startup Time:** (all models) 50 ms

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: 30,000 psi for P56/P57 options;
 10,000 psi otherwise



BUILT FOR HARSH CONDITIONS & HAZARDOUS LOCATIONS

Not all pressure measurements are simple. Changing weather, hazardous environments, intense shock, and severe vibration call all wreak havoc on a pressure transducer. The PT-400 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 wires down using a variety of methods and use rubber mounts to protect against extreme vibration. All soldering is done by certified technicians.

FULLY SEALED ELECTRONICS

- Sealed access points
- Shock and vibration cushions
- Pressure tested welds

REMOTE MONITORING OPTIONS

Pair your PT-400 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-400-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-400-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-400-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-400-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-400-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-400-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-400-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-400-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-400-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-400-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-400-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-400-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-400-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-400-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-400 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 CONFIGURATION OPTIONS

MODEL NUMBER: PT-400 - - - - - - - - - - - -

A B C D E F G H I J K

A. Performance

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

E. Electrical Connection

- ☐ 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
 - (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 cable
- ☐ E40 3 pin bayonet (L1 4-20 mA output only)
- ☐ E45 4 pin minifast Turk

Mating connectors sold separately unless noted.
Other connectors available, please consult factory.

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 ($\leq 10,000$ psi)
- ☐ P1 1/2-14 male NPT ($\leq 10,000$ psi)
- ☐ P5 1/4 - 18 female NPT ($\leq 15,000$ psi)
- ☐ P6 1/2 female NPT ($\leq 10,000$ psi)
- ☐ P38 1 1/2 in. tri-clover w/ 3/4 in. diaphragm ($\leq 1,000$ psi)
- ☐ P52 1 1/2 in. male NPT ($\leq 1,000$ psi)
- ☐ P54 7/16 - 20 UNJF-3A Male w/ Cone ($\leq 1,000$ psi)
- ☐ P56 F250C High Pressure (10,000 psi - 30,000 psi)

H. Accuracy

- 1-5,000 psi
- ☐ N0* $\pm 0.25\%$ (1% for pressure ≤ 1 psi)
 - Note: $\pm 0.25\%$ available up to 10,000 psi for 4-20 mA output only
 - ☐ N1 $\pm 0.25\%$ with NIST certification
 - Note: $\pm 0.25\%$ available up to 10,000 psi for 4-20 mA output only
 - ☐ N2 $\pm 0.1\%$ with NIST certification
- Up to 30,000 psi
- ☐ N12 $\pm 0.5\%$
 - ☐ N13 $\pm 0.5\%$ with NIST certification

I. Materials

- ☐ M1* 316L SS ($\leq 1,000$ psi)
- ☐ M2 17-4 SS ($> 1,000$ psi)
- ☐ M7 Incoloy (10,000 - 30,000 psi; P56/P57 only)

J. Compensated Temperature Range

- ☐ S0* -17° to 54°C / 0° to 130°F ($> 1,000$ 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 ($5 < x \leq 10$ psi)
- ☐ S10* -10° to 70°C / 14° to 158°F ($10 < x \leq 1000$ psi)
- ☐ S11* No Temperature Specification (≤ 5 psi)
Hazloc ratings only valid to ambient temperature of 80°C (176°F)

K. Location Ratings

- ☐ Y0 No Approvals
- ☐ Y2 North American Intrinsic Safety
Class I, Div. 1, Groups C, D T4, Ex ia
Class I, Zone 0, AEx ia IIB T4 Ga
Ex ia IIB T4 Ga

* This option is standard.