ADT 672
Digital Pressure Calibrator

ADT 672 for differential pressure

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

- **Now offering 0,05% accuracy up to 2,800 bar (40k psi)**

- **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**

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 builtin 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 4,200 bar (60,000 psi)

- Measure mA with ±0.01% RD + 1,5 µA 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

- ISO 17025 accredited calibration with data (Included)

Specifications

Accuracy	ADT672-02: 0.02% of full span
	ADT672-05: 0.05% of full span
	>40,000 (2,800): 0.1 % FS
Gauge Types	Gauge pressure; Compound Pressure; Absolute pressure; Differential pressure
Display	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")
Pressure units	Pa, kPa, MPa, psi, bar, mbar, inH2O@4°C, mmH2O@2°C, inHg@0°C, mmHg@0°C, kgf/cm²
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: -20°C to 70°C (-4°F to 158°F)
	Humidity: <95%
Pressure Connections	≤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: Ø6 mm (0.236 inch) test hose
	Other connections available per request
Over Pressure Warning	120%
Electrical Connection	Ø4mm (0.156 inch) sockets
Electrical Measurement Accuracy:	Voltage DC: ±30,000V; ± (0.01%RD + 1.5 mV)
	Current DC: ±30,000mA; ± (0.01%RD + 1.5 µA)
	DC 24V: 24V±0.5; max: 50mA, Protect at: 120mA
	Switch [1]: Statue OPEN / CLOSED
Power	Battery: Rechargeable Li-ion polymer battery
	Li-Battery working time: 40 hours
	Recharge time: 4 hours
	External power: 110V/220V power adapter (DC10V)
Enclosure	Case material: Aluminum alloy
	Wetted parts: 316L SS
	Dimension: Ø120mm X 46mm depth X 184mm height
	Weight: 0.7kg
	Protection Level: IP 30
Data Logger	Storage capacity: 30 files, 40 records per file
	Mode: manual and automatic
	Hourly-record: record the data every hour
	Interval-record: set by user
Compliance	CE marked
Communication	RS232 (DB9/F, environmentally sealed)
	Baud rate: 1200,2400,4800,9600
	Data length: 8 bits
	Stop bit: 2 bits
	Address: from 1 to 112
Warranty	1 year

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

Pressure ranges

Gauge Pressure
(for bigger pressure ranges over 70 bar (1000psi) sealed)

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

(1) 0.02% FS only for gas devices

Absolute Pressure

P/N	Pressure range (psi)	Pressure range (bar)	Medium	Accuracy (% FS)	Burst Pressure
AP5	5	0.35	Gas	0.1	3x
AP10	10	0.7	Gas	0.1	3x
AP15	15	1.0	Gas	0.1	3x
AP30	30	2.0	Gas	0.1	3x
AP50	50	3.5	Gas	0.1	3x
AP100	100	7.0	Gas / Liquid	0.1	3x
AP300	300	20	Gas / Liquid	0.1	3x
AP500	500	35	Gas / Liquid	0.1	3x
AP1K	1000	70	Gas / Liquid	0.1	3x
AP3K	3000	200	Gas / Liquid	0.1	3x
AP5K	5000	350	Gas / Liquid	0.1	3x

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Differential Pressure

P/N	Pressure range (inH2O)	Pressure range (mbar)	Media	Accuracy (% FS)[1]	Burst Pressure	Static Pressure Range
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	±160	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.

Positive / negative pressure range

P/N	Pressure range (psi)	Pressure range (bar)	Media	Accuracy (% FS)[1]	Accuracy %RD	Burst Pressure
CP2	±2	±0.16	Gas	0.05 (0.1 , 0.2)	0.1	3x
CP5	±5	±0.35	Gas	0.02 (0.05, 0.1, 0.2)	0.1	3x
CP10	±10	±0.7	Gas	0.02 (0.05, 0.1, 0.2)	0.1	3x
CP15	±15	±1	Gas	0.02 (0.05, 0.1, 0.2)	0.1	3x
CP30	-15 to 30	-1 to 2	Gas	0.02 (0.05, 0.1, 0.2)	0.1	3x
CP100	-15 to 100	-1 to 7	Gas / Liquid	0.02 (0.05, 0.1, 0.2)	0.1	3x
CP300	-15 to 300	-1 to 20	Gas / Liquid	0.02 (0.05, 0.1, 0.2)	0.1	3x
CP500	-15 to 500	-1 to 30	Gas / Liquid	0.02 (0.05, 0.1, 0.2)	0.1	3x
CP600	-15 to 600	-1 to 40	Gas / Liquid	0.02 (0.05, 0.1, 0.2)	0.1	3x
CP1K	-15 to 1K	-1 to 70	Gas / Liquid	0.02 (0.05, 0.1, 0.2)	0.1	3x

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

Accessories included

- 110V/220V external power adapter (DC 10V)
- 2 pieces 1.5-meter test leads and 2 pieces alligator clips
- 2 pieces Ø6 mm (0.236 inch) test hose (for differential pressure gauge only)
- Additel/Land software (free download at www.additel.com)
- Manual
- ISO 17025 accredited calibration certificate (DAkkS on demand)

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	RS232 (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) and 2 pieces alligator clips

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Additel Pressure Gauge Selection Guide

Feature / Series	ADT672 Series Digital Pressure Calibrator	ADT681 Series Digital Pressure Gauge	ADT680 Series Digital Pressure Gauge
Gauge Pressure	●	●	●
Compound Pressure	●	●	●
Absolute Pressure	●	●	
Differential Pressure	●	●	
Accuracy Classes	0.02% & 0.05%FS 15K & 20K psi: 0.05%FS >20K psi: 0.1%FS	0.02%, 0.05%, & 0.2%FS & 0.1%RD 15K & 20K psi: 0.05%, 0.1%, 0.2%FS & 0.1%RD >20K psi: 0.1% & 0.2%FS	0.05%, 0.1%, & 0.25%FS >20K psi: 0.1% & 0.25%FS
Digital Display	●	●	●
Analog Display (Fan-Shaped Indication)		●	
Fully Temperature Compensation from -10 C to 50 C	●	●	●
Resolution			
6-Digit Resolution	●		
5-Digit Resolution	●	●	●
Selectable Pressure Units	11	11	19
Backlight	●	●	●
Over Pressure Indication	●	●	●
IS Certification (optional – not available for panel mount)		ADT681IS only (≤GP15)	
IP67 Certification			●
Panel Mount (optional)		●	
Wireless			680W only
Data Logging	●	Optional	680W only
Min/Max	●	●	●
Built-in Leak Test	●		
HART Communication	●		
Measure mA and V	●		
24V Loop Power	●		
Switch Test	●		
NIST-Traceable Certificate of Calibration	●	●	●
Power	Rechargeable battery	9V battery (120/220V adapter is optional)	2AA batteries

Series / Pressure	Pressure Range			ADT672 Series Digital Pressure Calibrator	ADT681 Series Digital Pressure Gauge	ADT680 Series Digital Pressure Gauge
	psi	bar	Media			
Gauge						
V15	-15 to 0	-1 to 0	G	●	●	●

Series / Pressure	psi	bar	Media	ADT672 Series Digital Pressure Calibrator	ADT681 Series Digital Pressure Gauge	ADT680 Series Digital Pressure Gauge
GP5	0 to 5	0 to 0.35	G,L	●	●	
GP10	0 to 10	0 to 0.7	G,L	●	●	
GP15	0 to 15	0 to 1	G,L	●	●	●
GP30	0 to 30	0 to 2	G,L	●	●	●
GP50	0 to 50	0 to 3.5	G,L	●	●	
GP100	0 to 100	0 to 7	G,L	●	●	●
GP150	0 to 150	0 to 10	G,L	●	●	●
GP300	0 to 300	0 to 20	G,L	●	●	●
GP500	0 to 500	0 to 35	G,L	●	●	●
GP600	0 to 600	0 to 40	G,L	●	●	
GP1K	0 to 1K	0 to 70	G,L	●	●	●
GP2K	0 to 2K	0 to 140	G,L	●	●	
GP3K	0 to 3K	0 to 200	G,L	●	●	●
GP5K	0 to 5K	0 to 350	G,L	●	●	●
GP10K	0 to 10K	0 to 700	G,L	●	●	●
GP15K	0 to 15K	0 to 1K	G,L	●	●	●
GP20K	0 to 20K	0 to 1.4K	G,L	●	●	●
GP25K	0 to 25K	0 to 1.6K	G,L	●	●	●
GP30K	0 to 30K	0 to 2K	G,L	●	●	●
GP36K	0 to 36K	0 to 2.5K	G,L	●	●	●
GP40K	0 to 40K	0 to 2.8K	G,L	●	●	●
GP50K	0 to 50K	0 to 3.5K	G,L	●	●	●
GP60K	0 to 60K	0 to 4.2K	G,L	●	●	●
Compound						
CP2	±2	±0.16	G	●	●	
CP5	±5	±0.35	G	●	●	
CP10	±10	±0.7	G	●	●	
CP15	±15	±1	G	●	●	●
CP30	-15 to 30	-1 to 2	G	●	●	●
CP100	-15 to 100	17 to 7	G,L	●	●	
CP300	-15 to 300	-1 to 20	G,L	●	●	
Absolute						
AP5	5	0.35	G	●	●	
AP10	10	0.7	G	●	●	
AP15	15	1	G	●	●	
AP30	30	2	G	●	●	
AP50	50	3.5	G	●	●	
AP100	100	7	G,L	●	●	
AP300	300	20	G,L	●	●	
AP500	500	35	G,L	●	●	
AP1K	1K	70	G,L	●	●	
AP3K	3K	200	G,L	●	●	
AP5K	5K	350	G,L	●	●	
Differential	inH_2O	mbar				
DP1	±1	±2.5	G	●	●	
DP2	±2	±5	G	●	●	
DP5	±5	±10	G	●	●	
DP10	±10	±25	G	●	●	
DP20	±20	±50	G	●	●	
DP30	±30	±75	G	●	●	
DP50	±50	±160	G	●	●	
DP150	±150	±350	G	●	●	
DP300	±300	±700	G	●	●	