FLUKE®

Calibration

PPC4™ Pressure Controller/Calibrator

Premium performance

Maximum versatility

Outstanding reliability



FLUKE®
Calibration

PPC4 Pressure Controller/Calibrator



The best control precision available—to give you the widest usable range

Choose your interface, transducers and more for maximum versatility

PPC4, Fluke Calibration's fifth generation pressure controller/calibrator, continues to break new ground with an unprecedented combination of high end performance, operational versatility and long term reliability.

Now you can choose your local user interface to best fit your application and budget. If you are a bench-top user, the new graphic color display with point-and-click navigation in 11 languages will streamline your pressure calibration and testing tasks. Or, if PPC4 spends most of its time interfaced with a computer, choose the basic front panel. Both the basic PPC4 and PPC4-ui with advanced local user interface include standard remote interfaces and a front panel USB connection.

PPC4 includes individually characterized, quartz reference pressure transducer (Q-RPT) modules to precisely measure and control pressure. Fluke Calibration's Q-RPTs come with a choice of three performance and cost levels, from the unparalleled precision of Premium class to the new, economical Full Scale Standard class.

The AutoRange™ feature supports infinite ranging, quickly and simply optimizing speed, measurement uncertainty, control limits and safety features for the exact range specified by the user.

PPC4 takes the guess work out of uncertainty determination. It has the ability to calculate and display measurement uncertainty real time

Ultra high performance with patented pressure control

Control precision directly impacts the accuracy of your pressure measurements when dynamic (active) control is used in calibrations and tests. This is especially important when operating at the low end of a multiple-range controller. Our patented positive shut-off pressure control gives 50:1 control turndown delivering real, useable rangeability relative to other controllers that most often have % full scale control error. PPC4's dynamic control precision turndown is the key to extreme rangeability.

Broad workload coverage

PPC4's open architecture allows nearly limitless system configurations to adapt to your specific application's requirements. With PPC4 you have one controller with a complete and affordable solution.

Reliability and ruggedness

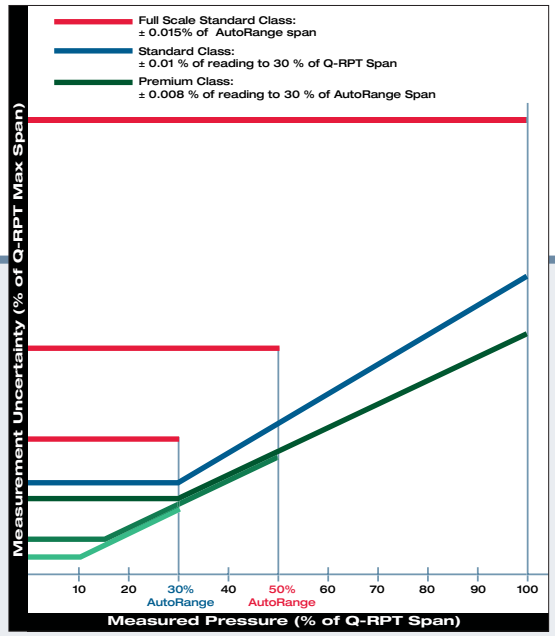
PPC4 carries on the PPC line's tradition of combining very high end performance with ruggedness and reliability.

With all of this, PPC4 delivers the performance and features needed to face a new generation of pressure calibration and test challenges in calibration labs, instrument shops and automated test stands.



Complete user interface support in 11 languages

PPC4's advanced user interface allows the user to select from Chinese (simplified), Chinese (traditional), Czech, English, French, German, Italian, Japanese, Portuguese, Russian and Spanish languages.



Q-RPT measurement uncertainty (A7M example)

Q-RPT quartz reference pressure transducers deliver premium performance

PPC4's outstanding pressure measurement specifications are made possible by Fluke Calibration's exclusive quartz reference pressure transducer (Q-RPT) modules.

Q-RPTs measure pressure by measuring the change in the natural oscillating frequency of a quartz crystal with pressure induced stress. To be qualified for use in a Q-RPT module, each transducer is individually evaluated and characterized using automated primary pressure standards. Only transducers exhibiting required levels of linearity, repeatability and stability make it. A proprietary compensation model, derived from 20+ years experience with thousands of quartz pressure transducers, is applied to optimize the metrological characteristics. **Full Scale Standard** (**f**), **Standard** (**s**) and **Premium** (**p**) Q-RPT modules are available to fit your performance and budgetary requirements (see page 10).

Q-RPT modules integrate the quartz transducer into a rigid, standardized assembly that protects the critical measuring elements from undesired connecting stresses. Modules include valves to support AutoZeroing, measurement mode changes and switching of the active Q-RPT.

Dynamic atmospheric pressure compensation, using an independent on-board barometer, allows instantaneous switching between absolute, gauge and bidirectional gauge modes at any time with no significant effect on measurement uncertainty. The barometer is used only to measure the small variations in atmospheric pressure that occur during gauge mode operation, so its absolute error and drift over time do not contribute to measurement uncertainty, and it does not require formal calibration. No additional hardware or options are needed to support both absolute and gauge modes with a single Q-RPT.

Infinite Ranging and AutoRange

There's a lot more to covering a wide range of test devices with a single pressure controller than percent-of-reading measurement uncertainty. **Infinite Ranging** and **AutoRange** are significant new steps in making single pressure controllers and monitors cover a broad range of unit under test (UUT) ranges without compromise.

AutoRange automatically adjusts all operating parameters to the exact user specified range without requiring operator judgment. It protects against accidental overpressure by setting upper limit alarm and shut off and it allows frequently used operating setups (unit, mode, range) to be preset and saved for instant recall.

In addition to range specific measurement uncertainty, PPC4 offers the full pressure control and feature adaptability that are needed for true rangeability in test and calibration applications.

Q-RPT module advantages

In addition to outstanding metrological characteristics, rugged Q-RPT modules offer the advantages of:

- Negligible warm-up time
- No gas species dependence
- Quartz element isolated from test medium
- Minimal sensitivity to orientation



Infinite Ranging gives PPC4 unprecedented versatility

Because of Infinite Ranging, PPC4 can adapt to a wide variety of devices to be tested. With the easy-to-use AutoRange function, a few simple key strokes or a single remote command string at the start of a test adapt every feature of the controller to optimize it for a specific user specified range. Just enter the maximum pressure, the measurement mode and, if desired, the full scale specification of the UUT, and:

- Q-RPT is selected. If there are several Q-RPTs in PPC4's system, the optimum Q-RPT to cover the defined range is automatically identified and selected.
- Unit of measure is set.
- Absolute, gauge or bidirectional gauge measurement mode is activated.
- Display resolution is adjusted to the appropriate level.
- Pressure control limits are set to fit the range of operation.
- Overpressure limits are adjusted to automatically protect the unit under test for the actual range of operation.
- Measurement uncertainty is reduced proportionally to the selected range (Full Scale Standard and Premium Class Q-RPTs only).

One technology—multiple solutions



Basic local user interface for the computer controlled environment



PPC4 standard front panel
USB connection provides easy access

PPC4 for bench top and computer controlled applications

Adaptive local user interface

With PPC4 you choose the local user interface to best fit your application. For the bench top user, the powerful advanced user interface offers a color graphic display with point-and-click navigation. For computer controlled installations, save cost with the basic user interface designed for occasional use.

System expansion

Whatever PPC4 interface you choose, both offer a breadth of latitude in putting together an automated pressure calibration system. A PPC4 controller can be configured with one, two or no internal Q-RPT modules. Up to two external Q-RPTs contained in a Fluke Calibration RPM4 Reference Pressure Monitor can also be easily integrated into the system.

When used as an external device, the RPM4 is connected by a 9-pin serial cable, which communicates via RS-232. The RPM4 Q-RPTs then become part of PPC4 system and are managed by PPC4 transparently to the user. There is only one test connection for the system's full range of operation, eliminating the need for external valving or multiple test ports required by traditional solutions.

Wide pressure range

PPC4 controls pressure using Fluke Calibration's patented, positive shut-off pressure control. Positive shut-off pressure control is recognized for its high reliability, very wide dynamic range and minimal gas consumption for even greater cost savings.

Thanks to positive shut-off pressure control, a PPC4 pressure controller has both the speed and precision to control pressure ranges in a 50:1 turn down ratio with a single pressure supply and a single controlled pressure output. PPC4 offers 0.002 % of reading control down to 2 % of the controller's maximum pressure. This allows PPC4 to cover a very wide range without the deterioration in delivered pressure uncertainty at the low end that is found in other controllers.

PPC4's pressure control module owes its reliability to the use of low power solenoid valves with less than 0.5 mm displacement used at very low operating frequency.

Fifth generation positive shut-off pressure control also features improved low absolute pressure precision and supply shut-off capability to allow lower ultimate absolute pressures when setting zero.

The basic and advanced PPC4 includes all the features you expect in today's state-of-the-art instruments

- Rugged enough for mobile applications and standard shipment without special packaging
- Advanced user interface with full support in 11 languages
- Covers the absolute range of 1 kPa (0.15 psi) to 14 MPa (2 000 psi) and gauge equivalent, including very low differential pressures
- Control precision to ± 4 ppm of Q-RPT span, default ± 0.005 % of AutoRanged range
- Three different Q-RPT measurement classes available to fit different performance requirements
- Measured and delivered pressure uncertainties calculated real-time and available on remote and local interfaces
- Q-RPTs can be located in an external RPM4 so that PPC4 does not need to be shipped or removed for recalibration
- AutoRange feature optimizes and sets measurement, control and safety features for the specific range of the test being run with a few simple entries
- Dynamic and static control modes with default or user specified parameters
- Common remote command protocol with Fluke Calibration PPC3 pressure controllers
- Multiple remote interface options: RS232 and front panel USB included, IEEE-488.2 or Ethernet and rear USB optional
- Instantaneous switching between absolute, gauge and bidirectional gauge modes without added hardware or calibration requirements
- Instantaneous switching between control and measure modes with no pressure discontinuity
- Automated AutoZeroing while vented at atmospheric pressure
- 16 SI and US pressure units as well as user definable units
- Simple, objective pressure ready/not ready indicator with user adjustable criteria
- Automatic pressure head correction
- On-board, programmable calibration sequences with UUT tolerance testing
- Automated leak testing routines
- Valve drivers option for system design
- Automated self purging liquid trap (SPLT) accessory available for protection against liquid contamination
- Flash memory for simple and free embedded software upgrades from **www.flukecal.com**

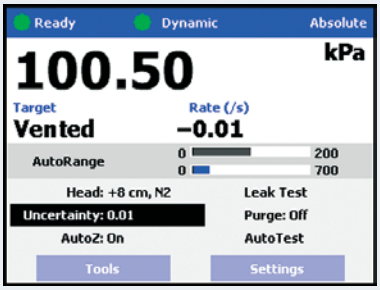
...and much more.

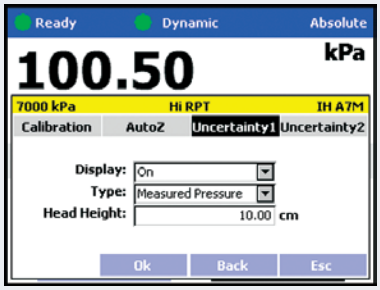


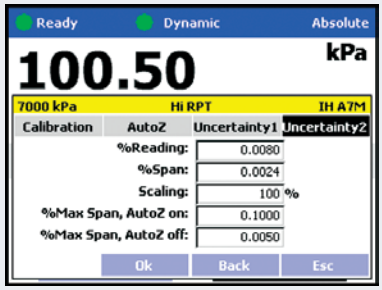
Advanced local user interface for the bench-top environment

Calculating measurement uncertainty in real time

Uncertainty in the measured or delivered pressure is calculated continuously, using uncertainty components that can be tailored by the user.

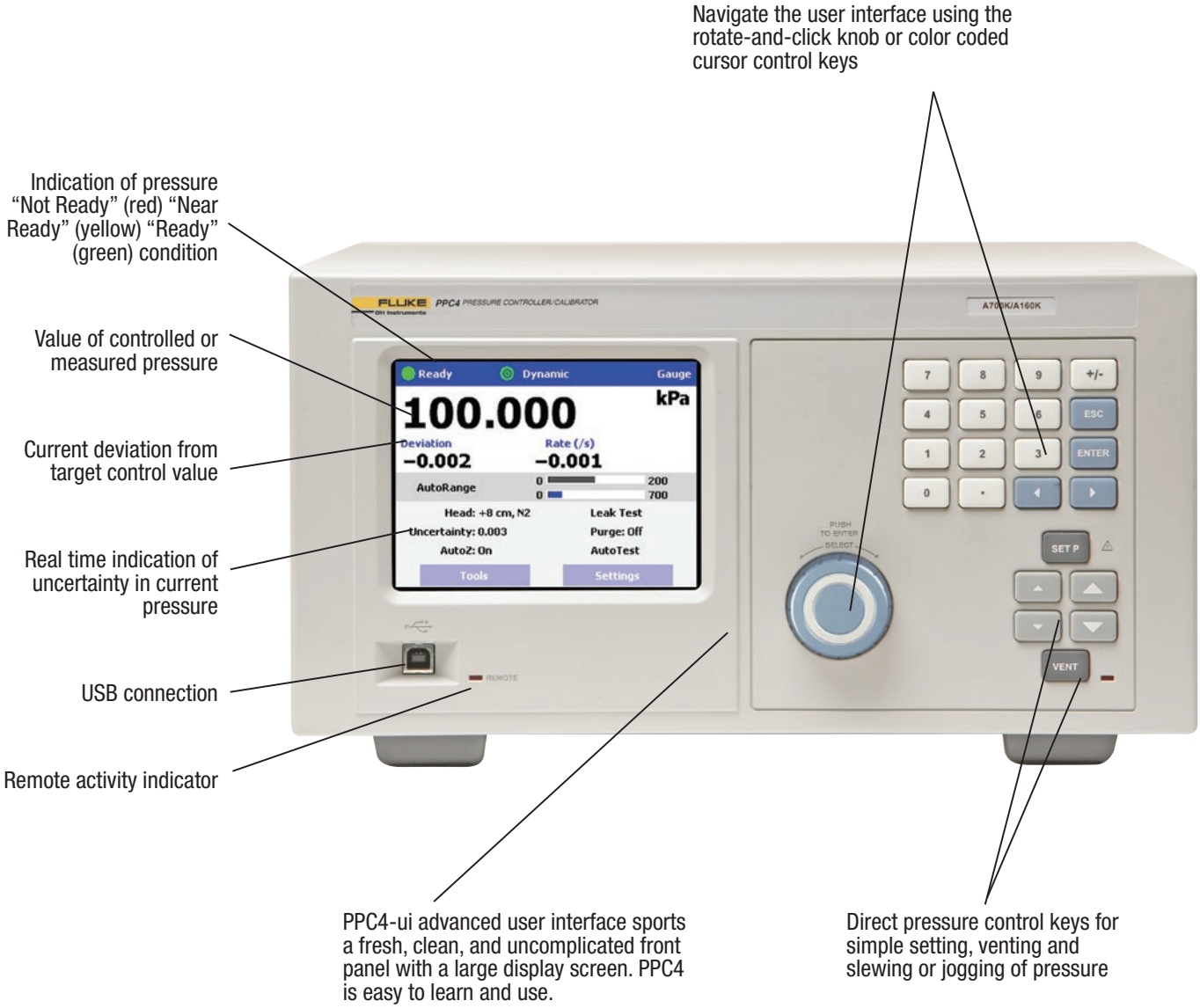




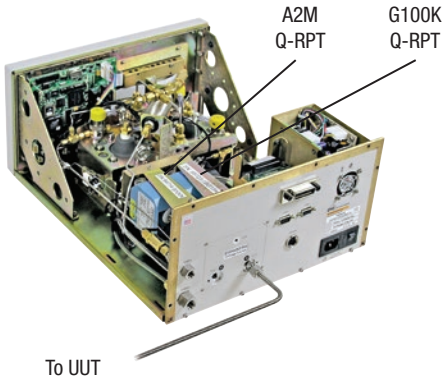


Easy-to-use high performance pressure controller/calibrator

PPC4-ui advanced user interface is equipped with an easy-to-read large color graphic display with point-and-click navigation. Its operation is fast and highly intuitive. The open architecture and external reference device provide versatility and ease in configuring and re-configuring a system.



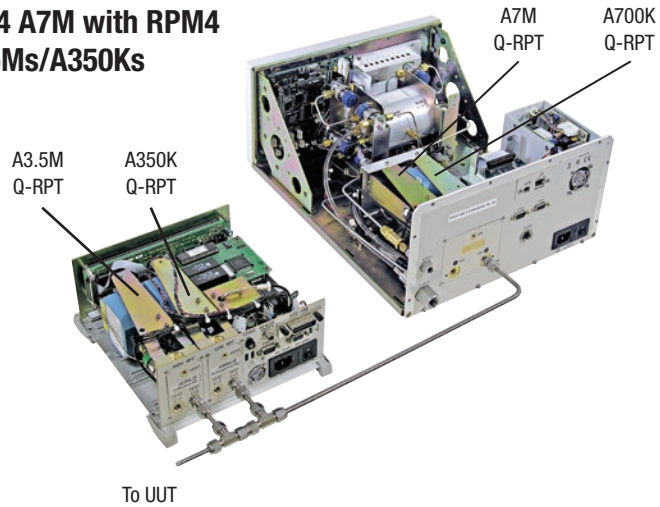
PPC4 A2M/G100K



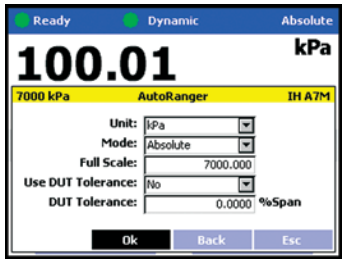
Open architecture—PPC4 system configuration examples include:

- A PPC4 with one or two built-in Q-RPTs to act as a stand-alone, “one box” controller/calibrator package.
- A PPC4 with no built-in Q-RPTs and an external RPM4 (with one or two Q-RPTs) to configure a system whose reference pressure measurement is remote from the controller. This configuration is ideal when possible differences in pressure between the controller and the test measurement location are a concern or when it is advantageous for the controller to be permanently installed, separately from the reference measurement devices.
- A PPC4 with no built-in Q-RPTs (utility sensor only) to act as low cost automated pressure setting and controlling device for use in a variety pressure calibration and test configurations. For example, as an automated pressure control component within a PG7000 piston gauge system.

PPC4 A7M with RPM4 A3.5Ms/A350Ks

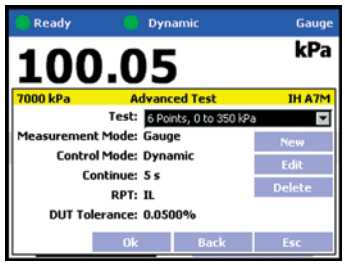


AutoRange



PPC4’s AutoRange feature optimizes measurement, control and safety features for the specific range of the test being run with a few simple entries.

AutoTest



PPC4 supports setting up and running quick tests on the fly and creating and storing complex test sequences for recall and execution.

User preferences

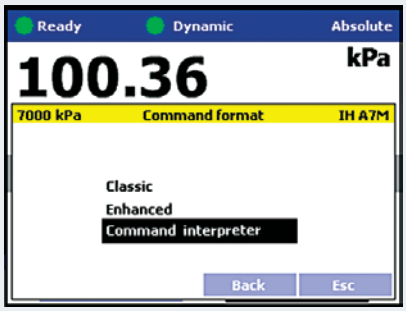


PPC4’s advanced user interface (ui) supports extensive user customization including screen saver, key press sounds, languages and secure access settings.

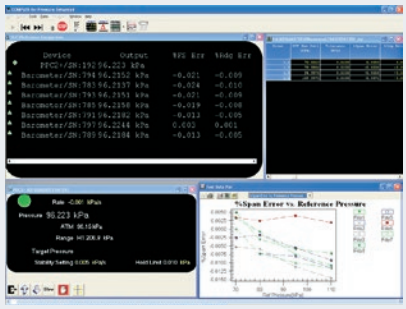
Automation and support

PPC4 Command Interpreter

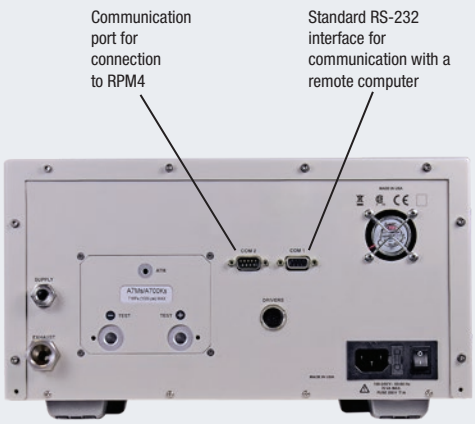
PPC4 Command Interpreter allows PPC4 to interpret and respond to custom remote commands, including commands used by other manufacturers. The feature can be used to make PPC4 emulate third party controllers, so that it can be used with test software written for controllers from other manufacturers. Thanks to Command Interpreter, PPC4 can be implemented to improve performance in an existing system, without requiring costly modifications to legacy software.



COMPASS® for Pressure



Rear panel of PPC4



Integration made easy

Multiple automation options with PPC4

From standalone, onboard calibration routines, to easy-to-use remote interfaces with third party emulation, to advanced, calibration software, PPC4 is geared to deliver the automation promise.

PPC4's high range turndown and open architecture make simple work of configuring a single automated system to cover a very wide range. Front panel USB and rear panel RS-232 interfaces are included for communication with a remote computer. IEEE-488.2 interface is optional. Remote operation is supported by a complete set of easy-to-use, well documented command strings.

For those not desiring, or not in a position, to develop their own PC based software, Fluke Calibration's COMPASS® for Pressure calibration software provides an off-the-shelf solution. COMPASS for Pressure has the power and flexibility to automate nearly any level of testing imaginable, including all aspects of test execution, data acquisition and report generation, whether for a bench top calibration system or a complete, multi-function sensor test stand.

Fluke Calibration also offers integrated, turnkey calibration systems, including pressure generation, control and data acquisition hardware in solutions ranging from mobile carts to attractive, small-footprint rack systems.

The support you need, when you need it

Fluke Calibration's calibration, testing and repair services are dedicated to filling your needs quickly and at a fair cost while maintaining the unmatched level of quality that is our trademark.

Fluke Calibration's calibration laboratories are accredited by the American Association for Laboratory Accreditation (A2LA) for conformance to ISO Guide 17025.

As a Fluke company, Fluke Calibration has access to global calibration and repair facilities to keep your hardware in top working order.

If you need to arrange training for yourself or your staff, Fluke Calibration can help there too. Fluke Calibration courses provide a broad range of classes including principles and practices of pressure calibration; design, use, and calibration of piston gauges as well as analysis of their measurement uncertainty. Classes are also available in the setup and operation of COMPASS for Pressure calibration software; the operation and maintenance of a Fluke Calibration molbloc/molbox system; and much more.

Fluke Calibration's commitment to support provides additional benefits as well, including invitations to software user group meetings and conferences, periodic email bulletins and a company newsletter.

FLUKE®
Calibration

Summary specifications

General	
Power requirements	100 V to 240 V ac 50/60 Hz, 70 W max consumption
Operating temperature range	10 °C to 40 °C (50 °F to 104 °F)
Storage temperature range	-20 °C to 70 °C (-4 °F to 158 °F)
Vibration	Meets MIL-T-28800D
Weight	16.6 kg (36.5 lb)
Dimensions (HxWxD)	PPC4: 19 cm x 35 cm x 41 cm (7.5 in x 13.8 in x 16.1 in)
	PPC4-ui: 19 cm x 35 cm x 45 cm (7.5 in x 13.8 in x 17.7 in)
Remote communication interfaces	RS-232 (COM1, COM2), USB (front panel)
	Optional: IEEE-488.2 or Ethernet and USB (Rear Panel)
Languages Supported (Advanced UI)	Chinese (simplified), Chinese (traditional), Czech, English, French, German, Italian, Japanese, Portuguese, Russian and Spanish
Pressure ranges	Vacuum to 14 MPa (2 000 psi)
Operating medium	Any clean, dry, non-corrosive gas
Supply pressure	Maximum desired set pressure +70 kPa (10 psi)
Exhaust pressure	Atmosphere or vacuum for pressures under 5 psig (35 kPa gauge)
Pressure connections	Test (+), Test (-): 1/8 in NPT F
	Supply: 1/8 in NPT F
	Exhaust: 3/8 in NPT F
	ATM: 10-32 UNF
Pressure limits	Maximum working test pressure: 103 % Hi Q-RPT maximum
	Maximum pressure on TEST port without damage: 115 % Hi Q-RPT maximum
Utility sensor (if present)	Resolution: 0.001 % of span
	Precision: 0.1 % of span

Pressure measurement			
Warm up time	30 minute temperature stabilization recommended for best performance from cold power up		
Resolution	To 1 ppm, user adjustable		
Acceleration effect	± 0.008 %/g maximum, worst axis. Allows operation at a ± 20° from reference plane without significant effect		
Predicted one year stability[1]	± 0.005 % of reading (Gauge mode or Absolute mode with regular use of AutoZero)		
	Q-RPT Class (see page 11)		
	Full Scale Standard (f)	Standard (s)	Premium (p)
Precision[2]	± 0.01 % of AutoRanged span[4]	± 0.008 % of reading[5]	± 0.005 % of reading[7]
Measure-ment uncer-tainty[3]	± 0.015 % of AutoRanged span[4]	± 0.01 % of reading[6]	± 0.008 % of reading[8]

1. Predicted Q-RPT measurement stability limit (k=2) over one year assuming regular use of AutoZero function. AutoZero occurs automatically in gauge mode whenever vented, by comparison with barometric reference in absolute mode. Absolute mode predicted one year stability without AutoZ is ± (0.005 % Q-RPT span + 0.005 % of reading).
2. Combined linearity, hysteresis, repeatability. Add + 1 Pa (0.00015 psi) in gauge mode with an Axxx (absolute) Q-RPT for the resolution and short term stability of the on-board barometer.
3. Maximum deviation of the Q-RPT indication from the true value of applied pressure including precision, predicted one year stability limit, temperature effect and calibration uncertainty, combined and expanded (k=2) following the ISO "Guide to the Expression of Uncertainty in Measurement."
4. % of AutoRanged span, but with AutoRanged span no lower than 30 % of Q-RPT span (10 % with BG15K and G15K).
5. ± 0.008 % of reading from 30 % to 100 % of Q-RPT span. Below 30 %; ± 0.0024 % of Q-RPT span.
6. ± 0.01 % of reading from 30 % to 100 % of Q-RPT span. Below 30 %; ± 0.0030 % of Q-RPT span. For GXXX ranges, the total uncertainty is expanded to 0.015% reading or 0.0045% of Q-RPT span, whichever is greater when used outside of the altitude range of -90 to 900 meters (-300 to 3000 feet).
7. ± 0.005 % of reading from 30 % to 100 % of any AutoRanged span between 30 % and 100 % of maximum Q-RPT span. Below 30 %; ± 0.0015 % of AutoRanged span, or 0.0005 % of Q-RPT span, whichever is greater.
8. ± 0.008 % of reading from 30 % to 100 % of any AutoRanged span between 30 % and 100 % of maximum Q-RPT span. Below 30 %; ± 0.0024 % of AutoRanged span, or 0.0007 % of Q-RPT span, whichever is greater.

Note: Fluke Calibration technical note 8050TN11 provides a detailed description of PPC4 Q-RPT uncertainties.

Pressure control, all ranges		
Modes and ready indication		
Static mode		Sets pressure to target within hold limit and shuts off control in a closed test volume. Pressure is ready when inside hold limit and stability test is met.
Dynamic mode		Sets pressure within hold limit and continuously adjusts pressure to remain at target value. Pressure is ready when inside hold limit.
Control parameters		Hold limit, stability limit (default values can be adjusted by user)
Control perfomance		
Control precision		± 4 ppm of active Q-RPT span or ± 0.4 ppm of Hi Q-RPT span, whichever is greater
Lowest controllable pressure in dynamic mode	Gauge	Zero set by automated venting. Lowest point above or below zero pressure in dynamic mode limited only by Q-RPT resolution and control precision
	Absolute, negative gauge	± 0.05 % of Q-RPT span or 1 kPa (0.15 psia), whichever is greater
Ultimate pressure (absolute, negative gauge)	with low ultimate pressure option	50 Pa (0.5 mbar, 0.007 psia) typical, depending on vacuum pump and connections
	without low ultimate pressure option	200 Pa to 700 Pa (2 mbar to 7 mbar, 0.03 psia to 0.1 psia) depending on vacuum pump and connections
Typical pressure setting ready time (0.005 % hold limit, 50 cc test volume)		15 s to 35 s
Slew time (ATM to FS, 50 cc (3^3 in) test volume)		30 s
Typical test volume	0 MPa to 2 MPa (0 psi to 300 psi)	0 cc to 1,000 cc (61^3 in)
	3.5 MPa to 14 MPa (500 psi to 2 000 psi)	0 cc to 500 cc (31^3 in)

Ordering information

Configuring a PPC4 Controller/Calibrator

1. Define the maximum controlled pressure required (up to 14 MPa)
2. Select the Q-RPT or utility sensor for the maximum pressure identified and choose its class (see page 11)
   a. Full Scale Standard Q-RPT
   b. Standard Q-RPT
   c. Premium Q-RPT
   d. Utility sensor
3. Select a Lo Q-RPT if desired
   a. Full Scale Standard Q-RPT
   b. Standard Q-RPT
   c. Premium Q-RPT
4. Select the local user interface style
   a. PPC4 for basic (2 x 20 character, 10 key)
   b. PPC4-ui for advanced (color display, full keypad, point and click knob, languages)
5. Assemble the controller elements into a model descriptor

   Ex. PPC4 A7Mp/A700Ks, PPC4-ui A700Kf
6. Select options
   a. Units: SI or US nominal ranges
   b. CE compliance
   c. Remote interface: add IEEE-488.2 or Ethernet and rear USB
   d. Low ultimate pressure option

PPC4 Model Examples

Designator	Q-RPTs		Local user interface
	Hi	Lo	
PPC4-ui A10Mp/A2Mp	A10M, Premium class	A2M, Premium class	Advanced
PPC4-ui A350Ks	A350K, Standard class	None	Advanced
PPC4 A700Ku/A200Kp	None (A700Ku utility sensor)	A200K, Premium class	Basic
A7Mu	None (A7Mu utility sensor)	None	Basic

Options

PPC4-IEEE	3343306	IEEE-488.2 device interface on rear panel
PPC4-LOW-ULT-P	3567260	Low ultimate pressure option, reduces minimum delivered pressure (uncontrolled) to approximately 50 Pa



Dual and single Q-RPT manifolds. Fluke Calibration's exclusive quartz reference pressure transducer (Q-RPT) modules are the heart of PPC4's measurement performance.

The Q-RPT table provides a list of the Q-RPTs available to be included in a PPC4

In an SI version, the nominal range is defined in and the default unit is kPa. Ranges in other units are the equivalent of the kPa ranges. In a US version, the nominal range is defined in and the default unit is psi. Ranges in other units are the equivalent of the psi ranges.

There are three classes of Q-RPT measurement specifications and most PPC4 Q-RPTs are available in all three classes (see page 10):

Full Scale Standard class Q-RPTs are intended for applications in which the devices to be calibrated or tested have % of full scale uncertainty and require calibration standard uncertainty of ± 0.015 % or less. As the FS Standard Q-RPTs have the same 0.015 % of range uncertainty for any AutoRanged range down to 30 % of the maximum range of the Q-RPT, a single Q-RPT can cover a broad range of UUT ranges. FS Standard class Q-RPTs are also the most economical Q-RPTs available for PPC4, but you still get all of PPC4's outstanding features and unmatched pressure control. Full Scale Standard class Q-RPTs are indicated by "f" following the Q-RPT designator (for example, A7Mf).

Standard class Q-RPTs are intended for applications in which the devices to be calibrated or tested may benefit from the use of a calibration standard whose uncertainty is of-reading rather than being constant over a given range. With ± 0.01 % of reading measurement uncertainty and 0.008 % of reading precision, they are qualified to calibrate or test all but the very highest performance UUTs. Standard class Q-RPTs are indicated by "s" following the Q-RPT designator (for example, A10Ms).

Premium class Q-RPTs define the state of the art in high end pressure transfer standards. They are intended for applicationsthat require the highest possible performance. Premium class provides one year measurement uncertainty of ± 0.008 % of reading and 0.005 % of reading precision, with uncertainty turndown to 30 % of the maximum Q-RPT range so that a single Q-RPT can provide the same outstanding specs when operating in ranges well under the maxium Q-RPT range. Premium Q-RPTs are indicated by "p" following the Q-RPT designator (for example, A700Kp).

PPC4 Quartz reference pressure transducers (Q-RPTs) and ranges

Q-RPT designator	SI Version		US Version	
	Maximum range [kPa] absolute	Maximum range [kPa] gauge	Maximum range [psi] absolute	Maximum range [psi] gauge
A14M[1, u]	14 000	14 000	2 000	2 000
A10M[1]	10 000	10 000	1 500	1 500
A7M[1, u]	7 000	7 000	1 000	1 000
A3.5M[1]	3 500	3 500	500	500
A2M[1, u]	2 000	2 000	300	300
A1.4M[1]	1 400	1 400	200	200
A700K[1, u]	700	700	100	100
A350K[1]	350	250	50	35
A200K[1, u]	200	100	30	15
A160K[1]	160	60	23	8
A100K[1]	110	10	16	1.5
G200K[2]	-	200	-	30
G100K[2]	-	100	-	15
G15K[2]	-	15	-	2.2
BG15K[3]	-	15	-	2.2
BA100K4	70 to 110	-	10.2 to 16	-

1. All Axxx Q-RPTs and utility sensors support absolute, gauge and negative gauge measurement modes.
2. All Gxxx Q-RPTs are gauge mode only. Gxxx ranges not available in premium class
3. BG15K is bidirectional gauge from -15 kPa to +15 kPa (-2.2 psi to +2.2 psi).
4. BA100K is a barometric range.

u. Range available as utility sensor. A200K is to 300 kPa absolute, 200 kPa gauge.

Accessories

SPLT		3069823	Self purging liquid trap for PPC4 test port
RPM4		3072483	Reference pressure monitor for external Q-RPTs and/or absolute mode AutoZ. RPM4 brochure, #3031143)
Case		3338097	Rugged, reusable molded shipping case
Rack Mount Kit		3338072	Rack mount kit for 48 cm (19 in) rack. (4U)
PK-PPC-BG-DVU		3070389	Dual volume unit for use with BG15K Q-RPT
Reference vacuum kit, 220V		3584486	Vacuum pump package for PPC EXHAUST port. Includes connections
Reference vacuum kit, 110V		3584473	
RS-232 Cable	(Non CE)	2758335	9 pin, 2 m (6.6 ft) for PPC4 COM1 or PPC4 to RPM4 connection
	(CE Version)	3077381	
COMPASS for Pressure	ENH-SNGL	3070175	Software to automate testing, data acquisition, reporting and asset management
	BAS-SNGL	3071106	
	ENH-MULTI	3072374	
	BAS-SITE	3072407	

A complete Fluke Calibration controller range

PPC4 covers pneumatic pressure up to 14 MPa (2 000 psi).

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PPCH-G: pneumatic pressure to 100 MPa (15 000 psi)
PPCH: hydraulic pressure to 200 MPa (30 000 psi)

RPM4 reference pressure monitor



RPM4 can be used to provide one or two external Q-RPTs to a PPC4 system, expanding the range and/or providing reference measurement autonomy.

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