Additel 680A
Digital Pressure Gauges

Additel
Metrology Made Simple

- **Pressure ranges up to 60,000 psi (4,200 bar)**
- **0.1% or 0.2%FS accuracy**
- **800,000 data logging records**
- Intrinsically safe (ADT680AEx)
- IP67,Stainless steel shell, fully welded sensor
- Battery life up to 4000 hours
- Large, easy-to-read display
- Backlit display
- Bluetooth and RS232 capable
- Communication with Additel's Link Mobile App

ADT680A&ADT680AEx with data logging and Bluetooth

OVERVIEW

Additel's 680A Series Digital Pressure Gauges are designed with a wide range of pressure measurement and calibration applications in mind. 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 when accuracy and dependability are a must. 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.

Durability

The model ADT680A has been built with the finest materials to ensure that it can hold up to the elements. Everything from the stainless steel 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 resistant wetted parts help to protect the inner workings of these durable Additel gauges.

Easy-to-use

Technicians often have tight schedules and heavy workloads, which leaves little extra time for correcting mistakes or doing rework. The ADT680A prevents these errors with button functions that are smooth and easy to use. 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. The 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 ADT680A is designed with membrane buttons, making them easy to clean and maintain. Coupled with the extra-long battery life of these easy-to-use gauges, you will find that maintenance is minimal and infrequent.

Bluetooth

SPECIFICATIONS

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Model	ADT680A	ADT680AEx
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 CLASS I, Zone 0, AEx ia IIC T4 Ga T4 at -20~50°C
		International:EX ia IIC T4 Ga T4 at -20~50°C
Accuracy (For detailed accuracy, please see pressure range table)	0.1% , 0.2% of full span	
Gauge Types	Gauge pressure, compound pressure	
Display	Description: Wide viewing angle FSTN segment code LCD, three partition design	
	White backlight	
	4 or 5 digit display (switchable). Numeral display height: 14.5mm (0.57")	
Display Rate	3 readings per second in low power mode (default setting) Adjustable from 10 readings per second to 1 reading every 10 seconds	
Pressure Units	Pa, kPa, MPa, psi, bar, mbar, kgf/cm², %,inH$_2$O@4°C,mmH$_2$O@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. The conversion coefficient can be set via Additel Link mobile app	
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: <3000 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 *1/4HP female: Autoclave F-250-C, 9/16" - 18 UNF-2B *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: 1. Super stable mode[1]: 4000 hours (3 reading/s, default), 1000 hours (10 reading/s) 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	Shell material: 304 SS	
	Wetted parts material: 316L SS	
	Dimension: Ø4.13" x 1.83" x 5.84"(105mm x 46.5 mm x 148.5 mm)	
	Weight: 1.27 lbs (0.58 kg)	
Compliance	Protection Level: IP67(working media is liquid)	
	Vibration: 5 g (20-2000 Hz)	
	Drop-tested from 1 meter	
	Shock Resistance: 10 g	
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: 20 meters range without shelter , RS232 *(Do not use the RS-232 connector in a hazardous areas)	
Filtering	Averaging (3 to 10 samples) or low-pass first-order filter	
Overpressure Warning	Display flash warning when pressure exceeds 120% of FS	
Calibration	ISO 17025 Accredited Calibration Certificate with data	
Warranty	1 year	

Note: Do not connect to the RS232 port in hazardous areas, and do not replace batteries in hazardous areas.

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

[1] Sealed gauge pressure for above 1,000 psi
[2] G=Gas, L=Liquid

Compound Pressure

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

[1] G=Gas, L=Liquid
[2] FS specification applies to the span of the range

ORDERING INFORMATION

Model Number

| ADT680A | — | 10 | GP300 | PSI | — | N | • • | DL |

Model:
ADT680A
ADT680AEx

Accuracy:
10-0.1% of full span
20-0.2% of full span

Pressure range P/N:
See pressure range table

Range type:
PSI-range by psi
BAR-range by bar

Pressure port type:
N- 1/4NPT male
N2- 1/2NPT male
B-1/4BSP male
B2-1/2BSP male
M-M20X1.5 male
AF-Autoclave F-250-C female
AM-Autoclave M-250-C male

DL: Data logging
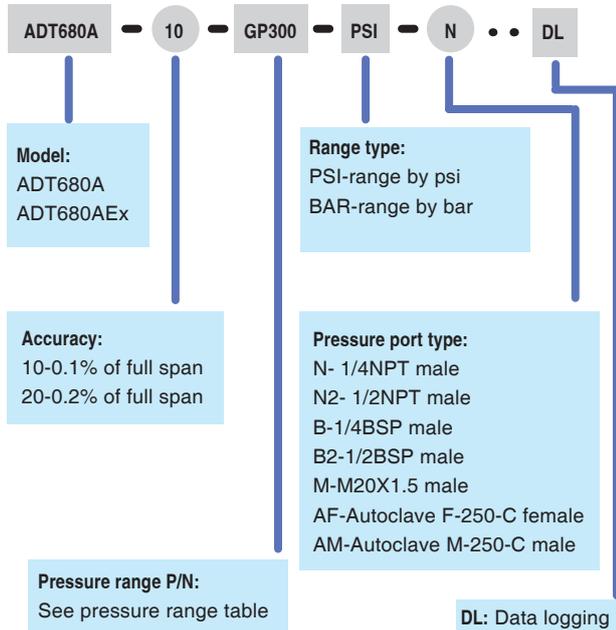
Accessories Included

Rubber boot
AA alkaline battery (3 pc)
ISO 17025 accredited calibration certificate

Optional Accessories

Model number	Description
9258	Rubber Boot for 680A gauge(Blue)
9259	Rubber Boot for 680AEx & 601Ex gauge (Red)
9040	Hanging strap with magnet
9262	Screen protector kit for ADT680A and ADT601EX
9250	All weather cover for ADT601EX and ADT680A gauges
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)
9530-PRO	Additel Acal Automated calibration software with asset management, professional version for single PC
9814-X	Power supply kit (including power adapter and RS232 communication line)
9050	USB to RS232 (DB9/M) Adapter
9050-EXT	RS 232 (DB9/M) extension cable, 9 feet
9920	Carrying case for one ADT680A digital pressure gauge
9919EX-1	Carrying case for one gauge for ADT601Ex, 680AEx, 681AEx, and 685Ex gauges

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