

# Additel 680 Series Digital Pressure Gauges



- Pressure ranges to 40,000 psi (2,800 bar)
- 0.05%, 0.1% or 0.25%FS accuracy
- Fully temperature compensated accuracy
- IP67
- Data logging and wireless (680W)



680 with data logging and wireless (optional)

## OVERVIEW

We designed the 680 series digital pressure gauges with two main objectives in mind. First, to provide an affordable digital gauge to replace mechanical gauges. If you're looking to move from dial gauges to a digital gauge, you'll find the 680 standard version gauge to be of high quality and suited for your need in terms of price and performance. With advanced microprocessor technology and state-of-the-art silicon pressure sensors, the 680 series digital pressure gauges provide an accurate, reliable, and economic solution for a wide range of pressure applications. They are loaded with functionality and remarkably easy to use. To reach the best performance, every silicon pressure sensor is specially aged, tested and screened before assembly.

The second objective was to provide a high-precision pressure gauge capable of wireless communication and data logging. Our 680W series provides just this along with several accuracy and pressure range options to meet your need. This wireless unit is compatible with the Additel/Land Wireless software, which is available for a free download from our website. Data can be recorded standalone with the 680W and then downloaded wirelessly to Additel/Land Wireless. For more advanced logging and data analysis, Additel/Log II Wireless is specially designed to communicate with the 680W. Each unit can store up to 140,000 readings which consist of date, time, pressure, and internal temperature. The 680 series digital pressure gauges are unmatched in performance and reliability. Best of all they are very affordable.

## FEATURES

- Pressure ranges to 40,000 psi (2,800 bar)
- 0.05%, 0.1% or 0.25% full scale accuracy
- Fully temperature compensated accuracy from 14°F to 122°F (-10°C to 50°C)
- Up to 13 selectable pressure units, 6 customized definition engineering units
- Large, easy to read display with 5-digit resolution
- Backlit display
- Icon-based menu
- Display flash warning when pressure exceeds 120% of FS
- Stainless wetted surface construction
- IP67 (submersible in 1 meter of water)
- Drop-tested from 1 meter
- 2 AA alkaline batteries
- CE R&TTE, FCC ID, IC ID Certificates
- NIST traceable calibration with data(included)

## SPECIFICATIONS

- **Models**
  - ADT680: Regular version
  - ADT680W: Data logging and wireless version
- Pressure Type: Gauge and Compound

### ■ Performance

Accuracy: 0.05%, 0.1% or 0.25%FS  
 Update Rate: 10 times/Sec ,3 times /Sec (default),  
 1 time /Sec ,1 time/15 Seconds  
 Operating Temperature: 14°F to 122°F (-10°C to 50°C)  
 Compensated Temperature: 14°F to 122°F (-10°C to 50°C), accuracy guaranteed  
 Storage Temperature: -4°F to 158°F (-20°C to 70°C)  
 Overload Pressure: 1.2X

### ■ Power Supply

Battery: 2 x AA alkaline (LR6) batteries  
 \*Recommend: Duracell MX1500, EnergizerE91,  
 Panasonic LR6, or Duracell 15AU

### Battery Life:

10 rdg/sec: 1500 hrs; 3 rdg/sec: 3000 hrs  
 1 rdg/sec: 6000 hrs; 1 rdg/15 sec: 12000 hrs.  
 Rated Power: 3.0VDC I<sub>max</sub>=30mA P<sub>max</sub>=90mW

### ■ Material

Wetted Surface: All wetted surfaces are 316L Stainless Steel with welded design for gauges ≤ 10,000 psi (no O-ring, thread tape, epoxy, or sealant on any part of the sensor assembly), and copper O-ring design for gauges > 10,000 psi.  
 Case: PC+ABS  
 Protective Cover: Silicone Rubber



## SPECIFICATIONS

- Display**  
 LCD Specification: FSTN-LCD, Visual scope 36x61mm;  
 Full 5 digits, 15.2mm High; 7 segment analog bar graph scaled from 0-100% of FS  
 Backlight: White
- Wireless Communication (ADT680W only)**  
 Wireless Frequency: 2.4G ISM Bands, 20 meter range  
 Number of wireless Channels : Chanel 1-15  
 Software: Wireless network demo software included  
 Read upto 20 gauges.
- Data Logging (ADT680W only)**  
 Storage Capacity: 140,000 readings(time, pressure, and temperature)  
 Storage Interval: Adjustable from 1-9999 Sec  
 Single-button-press data logging enabled
- Compliances**  
 Certificates: CE R&TTE, FCC ID, IC ID  
 Protection Level: IP67  
 Vibration: 5g(20-2000Hz)  
 Shock resistance: 100g/11ms
- Others**  
 Dimensions: 100mm x 40mm, total height: 157mm  
 Weight: 500g  
 Fitting: 1/4NPT male, 1/2NPT male, 1/4BSP male, 1/2BSP male, M20x1.5 male ( $\leq 15,000$  PSI)  
 1/4HP female or 1/4HP male ( $> 15,000$  PSI)  
 \*1/4HP female: Autoclave F-250-C, 9/16" - 18 UNF-2B  
 \*1/4HP male: Autoclave M-250-C, 9/16" - 18 UNF-2A  
 Other connections available per request

Gauge Pressure					
P/N	Pressure Range		Accuracy(FS%)	Media <sup>[3]</sup>	Burst Pressure
	(psi) <sup>[1]</sup>	(bar)			
V15	-15	-1.0	0.05 (0.1, 0.25)	G	3x
GP15	15	1.0	0.05 (0.1, 0.25)	G,L	3x
GP30	30	2.0	0.05 (0.1, 0.25)	G,L	3x
GP100	100	7.0	0.05 (0.1, 0.25)	G,L	3x
GP300	300	20	0.05 (0.1, 0.25)	G,L	3x
GP500	500	35	0.05 (0.1, 0.25)	G,L	3x
GP1K	1,000	70	0.05 (0.1, 0.25)	G,L	3x
GP3K	3,000	200	0.05 (0.1, 0.25)	G,L	3x
GP5K	5,000	350	0.05 (0.1, 0.25)	G,L	3x
GP10K	10,000	700	0.05 (0.1, 0.25)	G,L	3x
GP15K	15,000	1,000	0.05 (0.1, 0.25)	G,L	2x
GP20K	20,000	1,400	0.05 (0.1, 0.25)	G,L	1.5x
GP25K	25,000	1,600	0.1 (0.25)	G,L	1.5x
GP30K	30,000	2,000	0.1 (0.25)	G,L	1.5x
GP36K	36,000	2,500	0.1 (0.25)	G,L	1.5x
GP40K	40,000	2,800	0.1 (0.25)	G,L	1.1x

Compound Pressure <sup>[1]</sup>					
P/N	Pressure Range		Accuracy(FS%) <sup>[2]</sup>	Media <sup>[3]</sup>	Burst Pressure
	(psi)	(bar)			
CP15	$\pm 15$	$\pm 1$	0.05(0.1, 0.25)	G,L	3x
CP30	-15 to 30	-1 to 2	0.05(0.1, 0.25)	G,L	3x

[1] Sealed gauge pressure for above 1,000 psi.

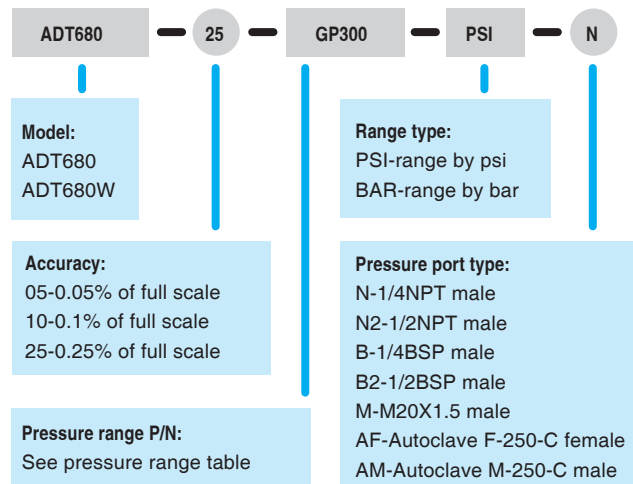
[2] FS specification applies to the span of the range.

[3] G=Gas, L=Liquid

- Auto off:**  
 Disabled, 15, 30, 45, 60, 90, or 120 Minutes.
- Filtering:** Averaging (3 to 10 samples) or low-pass first-order filter.
- Engineering units:** Pa, kPa, MPa, bar, mba, psi, kgf/cm<sup>2</sup>, mmH<sub>2</sub>O, mmHg, inH<sub>2</sub>O, inHg, ozf/in, %, °C, °F.  
 extend units: inH<sub>2</sub>O(20°C), inH<sub>2</sub>O(60°F), mmH<sub>2</sub>O(20°C), mmH<sub>2</sub>O(15°C), ftH<sub>2</sub>O(60°F), or ftH<sub>2</sub>O(4°C)
- Backlight Duration:**  
 Not auto off, 15,30,45,60 seconds optional.
- Max/Min data capture:** Saves Max and Min data during pressure measurement.
- Key Lockout:** When the gauge is in auto-storing mode, the front panel buttons will be automatically locked.
- Overpressure Alarm:** Display will flash over 120%FS
- Battery voltage Indicator:** Displays the battery life remaining. When the battery voltage is too low, the gauge will power-off automatically.
- Overpressure Record:**  
 Gauge will record max pressure data when the gauge is over pressured by 120% of FS.
- Leakage test:**  
 In leak test mode, the gauge will record beginning pressure, ending pressure, and show the difference  $\Delta P$ .
- Factory Reset:**  
 Resets all settings back to factory default, except the calibration parameters.
- Warranty:** 1 year

## ORDERING INFORMATION

### Model Number



### Accessories included

AA battery (2 pcs); Manual; NIST traceable calibration certificate;  
 Rubber boot for Additel 680 gauge;  
 Additel/Land Wireless software for 680W (free download at [www.additel.com](http://www.additel.com))

### Optional Accessories

Model number	Description
9503	Additel/Log II Wireless real time data logging and graphical software for 680W
9030	Spare wireless master device (USB dongle) for ADT680W gauge.

Note: For oil-free applications contact Additel.

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