

ADT 681A

Digital Pressure Gauges



- **Pressure ranges up to 60,000 psi (4,200 bar)**
- **0.02%FS or 0.1% RD accuracy**
- Measures gauge or absolute pressure
- % pressure indication with fan-shaped graphic
- Fully temperature compensated accuracy (-10~50°C)
- Bluetooth communication
- Communication with Additel's Link Mobile App
- Large easy-to-read display
- Intrinsically safe version (681AEx)
- Data logging (up to 10,000,000 records)
- IP67 rated

Overview

Additel's 681A Series Digital Pressure Gauges are designed to be your favorite tool for a wide range of pressure measurement and calibration 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.

Durability

The model ADT681A has been built with the finest materials to ensure that it can hold up 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 this 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 ADT681A solves this problem with carefully designed 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. 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 maintenance

The ADT681A is designed with membrane buttons, making them easy to clean and maintain over time, 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.



Specifications

Model	ADT 681A	ADT68aAEX
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)	681A(Ex)-02:	0.02% of full span
	681A(Ex)-05:	0.05% of full span
	681A(Ex)-RD:	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= 14.5 psi
	Built-in barometer: 55 Pa	
Gauge Types	Gauge pressure, compound pressure, absolute pressure (calculated by gauge pressure and barometric pressure), differential pressure and barometric pressure	
Multifunction Fan-shaped section	Atmospheric pressure, ambient temperature, peak-peak values (max, min), TARE, leak test, pressure percentage display, time display, data logging status	
Display	Wide viewing angle FSTN segment code LCD, three partition design	
	White backlight, backlight time: ON, 15 seconds, 30 seconds, 45 seconds, 60 seconds, the default is 15 seconds	
	5~6 digit display can be switched, character height 14.8mm(0.58"), main display + unit display + fan-shaped section	
Pressure Units	Pa, kPa, MPa, psi, bar, mbar, kgf/cm ² , %,inH ₂ O@4°C,mmH ₂ O@4°C, inHg@0°C, mmHg@0°C	
	6 engineering water column units: inH ₂ O(20°C), inH ₂ O(60°F), mmH ₂ O(20°C), mmH ₂ O(15°C), ftH ₂ O(60°F), ftH ₂ O(4°C)	
	1 custom unit: identified by the USER code, and the conversion coefficient can be set through Additel -Link	
Environmental	Compensated Temperature: -4°F to 122°F (-20°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%RH~95%RH, non-condensing	
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	
	Differential Pressure: barb fitting	
Other connections available per request		

Power	Battery: 3 AA alkaline batteries
	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 minute auto-off options or never
	External power: power supply through USB (optional)
Enclosure	Case material: 304 SS; Front panel material: anti-static PET; Rubber boot material (optional): anti-static TPU
	Wetted parts material: 316L SS
	Dimension: Ø4.65" x 1.65" x 7"(118mm x 42 mm x 178 mm)
	Weight: 1.5 lbs (0.68 kg)
Compliance	Protection Level: IP67(against 1 meter water immersion for 30 mins)
	Vibration: 5 g; Shock Resistance: 10 g
	1 meter drop test (without rubber boot)
Data Logging	Data storage: 10,000,000 records (time and pressure) or 5,000,000 records (time, pressure and temperature)
	Rate: user-selectable from 0.1 to 99,999 second intervals
Communication	Bluetooth (BLE4.2), USB-C, RS232 *(Do not use the USB-C or 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.



Pressure Range

Gauge Pressure ^[1]						
PN	Pressure Range		Media	Accuracy		Burst Pressure
	(psi)	(bar)		% FS	% RD ^[3]	
V15 ^[2]	-15	-1.0	Gas	0.02	N/A	3 x
V15 ^[2]	-15	-1.0	Gas, Liquid	0.05	N/A	3 x
GP2	2	0,16	Gas	0.05	N/A	3 x
GP5	5	0.35	Gas, Liquid	0.05	0.1	3 x
GP10	10	0.7	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP15	15	1.0	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP30	30	2.0	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP50	50	3.5	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP100	100	7.0	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP150	150	10	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP300	300	20	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP500	500	35	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP600	600	40	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP1K	1.000	70	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP1.5K	1.500	100	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP2K	2.000	140	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP3K	3.000	200	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP5K	5.000	350	Gas, Liquid	0.02 / 0.05	0.1	3 x
GP10K	10.000	700	Gas, Liquid	0.02 / 0.05	0.1	1,5 x
GP15K	15.000	1.000	Gas, Liquid	0.05 (0.1)	0.1	1,5 x
GP20K	20.000	1.400	Gas, Liquid	0.05 (0.1)	N/A	1,5 x
GP25K	25.000	1.600	Gas, Liquid	0.05 (0.1)	N/A	1,5 x
GP30K	30.000	2.000	Gas, Liquid	0.05 (0.1)	N/A	1,5 x
GP36K	36.000	2.500	Gas, Liquid	0.05 (0.1)	N/A	1,5 x
GP40K	40.000	2.800	Gas, Liquid	0.05 (0.1)	N/A	1.35 x
GP50K	50.000	3.500	Gas, Liquid	0.1 (0.2)	N/A	1.2 x
GP60K	60.000	4.200	Gas, Liquid	0.1 (0.2)	N/A	1.1 x

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

[2] Vacuum range is (-15-0) psi

[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

Barometric Pressure					
PN	Pressure Range		Media	Annual Accuracy%	Burst Pressure
	(psi)	(bar)			
BP	60 kPa	110 kPa	Gas	± 55 PA	3 x
BPH	60 kPa	110 kPa	Gas	± 22 PA	3 x

Compound Pressure						
PN	Pressure Range		Media	Accuracy		Burst Pressure
	(psi)	(bar)		% FS ^[2]	% RD ^[3]	
CP2	±2	±0.16	Gas, Liquid	0.05	N/A	3 x
CP5	±5	±0.35	Gas, Liquid ^[1]	0.02 / 0,05	0.1	3 x
CP10	±10	±0.7	Gas, Liquid ^[1]	0.02 / 0,05	0.1	3 x
CP15	±15	±1	Gas, Liquid ^[1]	0.02 / 0,05	0.1	3 x
CP30	-15 to 30	-1 to 2	Gas, Liquid ^[1]	0.02 / 0,05	0.1	3 x
CP50	-15 to 50	-1 to 3.5	Gas, Liquid	0.02 / 0,05	0.1	3 x
CP100	-15 to 100	-1 to 7	Gas, Liquid	0.02 / 0,05	0.1	3 x
CP150	-15 to 150	-1 to 10	Gas, Liquid	0.02 / 0,05	0.1	3 x
CP300	-15 to 300	-1 to 20	Gas, Liquid	0.02 / 0,05	0.1	3 x
CP500	-15 to 500	-1 to 35	Gas, Liquid	0.02 / 0,05	N/A	3 x
CP600	-15 to 600	-1 to 40	Gas, Liquid	0.02 / 0,05	N/A	3 x
CP1K	-15 to 1K	-1 to 70	Gas, Liquid	0.02 / 0,05	N/A	3 x

[1] 0.02%FS for gas media only

[2] FS = upper limit of range - lower limit of range

[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

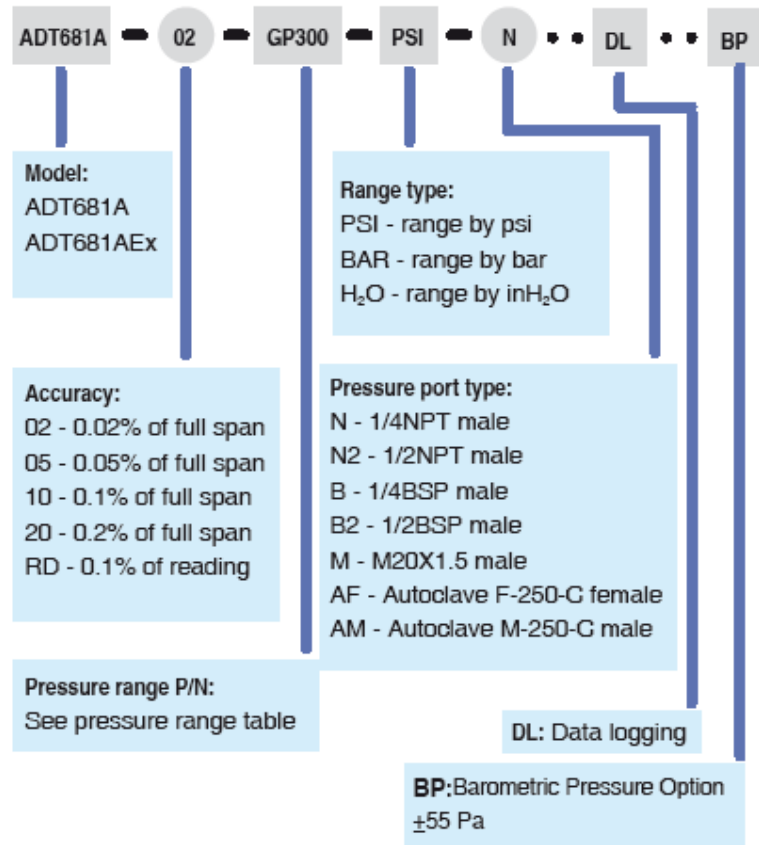
Differential Pressure						
PN	Pressure Range		Media	Accuracy	Burst Pressure	Static Pressure Range (mbar)
	(inH ₂ O)	(mbar)		% FS ^[3]		
DP1	±1	±2.5	Gas	0.05 ^[2]	50 x	±250
DP2	±2	±5.0	Gas	0.05 ^[2]	25 x	±250
DP5	±5	±10	Gas	0.05	10 x	±250
DP10	±10	±25	Gas	0.05	5 x	±250
DP20	±20	±50	Gas	0.05	25 x	±2.500
DP30	±30	±75	Gas	0.05	15 x	±2.500
DP50	±50	±125	Gas	0.05	10 x	±2.500
DP100	±100	±250	Gas	0.02	5 x	±2.500
DP150	±150	±350	Gas	0.02	10 x	±7.000
DP300	±300	±700	Gas	0.02	5 x	±7.000

[1] Calibration interval: 180 days

[2] FS = upper limit of range - lower limit of range

Ordering information

Model Number



Accessories (included)

Rubber boot
AA alkaline batteries (3 pcs)
USB-C cable
Silicone tube - 1 meter each (2 pcs for DP models only)
ISO 17025 accredited calibration certificate

Optional Accessories

Model number	Description
9040	Hanging strap with magnet
9257	Field rain cover
9810	USB power adaptor
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)
9050-EXT	RS 232 (DB9/M) extension cable, 9 feet
9902	Carrying case for four gauges
9903	Carrying case for one gauge

Your Note

Ruled area for notes, consisting of multiple horizontal dashed lines.