# Additel 680P
# Digital Pressure Gauges

- Stainless steel housing
- Fully welded sensor
- Backlight display
- Intrinsically safe (ADT680PEx)
- IP67 rated

## OVERVIEW

Additel's 680P Series Digital Pressure Gauges are designed to be used in panel mount applications. With features such as datalogging and Bluetooth technology included, you will find these gauges to be high in value at a reasonable cost. These durable IP67 rated gauges have been built with outdoor elements in mind and are the perfect fit for field work as well as in the laboratory. If you are working in an intrinsically sensitive area, look to our Ex-versions of this amazing digital pressure gauge to provide that extra level of safety in sensitive areas.

**Durable:**

The model ADT680P has been built with the finest materials to ensure that is can hold up to elements. Everything from the stainless outer shell to the innermost sensor design have been optimized to ensure that this gauge will keep you informed with on-demand and logged pressure readings for years to come. The IP67 rating ensures that dusty and wet environments won't hamper these gauges ability to perform while the shock and vibration resistance (5g vibration 10g shock) coupled with the corrosion resist wetted parts help to protect the inner workings of these durable.

**Easy to use:**

Technicians often have tight schedules and heavy workloads; this leaves little extra time for correcting mistakes or doing rework. The ADT680P series products are carefully designed with button functions and menus that are smooth and easy to use which saves on valuable time. The display is clear in bright sunlight, and the backlight can be turned on with a one-button press for use in low light situations. Pressure value can be displayed in large fonts and can be read from a few meters away making this gauge the perfect device for no-nonsense measurement, calibration, and verification work.

**Easy to maintain:**

The ADT680P is designed with membrane buttons, which can simply be wiped clean for quick and simple cleaning. Coupled with the extra-long battery life of these easy-to-use gauges, you will find that maintenance is minimal and infrequent.

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## SPECIFICATIONS

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| Model | ADT680P | ADT680PEx |
|---|---|---|
| Description | Digital Pressure Gauge | Intrinsically Safe Digital Pressure Gauge |
| Intrinsic Safety & European Compliance | CE marked | CE marked |
| | | EU: II 1G EX ia IIC T4 Ga T4 at -20~50°C |
| | | North America: CLASS I, Division 1, Groups A, B, C and D, T4<br>CLASS I, Zone 0, AEx ia IIC T4 Ga<br>T4 at -20~50°C |
| | | International:EX ia IIC T4 Ga T4 at -20~50°C |
| Accuracy | 0.02%, 0.05%, 0.1%, 0.2% of full span (For detailed accuracy, please see pressure range table) | |
| Gauge Types | Gauge pressure, compound pressure | |
| Installation direction | Installed axially | |
| Display | Description: Wide viewing angle FSTN segment code LCD , three partition design | |
| | White backlight, the lighting time can be set: ON, 15 seconds, 30 seconds, 45 seconds, 60 seconds, the default is 15 seconds | |
| | 4~5 digit display can be switched,numeral display height: 16mm (0.62") | |
| Display Rate | 3 readings per second in low power mode (default setting)<br>Adjustable from 10 readings per second to 1 reading every 10 seconds | |
| Pressure Units | Pa, kPa, MPa, psi, bar, mbar, kgf/cm$^2$, %, in$H_2O$@4°C, mm$H_2O$@4°C, inHg@0°C, mmHg@0°C | |
| | 6 engineering water columns:inH2O(20°C), inH2O(60°F), mmH2O(20°C), mmH2O(15°C), ftH2O(60°F), ftH2O(4°C) | |
| | 1 custom unit: identified by the USER icon, and the conversion coefficient can be set through Additel-Link | |
| Environmental | Compensated Temperature: 14°F to 122°F (-10°C to 50°C) | |
| | Operating Temperature: -4°F to 122°F (-20°C to 50°C) | |
| | Storage Temperature: -40°F to 167°F (-40°C to 75°C) | |
| | Humidity: 5%-95%,no condensation Working altitude: <3,000 meters | |
| Pressure Port | ≤15,000 psi: 1/4NPT male, 1/2NPT male, 1/4BSP male, 1/2BSP male, M20×1.5 male | |
| | >15,000 psi: 1/4HP female or 1/4HP male<br>*1/4HP female: Autoclave F-250-C, 9/16" - 18 UNF-2B<br>*1/4HP male: Autoclave M-250-C, 9/16" - 18 UNF-2A | |
| Power | External power supply through RS232 cable, and 3 AA alkaline batteries can also be installed as backup power | |
| | Battery life:<br>1. Super stable mode[1]: 4000 hours (3 reading/s, default), 1000 hours (10 reading/s)<br>2. Low power mode[2]: 5000 hours (2 reading/s), 9000 hours (1 reading/s), 18000 hours (1 reading/10s) | |
| | Power auto-off: 120, 90, 60, 45, 30, 15 minutes auto-off options | |
| | The factory default of power auto-off feature is inactive | |
| Enclosure | Case material:304 SS; Front panel material: anti-static PET; Rubber boot material (optional): anti-static TPU | |
| | Wetted parts material: 316L SS | |
| | Dimension: Ø3.62" x 4.52"depth, flange Ø5.43" (Ø92mm x115 mm depth, flange Ø138mm) | |
| | Weight: 1.32 lbs (0.6 kg) | |
| Compliance | Protection Level: IP67 | |
| | Vibration: 5g (20-2000 Hz) | |
| | Shock Resistance: 10g | |
| Data Logging (Optional) | Data storage: 800,000 records (time and pressure) or 400,000 records (time, pressure and temperature) | |
| | Rate: user-selectable from 1 to 99,999 second intervals | |
| Communication | Bluetooth (BLE5.3), RS232 *(Do not use the RS-232 connector in a hazardous area) | |
| Warranty | 1 year | |

Note:
[1] The pressure sensor has been powered continuously when the gauge is on, to improve the measurement resolution and reduce the impact of ambient humidity.
[2] The pressure sensor will be powered off after each sampling, to improve the continuous working hours.



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## PRESSURE RANGE

| *Gauge Pressure* [1] | | | | | | |
|---|---|---|---|---|---|---|
| P/N | Pressure Range | | Media[2] | Accuracy | | Burst Pressure |
| | (psi) | (bar) | | %FS | %RD[3] | |
| V15 | -15 | -1 | G, L[4] | 0.02, 0.05, 0.1, 0.2 | N/A | 3× |
| GP5 | 5 | 0.35 | G, L[4] | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP10 | 10 | 0.7 | G, L[4] | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP15 | 15 | 1.0 | G, L[4] | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP30 | 30 | 2.0 | G, L[4] | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP50 | 50 | 3.5 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP100 | 100 | 7.0 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP150 | 150 | 10 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP300 | 300 | 20 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP500 | 500 | 35 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP600 | 600 | 40 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP1K | 1,000 | 70 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP1.5K | 1,500 | 100 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP2K | 2,000 | 140 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP3K | 3,000 | 200 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP5K | 5,000 | 350 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 3× |
| GP10K | 10,000 | 700 | G, L | 0.02, 0.05, 0.1, 0.2 | 0.1 | 1.5× |
| GP15K | 15,000 | 1,000 | G, L | 0.05, 0.1, 0.2 | 0.1 | 1.5× |
| GP20K | 20,000 | 1,400 | G, L | 0.05, 0.1, 0.2 | N/A | 1.5× |
| GP25K | 25,000 | 1,600 | G, L | 0.05, 0.1, 0.2 | N/A | 1.5× |
| GP30K | 30,000 | 2,000 | G, L | 0.05, 0.1, 0.2 | N/A | 1.5× |
| GP36K | 36,000 | 2,500 | G, L | 0.05, 0.1, 0.2 | N/A | 1.5× |
| GP40K | 40,000 | 2,800 | G, L | 0.05, 0.1, 0.2 | N/A | 1.35× |
| GP50K | 50,000 | 3,500 | G, L | 0.1, 0.2 | N/A | 1.2× |
| GP60K | 60,000 | 4,200 | G, L | 0.1, 0.2 | N/A | 1.1× |

[1] Sealed gauge pressure for above 1,000 psi
[2] G=Gas, L=Liquid
[3] %RD accuracy: 0% to 20% of range: ± (0.02% of full span),20% to 110% of range: ± (0.1% of reading)
vacuum: ± (0.25% of FS), FS=-14.5psi
[4] 0.02%FS for gas media only

| *Compound Pressure* | | | | | | |
|---|---|---|---|---|---|---|
| P/N | Pressure Range | | Media [1] | Accuracy | | Burst Pressure |
| | (psi) | (bar) | | %FS[2] | %RD[3] | |
| CP5 | ±5 | ±0.35 | G, L | 0.1, 0.2 | N/A | 3× |
| CP10 | ±10 | ±0.7 | G, L | 0.05, 0.1,0.2 | 0.2 | 3× |
| CP15 | ±15 | ±1 | G, L | 0.05, 0.1, 0.2 | 0.2 | 3× |
| CP30 | -15 to 30 | -1 to 2 | G, L | 0.05, 0.1, 0.2 | 0.2 | 3× |
| CP50 | -15 to 50 | -1 to 3.5 | G, L | 0.05, 0.1, 0.2 | 0.2 | 3× |
| CP100 | -15 to 100 | -1 to 7 | G, L | 0.05, 0.1, 0.2 | 0.2 | 3× |
| CP150 | -15 to 150 | -1 to 10 | G, L | 0.05, 0.1, 0.2 | 0.2 | 3× |
| CP300 | -15 to 300 | -1 to 20 | G, L | 0.05, 0.1, 0.2 | 0.2 | 3× |
| CP500 | -15 to 500 | -1 to 35 | G, L | 0.05, 0.1, 0.2 | N/A | 3× |
| CP600 | -15 to 600 | -1 to 40 | G, L | 0.05, 0.1, 0.2 | N/A | 3× |
| CP1K | -15 to 1K | -1 to 70 | G, L | 0.05, 0.1, 0.2 | N/A | 3× |

[1] G=Gas, L=Liquid
[2] FS specification applies to the span of the range
[3] %RD accuracy: 0% to 20% of range: ± (0.02% of full span),20% to 110% of range: ± (0.2% of reading)
vacuum: ± (0.25% of FS), FS=-14.5psi

| *Barometric Pressure* | | | | | |
|---|---|---|---|---|---|
| P/N | Pressure Range | | Media[1] | Annual Accuracy | Burst Pressure |
| | Low | High | | | |
| BP | 60 kPa | 110 kPa | G | ±55Pa | 3× |
| BPH | 60 kPa | 110 kPa | G | ±22Pa | 3× |

[1] G=Gas



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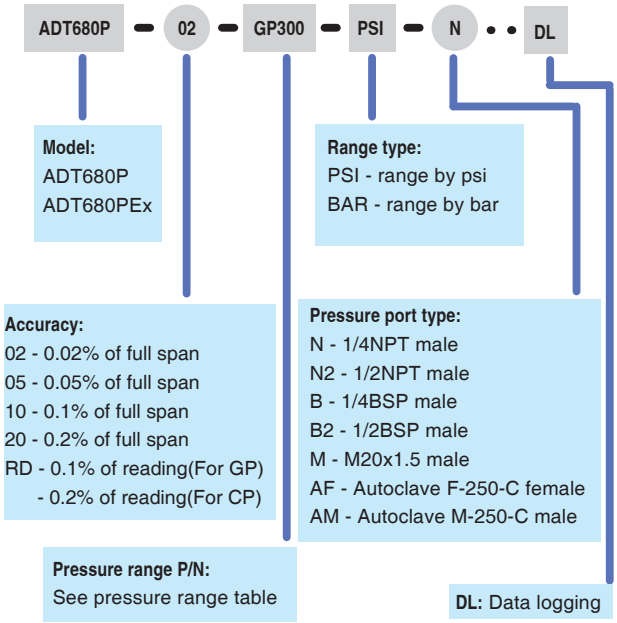
## ORDERING INFORMATION

### Model Number




### Accessories Included

| |
|---|
| AA alkaline battery (3 pcs) |
| ISO 17025 accredited calibration certificate |

### Optional Accessories

| Model number | Description |
|---|---|
| 9530-BASIC | Additel Acal Automated calibration software with asset management, basic version |
| 9530-NET | Additel Acal Automated calibration software with asset management, network version, Includes server installation and 1 user license |
| 9502 | Additel Log II data logging software (PC) |
| 9814-X | Power supply kit (including power adapter and RS232 communication line) |
| 9530-PRO | Additel Acal Automated calibration software with asset management, professional version for single PC |
| 9050 | USB to RS232 (DB9/M) Adapter |
| 9050-EXT | RS 232 (DB9/M) extension cable, 9 feet |



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