## Additel 673

## **Advanced Digital Pressure Calibrators**

- 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
- Bluetooth and USB Communication
- Wi-Fi (optional)
- Measure mA or V, and with 24V loop power
- Full HART Field Communicator (Optional)
- Data logging
- Communicates with Additel's Link Mobile App

### **OVERVIEW**

Additel's 673 Advanced Digital Pressure Calibrators will redefine the way you want to measure and calibrate pressure readings and devices! With wireless remote connectivity, microprocessor technology, state of-the-art silicon pressure sensors and onboard storage capacity, these attractive and fully temperature compensated calibrators 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 brings a new and refreshing experience to pressure calibration work. This completely new way of interfacing with our pressure calibrators makes the ADT673 a real pleasure to use. The handy Additel Link app gives users the ability to remotely monitor these calibrators from the convenience of a personal device or cell phone. With an abundance of options to choose from, you can configure these pressure calibrators to precisely fit your specific pressure calibration and measurement needs. With an IP67 rating, you will find that these amazing pressure calibrators 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 this new and revolutionary calibrator. 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 ADT673 calibrators 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.

### HART Field Communicator :

With full support for HART communication protocols, the ADT673 Advanced Digital Pressure Calibrators provide a pressure calibration solution for transmitters over a wide pressure range. The ADT673 is a very portable device and can measure pressure precisely with a built-in pressure sensor, as well as read the current or mV produced by a transducer. It can even supply an excitation voltage (loop power) to power sensors or transmitters during calibration.

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## PRESSURE RANGE

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

[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	Accura	Burst	
F/IN	(psi)	(bar)	weula	%FS <sup>[1]</sup>	%RD	Pressure
CP2	±2	±0.16	G	0.05	N/A	З×
CP5	±5	±0.35	G	0.02 (0.05)	0.1	З×
CP10	±10	±0.7	G	0.02 (0.05)	0.1	З×
CP15	±15	±1	G	0.02 (0.05)	0.1	З×
CP30	-15 to 30	-1 to 2	G	0.02 (0.05)	0.1	З×
CP100	-15 to 100	-1 to 7	G, L	0.02 (0.05)	0.1	З×
CP300	-15 to 300	-1 to 20	G, L	0.02 (0.05)	0.1	З×
CP500	-15 to 500	-1 to 35	G, L	0.02 (0.05)	0.1	З×
CP600	-15 to 600	-1 to 40	G, L	0.02 (0.05)	0.1	З×
CP1K	-15 to 1000	-1 to 70	G, L	0.02 (0.05)	0.1	З×

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

## **SPECIFICATIONS**

	673-02: 0.02% of full span
	673-05: 0.05% of full span
Accuracy	673-RD: 0% to 20% of range: 0.02% of full span
	20% to 110% of range: 0.1% of reading
	Vacuum: 0.25% of full span <sup>[1][2]</sup>
	Built-in barometer: 55 Pa
Gauge Types	Gauge pressure, compound pressure, absolute pressure, differential pressure
	Color Touchscreen (capacitive)
	Screen protector: tempered glass film (replaceable)
Display	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)
	Pa, kPa, MPa, psi, bar, mbar, kgf/cm <sup>2</sup> , inH <sub>2</sub> O@4°C
Pressure Units	mmH <sub>2</sub> O@4°C, inHg@0°C, mmHg@0°C and 5 customizable units
	Compensated Temp.: 14°F to 122°F (-10°C to 50°C)
Environmental	Operating Temp.: 14°F to 122°F (-10°C to 50°C)
Environmental	Storage Temp.: -4°F to 158°F (-20°C to 70°C)
	Humidity: 0 - 95%, Non-condensing
	≤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
Pressure Port	*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
Over Pressure Warning	120%
	Battery: rechargeable Li-ion battery
Power	Battery: rechargeable Li-ion battery Li-Battery life: 16 hours typically
Power	
Power	Li-Battery life: 16 hours typically
Power	Li-Battery life: 16 hours typically Recharge time: 4 hours typically
Power	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC)
Power	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS
	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm)
	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup>
	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg)
Enclosure Electrical	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67
Enclosure Electrical Measurement	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: ±30.0000 V, ± (0.01%RD + 1.5 mV)
Enclosure Electrical	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: ±30.0000 V, ± (0.01%RD + 1.5 mV) Current DC: ±30.0000 mA, ± (0.01%RD + 1.5 µA)
Enclosure Electrical Measurement Accuracy	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: $\pm$ 30.0000 V, $\pm$ (0.01%RD + 1.5 mV) Current DC: $\pm$ 30.0000 mA, $\pm$ (0.01%RD + 1.5 $\mu$ A) DC 24 V: 24 V $\pm$ 1 V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches
Enclosure Electrical Measurement Accuracy	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: $\pm 30.0000$ V, $\pm (0.01\%$ RD + 1.5 mV) Current DC: $\pm 30.0000$ mA, $\pm (0.01\%$ RD + 1.5 $\mu$ A) DC 24 V: 24 V $\pm 1$ V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches Data storage: 8GB (100M+ records)
Enclosure Electrical Measurement Accuracy	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: $\pm 30.0000$ V, $\pm (0.01\%$ RD + 1.5 mV) Current DC: $\pm 30.0000$ mA, $\pm (0.01\%$ RD + 1.5 $\mu$ A) DC 24 V: 24 V $\pm$ 1 V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches Data storage: 8GB (100M+ records) Mode: manual and automatic
Enclosure Electrical Measurement Accuracy (23 ± 15°C)	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: $\pm 30.0000$ V, $\pm (0.01\%$ RD + 1.5 mV) Current DC: $\pm 30.0000$ mA, $\pm (0.01\%$ RD + 1.5 $\mu$ A) DC 24 V: 24 V $\pm 1$ V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches Data storage: 8GB (100M+ records)
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Enclosure Electrical Measurement Accuracy (23 ± 15°C)	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: $\pm$ 30.0000 V, $\pm$ (0.01%RD + 1.5 mV) Current DC: $\pm$ 30.0000 M, $\pm$ (0.01%RD + 1.5 µA) DC 24 V: 24 V $\pm$ 1 V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches Data storage: 8GB (100M+ records) Mode: manual and automatic Interval-record: user selectable from 0.1 to 9999.9 second intervals Protection Level: IP67 Vibration: 5 g (10-500 Hz)
Enclosure Electrical Measurement Accuracy (23 ± 15°C) Data Logging	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: ±30.0000 V, ± (0.01%RD + 1.5 mV) Current DC: ±30.0000 M, ± (0.01%RD + 1.5 µA) DC 24 V: 24 V ±1 V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches Data storage: 8GB (100M+ records) Mode: manual and automatic Interval-record: user selectable from 0.1 to 9999.9 second intervals Protection Level: IP67 Vibration: 5 g (10-500 Hz) Shock Resistance: 8 g/11 ms
Enclosure Electrical Measurement Accuracy (23 ± 15°C) Data Logging Compliance	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: $\pm$ 30.0000 V, $\pm$ (0.01%RD + 1.5 mV) Current DC: $\pm$ 30.0000 M, $\pm$ (0.01%RD + 1.5 µA) DC 24 V: 24 V $\pm$ 1 V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches Data storage: 8GB (100M+ records) Mode: manual and automatic Interval-record: user selectable from 0.1 to 9999.9 second intervals Protection Level: IP67 Vibration: 5 g (10-500 Hz)
Enclosure Electrical Measurement Accuracy (23 ± 15°C) Data Logging Compliance Communication	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: $\pm$ 30.0000 V, $\pm$ (0.01%RD + 1.5 mV) Current DC: $\pm$ 30.0000 M, $\pm$ (0.01%RD + 1.5 µA) DC 24 V: 24 V $\pm$ 1 V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches Data storage: 8GB (100M+ records) Mode: manual and automatic Interval-record: user selectable from 0.1 to 9999.9 second intervals Protection Level: IP67 Vibration: 5 g (10-500 Hz) Shock Resistance: 8 g/11 ms CE USB Type-C and Bluetooth included, RS232 or Wi-Fi (optional)
Enclosure Electrical Measurement Accuracy (23 ± 15°C) Data Logging Compliance	Li-Battery life: 16 hours typically Recharge time: 4 hours typically External power: 110V/220V power adapter (5 VDC) Case material: 304 SS Wetted parts: 316 SS <sup>[3]</sup> Size: 4.65" x 1.77" x 6.89"(118mm x 42mm x175mm) Weight: 1.58 lb (0.715 kg) Protection Level: IP67 Voltage DC: $\pm$ 30.0000 V, $\pm$ (0.01%RD + 1.5 mV) Current DC: $\pm$ 30.0000 M, $\pm$ (0.01%RD + 1.5 µA) DC 24 V: 24 V $\pm$ 1 V, MAX: 30 mA Switch <sup>[4]</sup> : status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches Data storage: 8GB (100M+ records) Mode: manual and automatic Interval-record: user selectable from 0.1 to 9999.9 second intervals Protection Level: IP67 Vibration: 5 g (10-500 Hz) Shock Resistance: 8 g/11 ms CE USB Type-C and Bluetooth included,

[1] FS = -14.5 psi

[2] Applicable to ADT673-RD-CPX

[3] Wetted parts material types may vary by pressure range. Please refer to the manual or contact us for more information.

[4] Trigger voltage 2.7V

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## **PRESSURE RANGE**

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

Differential Pressure									
P/N	Pressure	Range	Media	Accuracy	Burst	Static Pressure			
1711	(inH₂O)	(mbar)	weata	(%FS) <sup>[1]</sup>	Pressure	Range			
DP1	±1	±2.5	G	0.05 <sup>[2]</sup>	100×	±10 psi			
DP2	±2	±5.0	G	0.05 <sup>[2]</sup>	100×	±10 psi			
DP5	±5	±10	G	0.05 <sup>[2]</sup>	50×	±10 psi			
DP10	±10	±25	G	0.05 <sup>[2]</sup>	20×	±10 psi			
DP20	±20	±50	G	0.05	20×	±10 psi			
DP30	±30	±75	G	0.05	20×	±10 psi			
DP50	±50	±125	G	0.05	3×	±10 psi			
DP100	±100	±250	G	0.02	3×	±15 psi			
DP150	±150	±350	G	0.02	3×	50 psi			
DP300	±300	±700	G	0.02	3×	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.

Barometric Pressure									
P/N	Pressure	e Range	Media	Accuracy	Burst Pressure				
F/IN	Low	High	Ivieula	Accuracy					
BP	60 kPa	110 kPa	G	55 Pa	З×				

Communication Types Supported					Additel Software Compatibility Matrix								
Comm	ADT685	ADT685Ex	ADT686	ADT673	Model	Δ	ADT685/.	ADT685I	Ξx		ADT686	/ADT673	}
RS232	0	0	0	0	Comm	ACal	Logll	Land	Link	ACal	LogII	Land	Link
	_	_	_	_	RS232	•	•	•		•	•	•	
RS485	0				RS485	<b>D</b> <sup>[2]</sup>	<b>D</b> <sup>[2]</sup>	<b>O</b> <sup>[2]</sup>					
WiFi			0	0	only for ADT685 WiFi					•	•		[1]
					VVIFI					•	•		
USB	•	•	•	•	USB	•	•	•		•	•	•	
Bluetooth(BLE)	•	•	•	•	Bluetooth(BLE)				•				•
	Supported	O No	n Ex mo	dels only									

O Optional Included

This configuration requires that the device be connected to ACloud via Wi-Fi to utilize the Additel Link app.
4-20mA output and RS-485 not available in ADT685Ex models.

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# ADT673 Advanced Digital Pressure Calibrators

#### **ORDERING INFORMATION** Model Number ADT673 - 02 - GP300 - PSI WIFI HART Ν . . Range type: PSI-range by psi BAR-range by bar H<sub>2</sub>O-range by inH<sub>2</sub>O Accuracy: Pressure port type: 02-0.02% of full span N- 1/4NPT male 05-0.05% of full span N2- 1/2NPT male 10-0.1% of full span B-1/4BSP male 20-0.2% of full span B2-1/2BSP male RD-0.1% of reading M-M20X1.5 male AF-Autoclave F-250-C female AM-Autoclave M-250-C male Pressure range P/N: See pressure range table Comm port (optional): WIFI = Wi-Fi 232 = RS-232 HART Communicator (Optional)



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#### Accessories Included

#### Optional Accessories

Model number	Description
9903	Carrying case for (1) digital pressure gauge
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	RS 232 (DB9/M) extension cable, 9 feet
1220610724	Screen protector kit
9040	Hanging strap with magnet

Note: For oil-free applications contact us.

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