ADT 686
Advanced Digital Pressure Gauge

ADT 686

- **Pressure ranges up to 60,000 psi (4,200 bar)**

- **0.02%, 0.05% FS or 0.1% RD Accuracy**

- **Color Touchscreen Display**

- **Every model measures Gauge or Absolute Pressure**

- **Built-in Barometer**

- **Intuitive Smartphone Like Interface**

- **Wi-Fi (optional)**

- **Bluetooth and USB communication**

- **Data logging (optional)**

- **Communicates with Additel's Link Mobile App**

- **IP67 Rated**

Overview

Additel's 686 Advanced Digital Pressure Gauges will redefine the way you want to measure pressure! With wireless remote connectivity, microprocessor technology, state of-the-art silicon pressure sensors and optional onboard storage capacity, these attractive and fully temperature compensated gauges will provide the performance, durability and reliability you've come to expect from genuine Additel products. The all new modern menu structure and control interface bring a new and refreshing experience to pressure calibration work. This completely new way of interfacing with our gauges makes the ADT686 a real pleasure to use. The handy Additel Link app gives users the ability to remotely monitor these gauges from the convenience of a personal device or cell phone. With an abundance of options to choose from, you can configure these pressure gauges to precisely fit your specific pressure calibration and measurement needs. With an IP67 rating, you will find that these amazing pressure gauges can be used in the field or laboratory to meet the most demanding pressure calibration needs.

A Modern User Experience:
Additel has gone above and beyond to provide our customers with the best possible experience when using these new and revolutionary gauges. The 3.4 inch color touchscreen display comes with a protective replaceable tempered glass screen and is a refreshing update to the traditional push button or blister pad interface. With an easy to navigate menu structure and fast touchscreen response, you will find these ADT686 gauges simple yet powerful to use. The easy to read display isn't just fun to use, but it's built rugged to handle the demands of a busy technician in the field or the laboratory.

Every model measures Gauge or Absolute Pressure:
The Additel 686 Digital Pressure Gauges contain a built-in barometer sensor which allows for the pressure reading to display in gauge pressure or absolute pressure with a simple menu selection. The built-in barometer is calibrated and certified to an accuracy of 50 Pa. With this unique feature, the ADT685 can be a solution for three common applications: gauge pressure measurement, absolute pressure measurement, and barometric or atmosphere pressure measurement. Having an Additel as your gauge will always give you the ability to do more with one instrument!

Specifications

Model	ADT 686
Accuracy	ADT686-02: 0.02% of full span
	ADT686-05: 0.05% of full span
	686-RD: 0% to 20% of range: 0.02% of full span 20% to 110% of Range: 0.1% of reading]
	Built in barometer: 55 Pa
Gauge Types	Gauge pressure; compound pressure; absolute pressure; differential pressure and barometric pressure
Display	Color Touchscreen (capacitive)
	Screen protector: tempered glass film (replaceable)
	Display rate: 3 readings per second (default setting). Adjustable from 10 readings per second to 1 reading every 20 seconds
	Resolution: 4,5 or 6 digits (user selectable)
Pressure Units[2]	Pa, kPa, MPa, psi, bar, mbar, kgf/cm2, $inH_2O@4°C$ $mmH_2O@4°C$, inHg@0°C, mmHg@0°C and 5 customizable units
Environmental	Compensated Temperature: -10°C to 50°C (14°F to 122°F)
	Operating Temperature: -10°C to 50°C (14°F to 122°F)
	Storage Temperature: -30°C to 70°C (-4°F to 158°F)
	Humidity: 0 - 95%; non-condensing
Pressure Port	≤15,000 psi: 1/4NPT male; 1/2NPT males; 1/4BSP male; 1/2BSP male; M20x1,5 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: Rechargeable Li-ion battery
	Li-Battery life: 16 hours typical
	Recharge time: 4 hours typical
	External power: 110V/220V power adapter (5 VDC)
Enclosure	Case material: 304 SS
	Wetted parts: 316L SS [1]
	size: 118 mm x 42 mm x 178 mm (4.65" x 1.77")
	Weight: 0.715 kg
Compliance	Protection Level: IP67
	Vibration: 5 g (10-500 Hz)
	Shock Resistance: 8 g/11 ms
	CE, UKCA
Data Logging (available only with ADT686-DL-Models)	Data storage: 8GB (100M+ records)
	Rate: user-selectable from 0.1 to 9999.9 second intervals
Communication	USB Type-C and Bluetooth included, RS232 or Wi-Fi (optional)
Warranty	1 year

[1] Wetted parts material types may vary by pressure range. Please refer to manual or contact to Additel for more information.
[2] Available units are dependent on the overall pressure range

Pressure Ranges

Gauge Pressure [1]

P/N	Pressure range		Medium [2]	Accuracy		Burst Pressure
	psi	**bar**		**% FS**	**% RD**	
V15	-15	-1.0	G	0.02 (0.05)	N/A	3x
GP2	2	0.16	G	0.05	N/A	3x
GP5	5	0.35	G	0.05	0.1	3x
GP10	10	0.7	G / L[3]	0.02 (0.05)	0.1	3x
GP15	15	1.0	G / L[3]	0.02 (0.05)	0.1	3x
GP30	30	2.0	G / L	0.02 (0.05)	0.1	3x
GP50	50	3.5	G / L	0.02 (0.05)	0.1	3x
GP100	100	7.0	G / L	0.02 (0.05)	0.1	3x
GP150	150	10	G / L	0.02 (0.05)	0.1	3x
GP300	300	20	G / L	0.02 (0.05)	0.1	3x
GP500	500	35	G / L	0.02 (0.05)	0.1	3x
GP600	600	40	G / L	0.02 (0.05)	0.1	3x
GP1K	1000	70	G / L	0.02 (0.05)	0.1	3x
GP1.5K	1,500	100	G / L	0.02 (0.05)	0.1	3x
GP2K	2,000	140	G / L	0.02 (0.05)	0.1	3x
GP3K	3,000	200	G / L	0.02 (0.05)	0.1	3x
GP5K	5,000	350	G / L	0.02 (0.05)	0.1	3x
GP10K	10,000	700	G / L	0.02 (0.05)	0.1	1.5x
GP15K	15,000	1,000	G / L	0.05 (0.1)	0.1	1.5x
GP20K	20,000	1,400	G / L	0.05 (0.1)	N/A	1.5x
GP25K	25,000	1,600	G / L	0.05 (0.1)	N/A	1.5x
GP30K	30,000	2,000	G / L	0.05 (0.1)	N/A	1.5x
GP36K	36,000	2,500	G / L	0.05 (0.1)	N/A	1.5x
GP40K	40,000	2,800	G / L	0.05 (0.1)	N/A	1.35x
GP50K	50,000	3,500	G / L	0.1 (0.2)	N/A	1.2x
GP60K	60,000	4,200	G / L	0.1 (0.2)	N/A	1.1x

(1) Sealed gauge pressure for above 1,000 psi
(2) G=Gas, L=Liquid
(3) 0.02% FS for gas media only

Compound Pressure

P/N	Pressure range		Media	Accuracy		Burst Pressure
	psi	**bar**		**% FS**	**% RD**	
CP2	±2	±0.16	Gas	0.05	N/A	3x
CP5	±5	±0.35	Gas	0.02 (0.05)	0.1	3x
CP10	±10	±0.7	Gas	0.02 (0.05)	0.1	3x
CP15	±15	±1	Gas	0.02 (0.05)	0.1	3x
CP30	-15 to 30	-1 to 2	Gas	0.02 (0.05)	0.1	3x
CP100	-15 to 100	-1 to 7	Gas / Liquid	0.02 (0.05)	0.1	3x
CP150	-15 to 150	-1 to 10	Gas / Liquid	0.02 (0.05)	0.1	3x
CP300	-15 to 300	-1 to 20	Gas / Liquid	0.02 (0.05)	0.1	3x
CP500	-15 to 500	-1 to 35	Gas / Liquid	0.02 (0.05)	N/A	3x
CP600	-15 to 600	-1 to 40	Gas / Liquid	0.02 (0.05)	N/A	3x
CP1K	-15 to 1000	-1 to 70	Gas / Liquid	0.02 (0.05)	N/A	3x

Pressure Ranges

Differential Pressure						
P/N	Pressure Range		Media	Accuracy (% FS)[1]	Burst Pressure	Static Pressure Range
	inH2O	mbar				
DP1	±1	±2.5	Gas	0.05 [2]	100x	±10 psi
DP2	±2	±5.0	Gas	0.05 [2]	100x	±10 psi
DP5	±5	±10	Gas	0.05 [2]	50x	±10 psi
DP10	±10	±25	Gas	0.05 [2]	20x	±10 psi
DP20	±20	±50	Gas	0.05	20x	±10 psi
DP30	±30	±75	Gas	0.05	20x	±10 psi
DP50	±50	±125	Gas	0.05	3x	±10 psi
DP100	±100	±250	Gas	0.02	3x	±15 psi
DP150	±150	±350	Gas	0.02	3x	50 psi
DP300	±300	±700	Gas	0.02	3x	50 psi

[1] FS specification applies to the Span of the Range: Accuracy includes one year stability.

[2] 0.05%FS Accuracy (incl. 6 months stability). One year accuracy is 0.05% FS calibration combined with 0.05% FS one year stability.

Barometric Pressure					
P/N	Pressure Range		Media	Accuracy	Burst Pressure
	Low	High			
BP	60 kPa	110 kPa	Gas	55 Pa	3x

Communication Types Supported				
Comm \ Model	ADT685	ADT685Ex	ADT686	ADT673
RS232	○	○	○	○
RS485	○			
WiFi			○	○
USB	●	●	●	●
Bluetooth (BLE)	●	●	●	●

○ Optional   ● Included

Additel Software Compatibility Matrix								
Comm \ Model	ADT685/ADT685Ex				ADT686/ADT673			
	ACal	LogII	Land	Link	ACal	LogII	Land	Link
RS232	●	●	●		●	●	●	
RS485 only for ADT685	◘ [2]	◘ [2]	◘ [2]					
WiFi					●	●	●	●[1]
USB	●	●	●		●	●	●	
Bluetooth (BLE)			●					●

● supported   ◘ Non Ex models only

[1] This configuration requires that the device is connected to ACloud via WiFi to utilize the Additel Link app

[2] 4-20mA output and RS-485 not available in ADT685Ex models

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Accessories included

Rubber boot
Rechargeable Lion battery (1 pc)
USB cable type-C
Battery cover removal tool (1pc)
Power adapter
Silicone tube - 1 meter each (2 pcs for DP models only)
ISO 17025 Accredited Calibration Certificate (DAkkS on demand)

Optional Accessories

Model number	Description
9903	Carrying case for (1) digital pressure gauge
9040	Hanging strap with magnet
9502	Additel/Log II real time data logging and graphical software
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
9050-EXT	RS232 (DB9/M) extension cable, 9 feet
1520000359	Screen protector kit

ADT 686	02	GP300	PSI	N	WIFI	DL

Accuracy:

02 - 0.02% of full span

05 - 0.05% of full span
10 - 0.1% of full span
20 – 0.2% of full span
RD – 0.1% of reading

Pressure Range:

See pressure range tables

Range type:

PSI - range by psi

BAR - range by bar

H_2O – range by inH_2O

Pressure port type

N -1/4 NPT male

N2 -1/2NPTmale

B -1/4 BSP male

B2 -1/2 BSP male

M-M20x1.5 male

AF -Autoclave F-250-C female

AM -Autoclave M-250-C male

Comm port (optional)

WIFI = Wi-Fi

232 = RS-232

DL: Data logging

Your Note