

# Additel 672

## Digital Pressure Calibrators



New Ranges to 60,000 psi (4200 bar)

- Pressure ranges to 60,000 psi (4,200 bar)
- HART Communication capability
- Measure mA or V, and with 24V loop power
- Easy-to-use, inexpensive pressure calibrator with uncertainty better than 0.02%FS



Gauge pressure

Differential pressure

### OVERVIEW

At first glance, the 672 series precision pressure calibrators look like an ordinary pressure gauge. But this series is much more than ordinary, and definitely more than just a pressure gauge—it's a pressure calibrator! With advanced microprocessor technology and state-of-the-art silicon pressure sensors, the 672 series precision pressure calibrators provide a pressure calibration solution for gauges, transmitters, and switches over a wide pressure range. The 672 is the size of a pressure gauge but with the functionality of a calibrator: It measures pressure precisely with a built-in pressure sensor, as well as reads the current or mV produced by a transducer. It can even supply an excitation voltage to power sensors or transmitters during calibration. In order to reach 0.02%FS accuracy up to 10,000 psi (700 bar) and 0.1%FS accuracy up to 60,000 psi (4,200 bar), every silicon pressure sensor has been specially aged, tested, and screened before assembly. The 672 series precision pressure calibrators are unmatched in performance and reliability.

### FEATURES

- Pressure ranges to 60,000 psi (4,200 bar)
- Measure mA with 0.01% RD + 1.5  $\mu$ A accuracy
- Measure V with 0.01% RD + 1.5 mV accuracy
- Power transmitters during test using 24V loop supply
- Pressure switch test
- HART Communication capability
- Advanced temperature compensation
- Dual readout
- Min/Max/Hold to capture changing measurements
- Data logging
- Large, easy to read display with 6-digit resolution
- Backlit display
- Rechargeable battery or AC adapter
- NIST traceable calibration with data (Included)





## SPECIFICATIONS

<b>Accuracy</b>	ADT672-02: 0.02% of full scale
	ADT672-05: 0.05% of full scale
	>20,000 (1,400 bar): 0.1% FS
<b>Gauge Types</b>	Gauge pressure, compound pressure, absolute pressure, differential pressure
<b>Display</b>	Description: Dual-line 6 full digit FSTN LCD with LED Backlight
	Display rate: 3.5 readings per second (Default setting).
	Numeral display height: 16.5mm (0.65")
<b>Pressure Units</b>	Pa, kPa, MPa, psi, bar, mbar, kgf/cm <sup>2</sup> , inH <sub>2</sub> O@4°C, mmH <sub>2</sub> O@4°C, inHg@0°C, mmHg@0°C
<b>Environmental</b>	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%
<b>Pressure Port</b>	≤ 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: 0.236 inch (Ø6 mm) test hose
	Other connections available per request
<b>Over Pressure Warning</b>	120%
<b>Electrical Connection</b>	0.156 inch (Ø4mm) sockets
<b>Electrical Measurement Accuracy</b>	Voltage DC: ±30.0000V, ± (0.01%RD + 1.5 mV)
	Current DC: ±30.0000mA, ± (0.01%RD + 1.5 µA)
	DC 24V: 24V±0.5V, MAX:50mA, Protect at: 120mA
	Switch <sup>[1]</sup> : Status OPEN/CLOSED
<b>Power</b>	Battery: Rechargeable Li-ion polymer battery
	Li-Battery working time: 40 hours
	Recharge time: 4 hours
	External power: 110V/220V power adapter (DC10V)
<b>Enclosure</b>	Case material: Aluminum alloy
	Wetted parts: 316L SS
	Dimension: Ø120mm X 46mm depth X 184mm height
	Weight: 0.7kg
<b>Data Logging</b>	Storage capacity: 30 files, 40 records per file
	Mode: manual and automatic
	Hourly-record: record the data every hour
	Interval-record: set by user
<b>Compliance</b>	CE Marked
<b>Communication</b>	RS232 (DB9/F, environmentally sealed)
	Baud rate: 1200, 2400, 4800, 9600
	Data length: 8 bits
	Stop bit: 2 bits
	Address: from 1 to 112
<b>Warranty</b>	1 year

[1] 1V-12V if switch has detective voltage

## PRESSURE RANGE

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

[1] Sealed gauge pressure for above 1000 psi

[2] G=Gas, L=Liquid

[3] 0.02% FS for gas media only

Absolute Pressure					
P/N	Pressure Range		Media	Accuracy(%FS)	Burst Pressure
	(psi)	(bar)			
AP5	5	0.35	G	0.1	3x
AP10	10	0.7	G	0.1	3x
AP15	15	1.0	G	0.1	3x
AP30	30	2.0	G	0.1	3x
AP50	50	3.5	G	0.1	3x
AP100	100	7.0	G, L	0.05 (0.1)	3x
AP300	300	20	G, L	0.05 (0.1)	3x
AP500	500	35	G, L	0.05 (0.1)	3x
AP1K	1,000	70	G, L	0.05 (0.1)	3x
AP3K	3,000	200	G, L	0.05 (0.1)	3x
AP5K	5,000	350	G, L	0.05 (0.1)	3x

Compound Pressure					
P/N	Pressure Range		Media	Accuracy(%FS) <sup>[1]</sup>	Burst Pressure
	(psi)	(bar)			
CP2	±2	±0.16	G	0.05	3x
CP5	±5	±0.35	G	0.02 (0.05)	3x
CP10	±10	±0.7	G	0.02 (0.05)	3x
CP15	±15	±1	G	0.02 (0.05)	3x
CP30	-15 to 30	-1 to 2	G	0.02 (0.05)	3x
CP100	-15 to 100	-1 to 7	G, L	0.02 (0.05)	3x
CP300	-15 to 300	-1 to 20	G, L	0.02 (0.05)	3x

[1] FS specification applies to the span of the range

Electrical Measurement Accuracy		
	Range	Accuracy
Voltage DC	±30.0000V	± (0.01%RD + 1.5 mV)
Current DC	±30.0000mA	± (0.01%RD + 1.5 µA)
DC 24V	24V±0.5V max:50mA Protect at: 120mA	
Switch <sup>[1]</sup>	Status OPEN/CLOSED	

[1] 1V~12V if switch has detective voltage

Differential Pressure						
P/N	Pressure Range		Media	Accuracy (%FS) <sup>[1]</sup>	Burst Pressure	Static Pressure Range
	(inH <sub>2</sub> O)	(mbar)				
DP1	±1	±2.5	G	0.05 <sup>[2]</sup>	100x	±10 psi
DP2	±2	±5.0	G	0.05 <sup>[2]</sup>	100x	±10 psi
DP5	±5	±10	G	0.05 <sup>[2]</sup>	50x	±10 psi
DP10	±10	±25	G	0.05 <sup>[2]</sup>	20x	±10 psi
DP20	±20	±50	G	0.05	20x	±10 psi
DP30	±30	±75	G	0.05	20x	±10 psi
DP50	±50	±160	G	0.05	3x	±10 psi
DP150	±150	±350	G	0.02	3x	50 psi
DP300	±300	±700	G	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 accuracy combined with 0.05%FS one year stability.

## ORDERING INFORMATION

### Model Number

ADT672 - 02 - GP300 - PSI - N

Model

**Accuracy:**  
 02-0.02% of full scale  
 05-0.05% of full scale  
 10-0.1% of full scale

**Range type:**  
 PSI-range by psi  
 BAR-range by bar  
 H<sub>2</sub>O-range by inH<sub>2</sub>O

**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

**Pressure range P/N:**  
 See pressure range table

### Accessories Included

110V/220V external power adapter (DC 10V)
2 pieces 1.5-meter test leads
2 pieces 0.236 inch (Ø6 mm) test hose (for differential pressure gauge only)
Additel/Land software (free download at <a href="http://www.additel.com">www.additel.com</a> )
Manual
NIST traceable calibration certificate

### Optional Accessories

Model number	Description
9702	Spare rechargeable Li-ion polymer battery for 672
9816	Spare 110V/220V external power adapter (DC 10V) for ADT22X and ADT672 calibrator
9502	Additel/Log II real time data logging and graphical software for 681 and 672
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	USB to RS232 (DB9/M) Adapter
9050-EXT	RS 232 (DB9/M) extension cable, 9 feet
9900-672	Carrying Case for one 672 digital pressure gauge
9022	Spare 2 pieces test leads (1.5-meter) for 672