Additel 681
Digital Pressure Gauges

- **Pressure ranges to 36,000 psi (2500 bar)**
- **0.025%, 0.05%, 0.1% or 0.2% FS accuracy**
- **% pressure indication with fan-shaped graph scale for visual reference**
- **Fully temperature compensated accuracy**
- **Panel mount gauges are available**

Gauge pressure   **Differential pressure**

OVERVIEW

With advanced microprocessor technology and state-of-the-art silicon pressure sensors, the 681 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 in our gauges is specially aged, tested and screened before assembly. The 681 series digital pressure gauges are unmatched in performance and reliability. Best of all, they are very affordable

FEATURES

- Pressure ranges to 36,000 psi (2500 bar)
- 0.025% full scale accuracy (681-02)

  0.05% full scale accuracy (681-05)

  0.1% full scale accuracy (681-10)

  0.2% full scale accuracy (681-20)
- Fully temperature compensated accuracy from 14°F to 122°F (-10°C to 50°C)
- Up to eleven selectable pressure units
- Large, easy to read display with 5-digit resolution
- Backlit display
- % pressure indication with fan-shaped graph scale for visual reference
- Display flash warning when pressure over 120% of FS
- Bottom mount or panel mount
- ATEX certified intrinsically safe (Model 681IS)
- NIST traceable calibration with data(included)
- 9V battery power or AC adapter (optional)

SPECIFICATIONS

- **Model**
  ADT681:   Regular gauge
  ADT681IS: ATEX certified intrinsically safe

- **Accuracy**
  681(IS)-02: 0.025% of full scale
  681(IS)-05: 0.05% of full scale
  681(IS)-10: 0.1% of full scale
  681(IS)-20: 0.2% of full scale
  (For detailed accuracy, please see pressure range table)

- **Gauge Types**
  Gauge pressure
  Compound pressure
  Absolute pressure
  Differential pressure

- **Fan-shaped Graph Scale**
  Similar to analog dials, including pressure swing, % indication with fan-shaped graph scale for visual reference, low/high alarm.

- **Display**
  Description: 5 full digit FSTN LCD
  Display rate: 3 readings per second (Default setting).
  Adjustable from 10 readings per second to 1 reading every ten seconds
  Numeral display height: 16.5mm (0.65")

SPECIFICATIONS

■ **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

■ **Environmental**

Compensated Temperature: 14°F to 122°F (-10°C to 50°C)
Operating Temperature: 14°F to 122°F(-10°C to 50°C)
Storage Temperature: -4°F to 158°F (-20°C to 70°C)
Humidity: <95%

681 with rubber boot

■ **Pressure Ranges**

Gauge Pressure [1]

P/N	Pressure Range (psi)	Pressure Range (bar)	Media [2]	Accuracy(%FS)	Burst Pressure
V15	-15	-1.0	G	0.025 (0.05, 0.1, 0.2)	3 X
GP2	2	0.16	G	0.05 (0.1, 0.2)	3 X
GP5	5	0.35	G	0.025 (0.05, 0.1, 0.2)	3 X
GP10	10	0.7	G	0.025 (0.05, 0.1, 0.2)	3 X
GP15	15	1.0	G,L[3]	0.025 (0.05, 0.1, 0.2)	3 X
GP30	30	2.0	G,L[3]	0.025 (0.05, 0.1, 0.2)	3 X
GP50	50	3.5	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP100	100	7.0	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP300	300	20	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP500	500	35	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP600	600	40	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP1K	1,000	70	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP2K	2,000	140	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP3K	3,000	200	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP5K	5,000	350	G,L	0.025 (0.05, 0.1, 0.2)	3 X
GP10K	10,000	700	G,L	0.025 (0.05, 0.1, 0.2)	2 X
GP15K	15,000	1,000	G,L	0.05 (0.1,0.2)	2 X
GP25K	25,000	1,600	G,L	0.1 (0.2)	1.5 X
GP30K	30,000	2,000	G,L	0.1 (0.2)	1.5 X
GP36K	36,000	2,500	G,L	0.1 (0.2)	1.5 X

Compound Pressure

P/N	Pressure Range (psi)	Pressure Range (bar)	Media	Accuracy(%FS)	Burst Pressure
CP2	±2	±0.16	G	0.05(0.1,0.2)	3 X
CP5	±5	±0.35	G	0.025(0.05,0.1,0.2)	3 X
CP10	±10	±0.7	G	0.025(0.05,0.1,0.2)	3 X
CP15	±15	±1	G	0.025(0.05,0.1,0.2)	3 X
CP30	-15 to 30	-1 to 2	G	0.025(0.05,0.1,0.2)	3 X
CP100	-15 to 100	-1 to 7	G, L	0.025(0.05,0.1,0.2)	3 X
CP300	-15 to 300	-1 to 20	G, L	0.025(0.05,0.1,0.2)	3 X

Absolute Pressure

P/N	Pressure Range (psi)	Pressure Range (bar)	Media	Accuracy(%FS)	Burst Pressure
AP5	5	0.35	G	0.1 (0.2)	3 X
AP10	10	0.7	G	0.1 (0.2)	3 X
AP15	15	1.0	G	0.1 (0.2)	3 X
AP30	30	2.0	G	0.1 (0.2)	3 X
AP50	50	3.5	G	0.1 (0.2)	3 X
AP100	100	7.0	G, L	0.1 (0.2)	3 X
AP300	300	20	G, L	0.1 (0.2)	3 X
AP500	500	35	G, L	0.1 (0.2)	3 X
AP1K	1,000	70	G, L	0.1 (0.2)	3 X
AP3K	3,000	200	G, L	0.1 (0.2)	3 X
AP5K	5,000	350	G, L	0.1 (0.2)	3 X

Differential Pressure

P/N	Pressure Range (inH$_2$O)	Pressure Range (mbar)	Media	Accuracy(%FS)	Burst Pressure
DP1	±1	±2.5	G	0.05	100X
DP2	±2	±5.0	G	0.05	100X
DP5	±5	±10	G	0.05	50X
DP10	±10	±25	G	0.05	20X
DP20	±20	±50	G	0.05	20X
DP30	±30	±75	G	0.05	20X
DP50	±50	±160	G	0.05	3X
DP150	±150	±350	G	0.025(0.05)	3X
DP300	±300	±700	G	0.025(0.05)	3X

Note: [1]. Sealed gauge pressure for above 1000 psi

[2]. G=Gas, L=Liquid (please specify media type when place order)

[3]. 0.025% FS for gas media only

SPECIFICATIONS

■ **Pressure Port**
1/4NPT male, 1/4BSP male, M20×1.5 male (≤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
0.236 inch (Ø6 mm) test hose (for differential pressure)
Other connections available per request

■ **Power**
Battery: One 9V alkaline battery (included)
Battery life: 300 hours (10 readings/s), 600 hours (3 reading/s), or 6000 hours (1 reading/10s)
Power auto-off: 60 minutes power auto-off. Auto-off may be disable
External power: 110/220V external power adapter (optional)
*(Do not use the external power adapter in a hazardous atmosphere)

■ **Enclosure**
Case material: Aluminum alloy
Wetted parts: 316L SS
Dimension:
Ø110mm X 35mm depth X 176mm height
(panel mount gauge: Ø140mm X 86mm depth)
Weight: 0.6kg

■ **Intrinsic Safety and European Compliance**
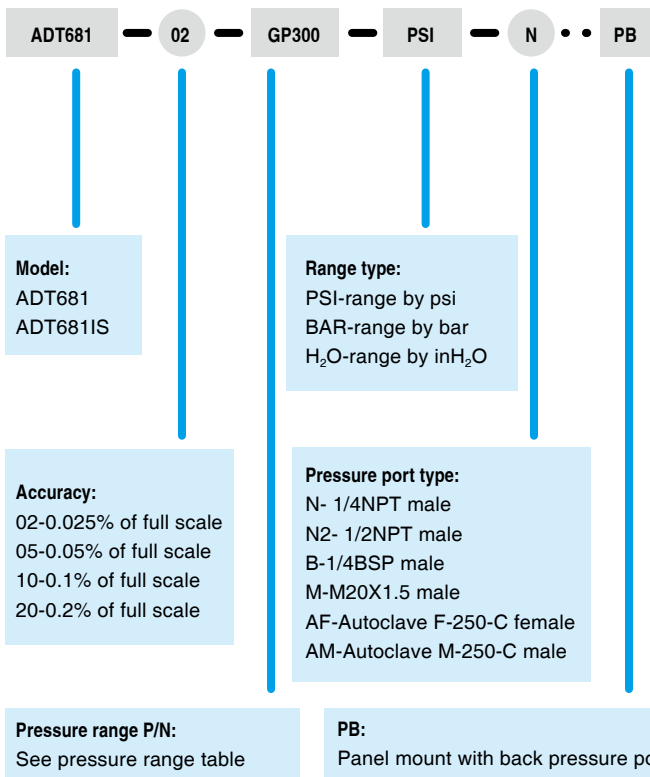CE marked
ATEX certified intrinsically safe (ADT681IS)

■ **Communication:** RS232
*(Do not use the RS-232 connector in a hazardous atmosphere)

■ **Warranty:** 1 year

ORDERING INFORMATION

■ **Model Number**

| ADT681 | — | 02 | — | GP300 | — | PSI | — | N | •• | PB |

Model:
ADT681
ADT681IS

Accuracy:
02-0.025% of full scale
05-0.05% of full scale
10-0.1% of full scale
20-0.2% of full scale

Pressure range P/N:
See pressure range table

Range type:
PSI-range by psi
BAR-range by bar
H$_2$O-range by inH$_2$O

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

PB:
Panel mount with back pressure port

681 Panel mount with back pressure port

■ **Accessories included**
Rubber boot (Except panel mount gauges)
9V alkaline battery (1 pc)
Manual
NIST traceable calibration certificate

■ **Optional Accessories**

Model number	Description
9812	110V/220V external power adapter (DC 9V) for 681 digital pressure gauge.
9502	Additel/Log II real time data logging and graphical software for 681 and 672.
9506	Additel/PCal pressure calibration software
9050	USB to RS232 (DB9/M) Adapter
9900-681	Carrying Case for one 681 digital pressure gauge