

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 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 μ A
Voltage dc measurement	1 mV
Accuracy	0.01% $\pm$ 2 LSD all ranges (at 23 °C $\pm$ 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	$\pm$ 0.1 °C (0.2 °F) $\pm$ 0.25 °C ($\pm$ 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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