Metrology Made Simple

Additel 760A/ 760S
Automatic Handheld Pressure Calibrators

- Automated pressure generation and control to 375 psi (25 Bar)
- Full HART field communicator (-DL models only)
- New contamination prevention system (CPS)
- Large Smartphone like touchscreen user experience
- Non-PC version (ADT760S)
- Fully automatic calibrator with built-in pump and controller
- Switchable internal pressure modules for expandable ranges
- Accuracy up to 0.01%FS
- External pressure modules available (measure only)
- Less than 4 lbs (1.8 kg) for handheld operation
- Source pressure, measure pressure and electrical
- Bluetooth, Wi-Fi and USB communications

OVERVIEW

Additel's benchmark handheld pressure calibrator (Additel 760 series), is engineered for an exceptional user experience. Now,we've introduced key upgrades designed to raise that standard even further with our ADT760A series. The ADT760A includes many key upgrades: Extended range to 375 psi (25 bar), provides a full HART field communicator (-DL models), support for our new contamination prevention system, updated into capacitive touch screen and an all new non-PC version (ADT760S).

All these enhancements are designed to help you work smarter, not harder. We believe the upgraded ADT760A will significantly boost your efficiency and give you time back for what matters most.

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FEATURES

ADT760A/760S-LLP

The 760A/760S-LLP is designed for low pressure calibration and comes with a build-in pressure module of your choice. The maximum range module compatible with the 760A/760S-LLP is to ±30 inH2O (±75 mbar) and provides an accuracy to 0.05%FS (see ordering information for configurations with the option of the 760A/760S and a module of your choice). Additional internal pressure modules (ADT155 series) are available and provide a variety of ranges down to ±0.25 inH_2O (±0.62 mbar). The accuracy of 0.05%FS and control stability 0.005%FS is based on the internal module's span. Measurements can be made in gauge or differential mode.

ADT760A/760S-D

The760A/760S-D gives you differential and gauge pressure but at a higher pressure range than the 760A/760S-LLP. Covering the range of -12.5 to 35 psi (-0.86 to 2.5 bar) and with an accuracy of 0.01%FS or 0.02%FS depending on the interchangeable ADT155 module used, the 760A/760S-D is an ideal solution to cover very common gauge and differential pressure measurements. The Additel 760A/760S-D comes with an internal module of your choice. The maximum range module compatible with the 760A/760S-D is to 35 psi. Lower pressure configurations down to ±10 inH_2O differential can be purchased to improve accuracy at lower pressures.

ADT760A-MA

The 760A/760S-MA generates and controls pressure from vacuum pressures up to 375 psig (25 bar.g) with an accuracy of 0.01%FS or 0.02%FS depending on the interchangeable ADT155 module used. Equipped with a built-in barometric reference, each unit can switch between gauge and absolute pressure types. A variety of internal sensors are available which offer lower pressure ranges for improved performance.

Pressure Specifications

Specification	*760A/760S-LLP*	*760A/760S-D*	*760A/760S-MA*
Max Pressure Range	±30 inH_2O (±75 mbar)	-12.5 to 35 psi (-0.86 to 2.5 bar)	-12.5 to 375 psig (-0.86 to 25 bar.g)
Accuracy	0.05%FS[1]	0.01%FS or 0.02%[1]	0.01%FS or 0.02%FS[1][3]
Stability	0.005%FS[2]	0.005%FS[2]	0.005%FS[2]
Pressure Type	Differential, Gauge	Differential, Gauge	Gauge, Absolute
Over Range Indication	120%		
Resolution	6 digits		
Measurement Units	Pa, hPa, kPa, mPa, bar, mbar, psi, mmHg@0°C, cmHg@0°C, mHg@0°C, inHg@0°C, inH_2O@4°C, mmH_2O@4°C, cmH_2O@4°C, mH_2O@4°C, mmH_2O@20°C, cmH_2O@20°C, mH_2O@20°C, mH2O@68°F, inH_2O@20°C, kgf/cm2, mtorr, torr, lb/ft2, tsi, custom		
Barometric Accuracy	N/A	N/A	55 Pa[4]
Connection	Barb fitting	Hose, 5 ft (1.5 m), with built-in filter to 1/4BSPF, 1/4NPTF, and M20F adapters	Hose, 5 ft (1.5 m), with built-in filter to 1/4BSPF, 1/4NPTF, and M20F adapters
Pressure Output Rate	<30 Seconds (30 inH_2O / 100 ml)	<10 Seconds (35 psi / 5 ml)	<90 Seconds (300 psi / 5 ml)

[1] FS specification applies to the span of the module range.
[2] Stability based on FS of the internal pressure module. Stability is 0.005%FS or 0.05 pa whichever is greater. Internal module is switchable.
[3] Specification based on gauge measurement. An additional 55 pa uncertainty will need to be included when measuring in absolute mode.
[4] 55 Pa uncertainty (k=2) includes calibration uncertainty, linearity, and long-term stability (<30 Pa per year). Barometer range of 60 to 110 kPa.

Electrical Specifications (ADT760A)

Specification	*Range*	*Resolution*	*Accuracy*	*Note*
mA Measure	± 30 mA	0.0001 mA	0.01%RD + 1.5 μA	Impedance <10 Ω
V Measure	± 30 V	0.0001 V	0.01%RD + 1.5 mV	Impedance >1 MΩ
mA Source	24 mA	0.001 mA	0.01%RD + 1.2 μA	20 mA @ 1 K
Loop Power Source	24 V	N/A	± 1 V	50 mA (Max Loading)
Pressure Switch	Open, close. Support for mechanical switches and NPN/PNP digital switches.			
Temperature Compensation	8 °C to 38 °C			
Temperature Coefficient	< ± (0.001%RD + 0.001%FS) / °C outside of 8°C to 38°C			

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General Specifications

Specification	*Description*
Channels	Four total: one electronic (not for ADT760S), one internal pressure, two external pressure (measure only)
Enclosure IP Rating	IP52 water and dust proof
Battery	Rechargeable Li-Ion battery, typically 10 hours of operation, recharges in less than 4 hours
Display	Color 854 x 480 TFT 4.95-inch touch screen
Communications	Bluetooth, WiFi and USB
Weight	4 lbs (1.8 kg)
Size	9.3 x 4.3 x 2.8 in (235 x 110 x 70 mm)
Certification	ISO 17025 accredited certificate with data included
HART Communications	Optional (ADT760A-X-DL model)
Data Logging	Optional (ADT760A-X-DL model), up to 1,000,000 readings (date and time stamped)
Task Documentation	Optional (ADT760A-X-DL model) up to 1000 tasks
Automation Functions	Switch test, auto step, leak test (Only for ADT760A)
Misuse Protection	Up to 30 V on any two sockets (Only for ADT760A)
Multi Lingual Interface	English, German, French, Italian, Spanish, Portuguese, Chinese, Japanese, and Russian
Pump Life	>500,000 cycles
Power	Rechargeable Li-Ion battery, external power: 110/220 V power adapter 10 V
Environment Specifications	Operation: 32°F to 122°F (0°C to 50°C), 0-90% RH, less than 3,000 meters Compensated temperature: 32°F to 122°F (0°C to 50°C) Storage temperature: -4°F to 158°F (-20°C to 70°C)
Vibration and Shock	Vibration: 4 g (20 to 2,000 Hz) Shock: 8 g
Compliance	CE
Software	ACal, Land, LogII
Warranty	1 year (excludes battery)
Hose & Filter End of Life	The estimated End of Life (EOL) expectancy for all accessory hoses and filters (pneumatic and hydraulic) is approximately 10 years and should be replaced at the first sign of wear or damage.

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Internal Modules Specifications and Compatibility

Module	Module Range[6]		Media	Accuracy (%FS)[1]	Burst Pressure	760A/760S-LLP	760A/760S-D	760A/760S-MA
	inH_2O	mbar						
ADT155-20-DP025	±0.25	±0.62	G	0.2[2]	100x	●		
ADT155-10-DP050	±0.5	±1.25	G	0.1[3]	100x	●		
ADT155-05-DP1	±1	±2.5	G	0.05[4]	100x	●		
ADT155-05-DP2	±2	±5	G	0.05[4]	100x	●		
ADT155-05-DP5	±5	±10	G	0.05[4]	50x	●		
ADT155-05-DP10	±10	±25	G	0.05[4]	20x	●	●	
ADT155-05-DP20	±20	±50	G	0.05	20x	●	●	
ADT155-05-DP30	±30	±75	G	0.05	20x	●	●	
ADT155-05-DP50	±50	±125	G	0.05	3x		●	
ADT155-02-DP100	±100	±250	G	0.02	3x		●	
ADT155-02-DP150	±150	±350	G	0.02	3x		●	
ADT155-02-DP300	±300	±700	G	0.02	3x		●	
ADT155-02-DP400	-380 to 400	-950 to 1K	G	0.02	3x		●	
ADT155-02-DP800	-380 to 800	-950 to 2K	G	0.02	3x		●	
ADT155-02-DP1K	-380 to 1K	-950 to 2.5K	G	0.02	3x		●	
Gauge Pressure	psig	bar.g						
ADT155-01/02-CP10	±10	±0.7	G	0.01 / 0.02[5]	3x		●	●
ADT155-01/02-CP15	-13.5 to 15	-0.95 to 1	G	0.01 / 0.02[5]	3x		●	●
ADT155-01/02-CP30	-13.5 to 30	-0.95 to 2	G	0.01 / 0.02[5]	3x		●	●
ADT155-01/02-CP35	-13.5 to 35	-0.95 to 2.5	G	0.01 / 0.02[5]	3x		●	●
ADT155-01/02-CP50	-13.5 to 50	-0.95 to 3.5	G	0.01 / 0.02[5]	3x			●
ADT155-01/02-CP100	-13.5 to 100	-0.95 to 7	G	0.01 / 0.02[5]	3x			●
ADT155-01/02-CP150	-13.5 to 150	-0.95 to 10	G	0.01 / 0.02[5]	3x			●
ADT155-01/02-CP200	-13.5 to 200	-0.95 to 14	G	0.01 / 0.02[5]	3x			●
ADT155-01/02-CP300	-13.5 to 300	-0.95 to 20	G	0.01 / 0.02[5]	3x			●
ADT155-01/02-CP375	-13.5 to 375	-0.95 to 25	G	0.01 / 0.02[5]	3x			●
Absolute Pressure	psi.a	bar.a						
ADT155-01/02-AP15	0 to 15	0 to1	G	0.01 / 0.02[5]	3x			●

[1] FS specification applies to the span of the module range. Accuracy includes one-year stability, except for DP025 to DP10 modules.
[2] Accuracy is a 6 months spec, 1-year long-term drift is 0.2%FS.
[3] Accuracy is a 6 months spec, 1-year long-term drift is 0.1%FS.
[4] Accuracy is a 6 months spec, 1-year long-term drift is 0.05%FS.
[5] Specification based on gauge measurement. An additional 55 pa uncertainty will need to be included when measuring in absolute mode. Applicable only for use with the ADT760A/760S-MA
[6] The low module pressure range may be outside the pressure range of the calibrator

Now Offering
0.01% Accuracy

* ADT155 Pressure Modules are calibrated in psi & inH2O

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Ordering Information

Model Number

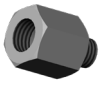
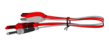
ADT760A — MA — 02 — CP100 — PSI • • • DL

- ADT760S
- **Pressure range:** See Model Type table
- **Accuracy:**
  01 - 0.01% full span
  02 - 0.02% full span
  05 - 0.05% full span
  10 - 0.1% full span
  20 - 0.2% full span
- **Internal Pressure Module Range:** See Optional Internal Pressure Module Table.
- **Range type:**
  PSI - range by psi
  BAR - range by bar
  H_2O - range by inH_2O
- **DL:** Data logging (only for 760A)

Model Type

Model Number	Description
ADT760A/760S-LLP	Automatic Handheld Pressure Calibrator, ±30 inH_2O
ADT760A-LLP-DL	Automatic Handheld Pressure Calibrator, ±30 inH_2O w/HART and data logging
ADT760A/760S-D	Automatic Handheld Pressure Calibrator, -12.5 to 35 psi
ADT760A-D-DL	Automatic Handheld Pressure Calibrator, -12.5 to 35 psi w/HART and data logging
ADT760A/760S-MA	Automatic Handheld Pressure Calibrator, -12.5 to 375 psi
ADT760A-MA-DL	Automatic Handheld Pressure Calibrator, -12.5 to 375 psi w/HART and data logging

Accessories (Included)

Model	Quantity	Picture
ADT100-760-KIT adapter set (excl ADT760A/760S-LLP)	1 set (to 1/4BSPF, to 1/4NPTF, to M20F)	
USB to USB cable (ADT760A-X-DL only)	1 pc	
9816-X 110V / 220V external power adapter	1 pc	
9724 chargeable Li-ion battery	1 pc	
9025 test leads for calibrator (ADT760A only)	1 sets (3 pcs)	
ADT100-760 Hose	1 pc for the ADT760A/760S-MA	
Pressure Hose	1 pc for the ADT760A/760S-D	
Silicone Tube	2 meters for the ADT760A/760S-LLP 1 meter for the ADT760A/760S-D	
1220211206 Adapter, quick female to barb (Only for ADT760A-D)	1 pc	
ISO17025 accredited certificate	1 pc	

Optional Accessories

Model	Description	Picture
9231	Contamination prevention system (excl ADT760A/760S-LLP)	
ADT161	See datasheet of ADT161 for more info; connection cable sold separately	
9060	Pressure module connection cable	
ADT100-760-N	Special Connector to 1/4NPT quick connector	
ADT100-760-B	Special Connector to 1/4BSP quick connector	
ADT100-760-M	Special Connector to M20x1.5 quick connector	
ADT100-760-N2	Special Connector to 1/2NPT quick connector	
ADT100-760-B2	Special Connector to 1/2BSP quick connector	
ADT128-B	Pneumatic Pressure Manifold for ADT760, -15 to 1000 psi, single port, 1/4 BSP F	
ADT128-B2	Pneumatic Pressure Manifold for ADT760, -15 to 1000 psi, single port, 1/2 BSP F	
ADT128-N	Pneumatic Pressure Manifold for ADT760, -15 to 1000 psi, single port, 1/4 NPT F	
ADT128-N2	Pneumatic Pressure Manifold for ADT760, -15 to 1000 psi, single port, 1/2 NPT F	
ADT128-M	Pneumatic Pressure Manifold for ADT760, -15 to 1000 psi, single port, M20x1.5	
9240A	DP gauge holder with a built-in 80 ml chamber	
1220211087	Filter, set of 1 pc	
9913-760-SC	Carry case for ADT760A/S and various accessories	
9904-760A	Carry case for ADT760 and various accessories	
ADT100-760-CNT	Special connector (to be used to adapt from the ADT760 to ADT100-760-KIT adapters)	
9530-PRO	Additel/Acal Automated calibration software with asset management, professional version for single PC	
9530-NET	Additel/Acal Automated calibration software with asset management, network version, includes server installation and 1 user license	

* Additel/Land software available for free download at www.additel.com

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