# Additel 673
# Advanced Digital Pressure Calibrators

Metrology Made Simple

- **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

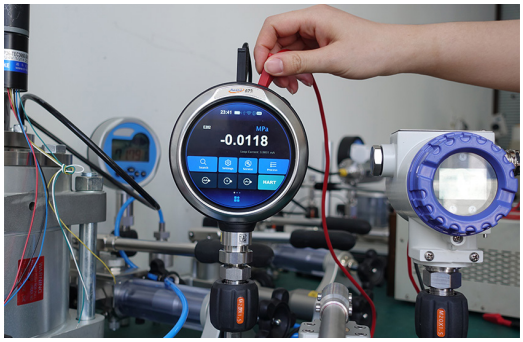
Additel 673

## 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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## SPECIFICATIONS

| Model | ADT673 |
|---|---|
| Accuracy | 673-02: 0.02% of full span |
| | 673-05: 0.05% of full span |
| | 673-RD: 0% to 20% of range: 0.02% of full span<br>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[3] | Pa, kPa, MPa, psi, bar, mbar, kgf/cm$^2$, inH$_2$O@4°C mmH$_2$O@4°C, inHg@0°C, mmHg@0°C and 5 customizable units |
| Environmental | Compensated Temp.: 14°F to 122°F (-10°C to 50°C) |
| | Operating Temp.: 14°F to 122°F (-10°C to 50°C) |
| | Storage Temp.: -4°F to 158°F (-30°C to 70°C) |
| | Humidity: 0 - 95%, Non-condensing |
| Pressure Port | < 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<br>*1/4HP female: Autoclave F-250-C, 9/16" - 18 UNF-2B<br>*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% |
| Power | Battery: rechargeable Li-ion battery |
| | Li-Battery life: 16 hours typically |
| | Recharge time: 4 hours typically |
| | External power: 110V/220V power adapter (5 VDC) |
| Enclosure | Case material: 304 SS |
| | Wetted parts: 316 SS [1] |
| | Size: 4.65" x 1.77" x 6.89"(118 x 42 x175mm) |
| | Weight: 1.58 lbs (0.715 kg) |
| Electrical Measurement Accuracy[4] (8 °C to 38 °C) | Voltage DC: ±30.0000 V, ± (0.01%RD + 1.5 mV) |
| | Current DC: ±30.0000 mA, ± (0.01%RD + 1.5 μA) |
| | DC 24 V: 24 V ±1 V, MAX: 30 mA |
| | Switch[2]: status OPEN/CLOSED, support for mechanical switches and NPN/PNP digital switches |
| Data Logging | Data storage: 8GB (100M+ records) |
| | Mode: manual and automatic |
| | Interval-record: user selectable from 0.1 to 9999.9 second intervals |
| Compliance | Protection Level: IP67 |
| | Vibration: 5 g (10-500 Hz) |
| | Shock Resistance: 8 g/11 ms |
| | CE, UKCA |
| 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] Trigger voltage 2.7V
[3] Available units are dependent on the overall pressure range
[4] Temperature coefficient: (5ppm of RD + 5ppm of FS)/ °C from -10 °C to 8 °C and 38 °C to 50 °C

## PRESSURE RANGE

***Gauge Pressure*** [1]

| P/N | Pressure Range | | Media[2] | Accuracy | | Burst Pressure |
|---|---|---|---|---|---|---|
| | (psi) | (bar) | | %FS | %RD | |
| V15 | -15 | -1.0 | G | 0.02, 0.05 | N/A | 3× |
| GP2 | 2 | 0.16 | G | 0.05 | N/A | 3× |
| GP5 | 5 | 0.35 | G | 0.05 | 0.1 | 3× |
| GP10 | 10 | 0.7 | G, L[3] | 0.02, 0.05 | 0.1 | 3× |
| GP15 | 15 | 1.0 | G, L[3] | 0.02, 0.05 | 0.1 | 3× |
| GP30 | 30 | 2.0 | G, L | 0.02, 0.05 | 0.1 | 3× |
| 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 | 3× |
| GP150 | 150 | 10 | G, L | 0.02, 0.05 | 0.1 | 3× |
| 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 | 3× |
| 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



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## PRESSURE RANGE

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### *Compound Pressure*

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

### *Differential Pressure*

| P/N | Pressure Range | | Media | Accuracy (%FS)[1] | Burst Pressure | Static Pressure Range |
|---|---|---|---|---|---|---|
| | ($inH_2O$) | (mbar) | | | | |
| DP1 | ±1 | ±2.5 | G | 0.05[2] | 100× | ±10 psi |
| DP2 | ±2 | ±5.0 | G | 0.05[2] | 100× | ±10 psi |
| DP5 | ±5 | ±10 | G | 0.05[2] | 50× | ±10 psi |
| DP10 | ±10 | ±25 | G | 0.05[2] | 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 Range | | Media | Accuracy | Burst Pressure |
|---|---|---|---|---|---|
| | Low | High | | | |
| BP | 60 kPa | 110 kPa | G | 55 Pa | 3× |
| BPH | 60 kPa | 110 kPa | G | 22 Pa | 3× |

### Communication Types Supported

| Comm \ Model | ADT685 | ADT685Ex | ADT686 | ADT673 |
|---|---|---|---|---|
| RS232 | ○ | ○ | ○ | ○ |
| RS485 | ○ | | | |
| WiFi | | | ○ | ○ |
| USB | ● | ● | ● | ● |
| Bluetooth(BLE) | ● | ● | ● | ● |

● Included ○ Optional

### 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 be connected to ACloud via Wi-Fi to utilize the Additel Link app.

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



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# ADT673
# Advanced Digital Pressure Calibrators

## ORDERING INFORMATION

### Model Number

ADT673 – 02 – GP300 – PSI – N • • WIFI • • HART

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

**Range type:**
PSI-range by psi
BAR-range by bar
$H_2O$-range by in$H_2O$

**Pressure port type:**
N- 1/4NPT male
N2- 1/2NPT male
B-1/4BSP male
B2-1/2BSP male
M-M20 X 1.5 male
AF-Autoclave F-250-C female
AM-Autoclave M-250-C male

**Comm port (optional):**
WIFI = Wi-Fi
232 = RS-232

**HART Communicator (Optional)**

### Accessories Included

| |
|---|
| Rubber boot |
| Test leads (1) set |
| Rechargeable Lion battery (1 pc) |
| USB cable (type-C) (1 pc) |
| Power adapter |
| Silicone tube - 1 meter each (2 pcs for DP models only) |
| ISO 17025 accredited calibration certificate |

### 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 | RS 232 (DB9/M) extension cable, 9 feet |
| 9260 | Screen protector kit |
| 9257 | Field rain cover |

Note: For oil-free applications contact Additel.



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