TECHNICAL DATA

# Fluke 729 Automatic Pressure Calibrator


## Key features

- Automatic pressure generation and regulation to 300 psi
- Configure procedures for pressure transmitters and switches
- Measure, source, and simulate 4 to 20 mA signals
- Troubleshoot and calibrate HART smart transmitters
- Automatically document test results

## Product overview: Fluke 729 Automatic Pressure Calibrator

### Portable automatic pressure calibrator simplifies pressure calibration

The Fluke 729 Automatic Pressure Calibrator has been designed specifically with process technicians in mind to simplify the pressure calibration process and provide faster, more accurate test results. Technicians know that calibrating pressure can be a time-consuming task, but the 729 makes it easier than ever with an internal electric pump that provides automatic pressure generation and regulation in an in an easy-to-use, rugged, portable package.

### Automatic pressure generation and control

The ideal portable pressure calibrator, the 729 allows you to simply type in a target pressure, and the calibrator will automatically pump to the desired set-point up to 300 psi (20 bar, 2 MPa). Then, internal fine adjustment control automatically stabilizes the pressure at the requested value. You can also fill in a test template and the 729 will automatically pump to and document a multiple-point pressure calibration test at the touch of a button.

The automatic internal fine pressure adjustment can also help compensate for minor leaks in hoses and test setups

providing technicians with a stable measurement. No need to manually turn a vernier to compensate for leaks helping to eliminate the hassle of manual pumping and manual fine adjustment of test pressures.

### Easy calibration documentation

The Fluke 729 can automatically test multiple pressure test points and automatically document the results. Calibration is as easy as typing in the starting and ending pressure, the number of test points, and the test tolerance. The 729 does the work for you by documenting and flagging out-of-tolerance test results in red on the graphical display for:

- Applied pressure
- Measured mA, mV, or digital PV
- % error for each test point

With Fluke Connect® compatibility, the 729 enables a user to perform remote monitoring using the Fluke Connect mobile app to manage and store pressure measurements and logging events. The app even allows for easy sharing so the whole team can access measurements without needing to be in the facility.

Upload and manage documented calibration results with DPCTrack2™ Calibration Management Software, making it easy to manage your instrumentation, create scheduled tests and reports, and manage calibration data.

### HART communication

Built-in HART communication capabilities enable HART transmitter mA adjustments, HART configuration, and the ability to adjust to applied 0% and 100% values. You can also do configuration tasks such as changing a transmitter tag, measurement units, and ranging. Other supported HART commands include setting fixed mA outputs for troubleshooting, read device configuration, and variables and read device diagnostics.

### Rugged, portable design

The 729 is tested and warranted to withstand a 1-meter drop test so it is ready for field instrumentation calibration work. With three ranges to choose from, 30 psi (2 bar, 200 kPa), 150 psi (10 bar, 1 MPa) and 300 psi (20 bar, 2 MPa), Fluke 729 Automatic Pressure Calibrators are designed to perform when and where you need them. You can also measure temperature with optional 720RTD probe for performing custody transfer calibrations. A standard semi-rigid carrying case designed for field work, with room in the case to store test hoses, fittings, test leads, and small hand tools means it's easy to carry everything needed for field pressure calibrations.

Attach one of 50 Fluke 750 Series Pressure Modules to expand the pressure range outside of the internal pump specifications. For greater accuracy and resolution on low pressure calibrations, the Fluke 729 can integrate an external Fluke 750 Series Pressure Module into the test workflow, greatly expanding the calibrators capabilities in low pressure ranges.

## Specifications: Fluke 729 Automatic Pressure Calibrator

| Pressure specification* |
|---|
| One-year specification 0.02% of full scale |
| Control specification 0.005% full scale minimum |
| *See manual for detailed specifications |

| Model |
|---|

| | | |
|---|---|---|
| **729 30G** | **Psi range, resolution** | **-12.0000 to 30.0000 psi** |
| | **Bar range, resolution** | -0.82737 to 2.06842 bar |
| | **kPa range, resolution** | -82.737 to 206.843 kPa |
| | **Comment** | No wireless communication |
| **729 150G** | **Psi range, resolution** | **-12.000 to 150.000 psi** |
| | **Bar range, resolution** | -0.8273 to 10.3421 bar |
| | **kPa range, resolution** | -82.73 to 1034.21 kPa |
| | **Comment** | No wireless communication |
| **729 300G** | **Psi range, resolution** | **-12.000 to 300.000 psi** |
| | **Bar range, resolution** | -0.8273 to 20.6843 bar |
| | **kPa range, resolution** | -82.73 to 2068.43 kPa |
| | **Comment** | No wireless communication |
| **729 30G FC** | **Psi range, resolution** | **-12.0000 to 30.0000 psi** |
| | **Bar range, resolution** | -0.82737 to 2.06842 bar |
| | **kPa range, resolution** | -82.737 to 206.843 kPa |
| | **Comment** | Wireless communication for Fluke Connect |
| **729 150G FC** | **Psi range, resolution** | **-12.000 to 150.000 psi** |
| | **Bar range, resolution** | -0.8273 to 10.3421 bar |
| | **kPa range, resolution** | -82.73 to 1034.21 kPa |
| | **Comment** | Wireless communication for Fluke Connect |

| | | |
|---|---|---|
| **729 300G FC** | **Psi range, resolution** | **-12.000 to 300.000 psi** |
| | **Bar range, resolution** | -0.8273 to 20.6843 bar |
| | **kPa range, resolution** | -82.73 to 2068.43 kPa |
| | **Comment** | Wireless communication for Fluke Connect |
| **729CN 200K** | **Psi range, resolution** | **-12.0000 to 30.0000 psi** |
| | **Bar range, resolution** | -0.82737 to 2.06842 bar |
| | **kPa range, resolution** | -82.737 to 206.843 kPa |
| | **Comment** | For China, no wireless communication |
| **729CN 1M** | **Psi range, resolution** | **-12.000 to 150.000 psi** |
| | **Bar range, resolution** | -0.8273 to 10.3421 bar |
| | **kPa range, resolution** | -82.73 to 1034.21 kPa |
| | **Comment** | For China, no wireless communication |
| **729CN 2M** | **Psi range, resolution** | **-12.000 to 300.000 psi** |
| | **Bar range, resolution** | -0.8273 to 20.6843 bar |
| | **kPa range, resolution** | -82.73 to 2068.43 kPa |
| | **Comment** | For China, no wireless communication |
| **729CN 200K FC** | **Psi range, resolution** | **-12.0000 to 30.0000 psi** |
| | **Bar range, resolution** | -0.82737 to 2.06842 bar |
| | **kPa range, resolution** | -82.737 to 206.843 kPa |
| | **Comment** | For China, wireless communication for Fluke Connect |

| | | |
|---|---|---|
| **729CN 1M FC** | **Psi range, resolution** | **-12.000 to 150.000 psi** |
| | **Bar range, resolution** | -0.8273 to 10.3421 bar |
| | **kPa range, resolution** | -82.73 to 1034.21 kPa |
| | **Comment** | For China, wireless communication for Fluke Connect |
| **729CN 2M FC** | **Psi range, resolution** | **-12.000 to 300.000 psi** |
| | **Bar range, resolution** | -0.8273 to 20.6843 bar |
| | **kPa range, resolution** | -82.73 to 2068.43 kPa |
| | **Comment** | For China, wireless communication for Fluke Connect |
| **729JP 200K** | **kPa range, resolution** | **-82.737 to 206.843 kPa** |
| | **Comment** | For Japan, no wireless communication |
| **729JP 1M** | **kPa range, resolution** | **-82.73 to 1034.21 kPa** |
| | **Comment** | For Japan, 1 MPa range, no wireless communication |
| **729JP 2M** | **kPa range, resolution** | **-82.73 to 2068.43 kPa** |
| | **Comment** | For Japan, 2 MPa range, no wireless communication |
| **729JP 200K FC** | **kPa range, resolution** | **-82.737 to 206.843 kPa** |
| | **Comment** | For Japan, wireless communication for Fluke Connect |
| **729JP 1M FC** | **kPa range, resolution** | **-82.73 to 1034.21 kPa** |
| | **Comment** | For Japan, wireless communication for Fluke Connect |
| **729JP 2M FC** | **kPa range, resolution** | **-82.73 to 2068.43 kPa** |
| | **Comment** | For Japan, wireless communication for Fluke Connect |

| **Electrical specification** |
|---|
| All specifications are valid to 110% of range, except 24 mA source and simulate which are valid to 100% of range. |
| **Ranges** |

| | |
|---|---|
| mA measure, source and simulate | 0 mA to 24 mA |
| Volts dc measure | 0 V dc to 30 V dc |
| **Resolution** | |
| mA dc source, simulate and measure | 1 µA |
| Voltage dc measurement | 1 mV |
| Accuracy | 0.01% ±2 LSD all ranges (at 23 °C ±5 °C) |
| Stability | 20 ppm of full scale /°C from -10 °C to +18 °C and 28 °C to +50 °C |
| mA simulate external voltage requirement | 12 V dc to 30 V dc |
| Loop compliance voltage | 24 V dc @ 20 mA |
| mA simulate external voltage requirement | 12 V dc to 30 V dc |
| Temperature measurement only/100 Ω Pt(385) RTD | -50 °C to 150 °C (-58 °F to 302 °F) |
| Temperature resolution | 0.01 °C (0.01 °F) |
| Temperature accuracy | ±0.1 °C (0.2 °F) ±0.25 °C (±0.45 °F) combined uncertainty when using 720 RTD probe (optional accessory) |
| Drive capability | 1200 Ω without HART resistor, 950 Ω with internal HART resistor |
| **Mechanical specification** | |
| Size (HxWxL) | 7 x 27.94 x 17.27 cm (2.75 x 11 x 6.8 in) |
| Weight | 6.5 lbs., 2.95 kg |
| Ingress protection | IP54 |
| **Environmental specification** | |
| Operating temperature | -10 °C to 50 °C for measurement, 0 °C to 50 °C for pressure control |
| Operating temperature with battery | -10 °C to 40 °C |
| Battery will only charge to 40 °C | |
| Storage temperature | -40 °C to 60 °C |
| Operating altitude | 3000 m |
| Storage altitude | 13000 m |
| **Wireless (729 FC only)** | |
| Radio frequency certification | FCC ID: T68-FBLE IC:6627A-FBLE |
| Wireless radio frequency range | 2412 MHz to 2462 MHz |

# Ordering information


**FLK-729 30G**
Fluke 729 Automatic Pressure Calibrator 30 psi, 2 bar range, no wireless communication

**FLK-729 150G**
Fluke 729 Automatic Pressure Calibrator 150 psi, 10 bar range, no wireless communication

**FLK-729 300G**
Fluke 729 Automatic Pressure Calibrator 300 psi, 20 bar range, no wireless communication

**FLK-729 30G FC**
Fluke 729 Automatic Pressure Calibrator 30 psi, 2 bar range, includes wireless communication for Fluke Connect

**FLK-729 150G FC**
Fluke 729 Automatic Pressure Calibrator 150 psi, 10 bar range, includes wireless communication for Fluke Connect

**FLK-729 300G FC**
Fluke 729 Automatic Pressure Calibrator 300 psi, 20 bar range, includes wireless communication for Fluke Connect

**FLK-729CN 200K**

**FLK-729CN 1M**

**FLK-729CN 2M**

**FLK-729CN 200K FC**

**FLK-729CN 1M FC**

**FLK-729CN 2M FC**

**FLK-729PLUS 2M**

**FLK-729PLUS 1M**

**FLK-729PLUS 200K**

**FLK-729JP 200K**

**FLK-729JP 1M**

**FLK-729JP 2M**

**FLK-729JP 200K FC**

**FLK-729JP 1M FC**

**FLK-729JP 2M FC**

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