FLUKE®

Calibration

6270A Modular Pressure Controller/Calibrator

The simple, easy-to-maintain solution for calibrating a wide range of pressure gauges and sensors

The 6270A can be used in system mode, allowing for multiple controllers to be operated through one front panel.

6270A features at a glance

- Calibrate a wide range of gauges and sensors with a single instrument
- Modular configuration makes this a versatile and economical solution
- Easy to operate
- Easy to maintain
- Wide measurement range—vacuum to 20 MPa (3000 psi)
- Three levels of accuracy let you balance accuracy and budget
- High speed, stable pressure control
- Localized graphical user interface in choice of nine languages
- Can be fully automated with COMPASS® for Pressure software
- Optional contamination prevention system helps keep valves clean and free from debris

Calibrate a wide range of pressure gauges and sensors from very low pressure to 3000 psi with this reliable, easy-to-maintain instrument

The Fluke Calibration 6270A Pressure Controller/Calibrator is a robust, reliable solution that lets you dramatically simplify the task of pneumatic pressure calibration. Thanks to its modular design, it is so flexible that it can be configured to meet a wide variety of needs and budgets, and expanded to cover a very broad workload, at purchase or later as your needs change and grow.

The 6270A is ideal for pressure sensor manufacturers who want to avoid downtime on the production line and need a pressure source that performs both quickly and accurately. Its modular design makes it easy to maintain; its high-speed control and accuracy over a wide range give them the throughput they require.

Managers and technicians in calibration laboratories and instrument shops appreciate the 6270A calibrator's control precision and accuracy over a wide pressure range, which enables them to calibrate a wide range of devices with a single calibrator. They also like the contamination prevention option that provides an important safeguard against that pervasive hazard.

The 6270A is easy to learn and use, thanks to a graphical user interface and an intuitive hardware design.

The 6270A works as a benchtop or rack-mounted solution.

Hook up to five measurement modules.

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Calibrate a wide workload—quickly, accurately, dependably

The 6270A features pressure ranges from low differential pressure to 20 MPa (3000 psi), which covers the requirements of most gauges and sensors. Three levels of accuracy, 0.02 % FS, 0.01 % reading from 50 % to 100 % of span or 0.01 % reading from 30 % to 100 % of span, let you balance your need for accuracy with the limits of your budget.

Thanks to its modular design, the 6270A is flexible enough that you can install modules with different accuracy classes within the same chassis. You can buy the highest level of accuracy for the pressure ranges that require it and a lower, more economical level of accuracy for everything else.

The 6270A's accuracy specifications are provided in full and supported by a Technical Note that details its measurement uncertainty, so you know exactly what you are getting. The Technical Note is available for download on the flukecal.com website. As with all Fluke Calibration instruments, these specifications are conservative, complete, and dependable.

Wide rangeability assures wide workload coverage

The Pressure Control Module can handle a wide range of pressures.

The 6270A features pulse-width-modulated control, a proven technology that enables it to deliver wide rangeability, the ratio of the maximum to the minimum specified measured value at which the instrument performs correctly. A wide rangeability is what enables you to calibrate a wide workload.

Cutting edge technology and performance

Three families of pressure measurement modules provide three levels of performance that let you set up a system that matches your needs for accuracy and value.

Good: PM200 pressure measurement modules	Better: PM500 pressure measurement modules	Best: PM600 measurement modules
• 0.02 % FS specification makes it ideal for calibrating or testing pressure dial gauges, lower accuracy transmitters, or pressure switches • Rugged silicon pressure sensor design allows for faster pressure control • Economic price point helps facilitate the purchase of back-up modules, making sure you are never down for calibration	• Highly characterized and linearized silicon pressure sensor provides an economical way of making accurate pressure measurements • 0.01 % reading measurement uncertainty from 50 % to 100 % for most ranges allows for a wide workload coverage • More than 45 ranges, from low differential pressures up to 20 MPa (3000 psi) to choose from. Your application is covered with this wide flexibility in configuration.	• Fluke Calibration Quartz Reference Pressure Transducer (Q-RPT) technology provides precise measurement with long term stability • 0.01 % reading measurement uncertainty from 30 % to 100 % of the modules' span allows for extremely wide workload coverage • Onboard barometer included with absolute mode modules, allowing them to be used in both absolute and gauge mode

Safety features protect operators and instruments

Each measurement and control module, as well as the main chassis, has pressure relief valves to protect the instrument and its operators from accidental overpressure. The 6270A has been designed using Sound Engineering Practices (SEP). With the internal relief valves, user-setable pressure limits, and emergency abort button, safety is the highest priority.

Preventing contamination

If your workload includes devices that contain different substances like water, oil, and gas, you could be at risk for contamination—something getting into your system that isn't supposed to be there. Contamination can clog a calibrator's valves, wear out its parts, and make it difficult to maintain pressure. If the contamination gets into the sensor, it can actually change the calibrator's behavior and throw off your readings. If contamination is a concern for you, order the optional 6270A Contamination Prevention System (CPS) to help keep the calibrator's valves clean and free from debris.

The CPS provides an unprecedented level of protection by maintaining uni-directional flow away from the controller, a gravity sump system, and a two-stage filtering system.

Create an automated piston gauge system

The 6270A is a flexible workhorse on its own, but you can also use it as the first step in creating an automated piston gauge system. Use the 6270A with a Fluke Calibration PG7601 or PG7202 Piston Gauge to automate the flotation of the piston. Add a PG7000-AMH Automated Mass Handler for PG7000 Piston Gauges to complete the automated system.

Change modules in about 20 seconds.

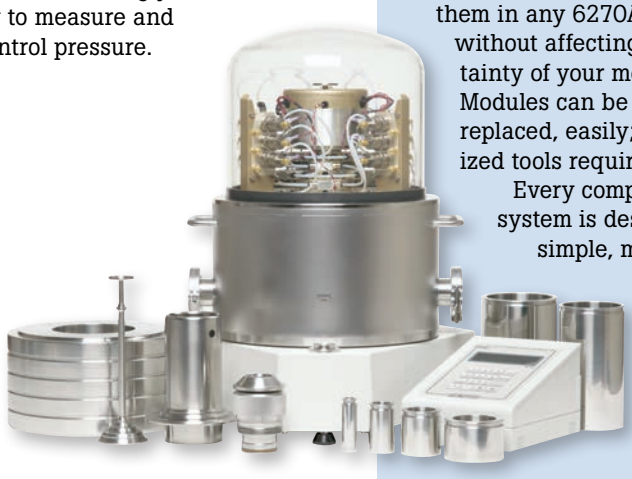
Modular configuration gives you almost unlimited flexibility

Install up to five pressure modules in a single 6270A chassis, mixing and matching module types and ranges to get the combination that best suits your needs. Buy just what you need to calibrate the pressure ranges in your current workload. Add modules later as your workload grows and changes.

Modules snap in and out quickly and easily; just slide each one into a specially designed track and tighten the knob until you hear it click into place. The click tells you that the module is safely in place; a special "anti-torque" guard on the knob prevents over-tightening. You never have to wonder if you tightened it too much or not enough.

Modules are installed and uninstalled through the front of the chassis. You can easily install and remove both the measurement modules and the control module from the chassis, even if the 6270A is installed in a rack mount.

Each module uses an enhanced face-seal design that has been leak tested to pressures that are three times higher than the maximum working pressure. You don't have to worry about a leak in the system affecting your ability to measure and control pressure.



So easy to maintain, you can do it in house

We designed the 6270A to be easy to maintain, making your cost of ownership very reasonable. We publish a Service and Calibration Manual with detailed instructions on how to replace valves and components. An on-board screen capture routine provides troubleshooting help.

Control and measurement modules are separate, allowing for quick and easy repair. Just pull out the module and replace it; no autotuning required. You can change the pressure ranges just as easily by installing a new module and possibly changing the supply pressure. No need to send the 6270A back to the factory.

The modules can be calibrated inside or outside of the chassis using the optional PMM Calibrator Kit. Once calibrated, you can use them in any 6270A chassis without affecting the uncertainty of your measurements. Modules can be removed and replaced, easily; no specialized tools required.

Every component in the system is designed for simple, modular replacement, from the front panel to the rear pressure connections.

Internal components, like the main CPU, are designed to be easily replaced.

The pressure connectors on the back of the 6270A are made from anodized aluminum, a robust material that stands up well to normal usage. However, if threads are stripped or there is galling from metal connectors sliding against it, you can easily remove the block without having to open the chassis. Simply remove the screws holding it in place and pull it out. The block does not have any items attached to it, so replacement is simple and low cost.

The removable rear manifold makes it easy to remove the 6270A from a rack-mounted system. Simply vent the test and supply ports and disconnect the connection manifold from the back of the chassis. You won't need to question which pressure line is the supply port and which one is the test port; they stay connected to the manifold, and the manifold can only be connected one way. Three types of manifolds—NPT, BSP, and 7/16-20—are available to meet the needs of different geographic regions. The isolation valves on the main manifolds are easily removed from the top of the 6270A chassis.

Automation, training and support

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Automate with COMPASS® software for improved consistency and throughput

Fluke Calibration COMPASS for Pressure software is designed specifically for pressure calibration. It enables you to automate the 6270A and run complete pressure calibration sequences on single or multiple devices under test (DUTs). COMPASS software removes the unknowns often associated with getting automated systems online.

The 6270A features a full remote interface that enables you to use it with custom software or other data acquisition equipment. Refer to the 6270A User Manual for details about the interface.

If you need support, we're here to help

Fluke Calibration's testing, repair and calibration services are dedicated to filling your needs quickly and at a fair cost while maintaining the unmatched level of quality that is our trademark. Our pressure calibr ion laboratories are accredited for conformance to ISO Guide 17025. We maintain global calibration and repair facilities to help you keep your hardware in top working order.

CarePlans help you manage cost of ownership

Reduce downtime and control your cost of ownership with a CarePlan. Fluke Calibration offers one-year, three-year and five-year Priority Gold CarePlans, which feature an annual standard or accredited calibration of your 6270A calibrator with guaranteed six-day in-house turnaround[1], plus free repairs with guaranteed ten-day in-house repair (includes calibration).

A range of training options get you up and running quickly

We sponsor a range of pressure and flow calibration courses in our Phoenix, Arizona facility in the United States. We also host periodic web seminars at no charge on a wide variety of pressure calibration topics. If you need service or maintenance training to help you maintain your fleet of pressure controllers, we can help you there, too.

Gold CarePlan
Annual calibration
Free repairs with guaranteed turnaround time
Pre-paid priority freight on return of instrument
Free product updates
Discounts on product upgrades
Discounts on training

[1] Six-day in-house turnaround not available in all countries; contact your local Fluke Calibration representative for details. Priority shipping times vary by country.

6270A overview

The large main display enables you to easily view and edit important information.

Make minor adjustments to the pressure using the Jog Wheel, ideal for calibration of analog dial gauges.

A simple, calculator-style keyboard makes it easy to enter values quickly.

Front panel abort button allows for fast venting in emergency situations.

Real time graph makes it easy to see pressure stability or procedure status.

The touch screen display in choice of ten languages features an easy-to-read, intuitive menu structure that lets you access any feature within four button presses or less.

To access the measurement and control modules, simply open the front panel. Modules are easy to replace, even when the 6270A is rack-mounted.

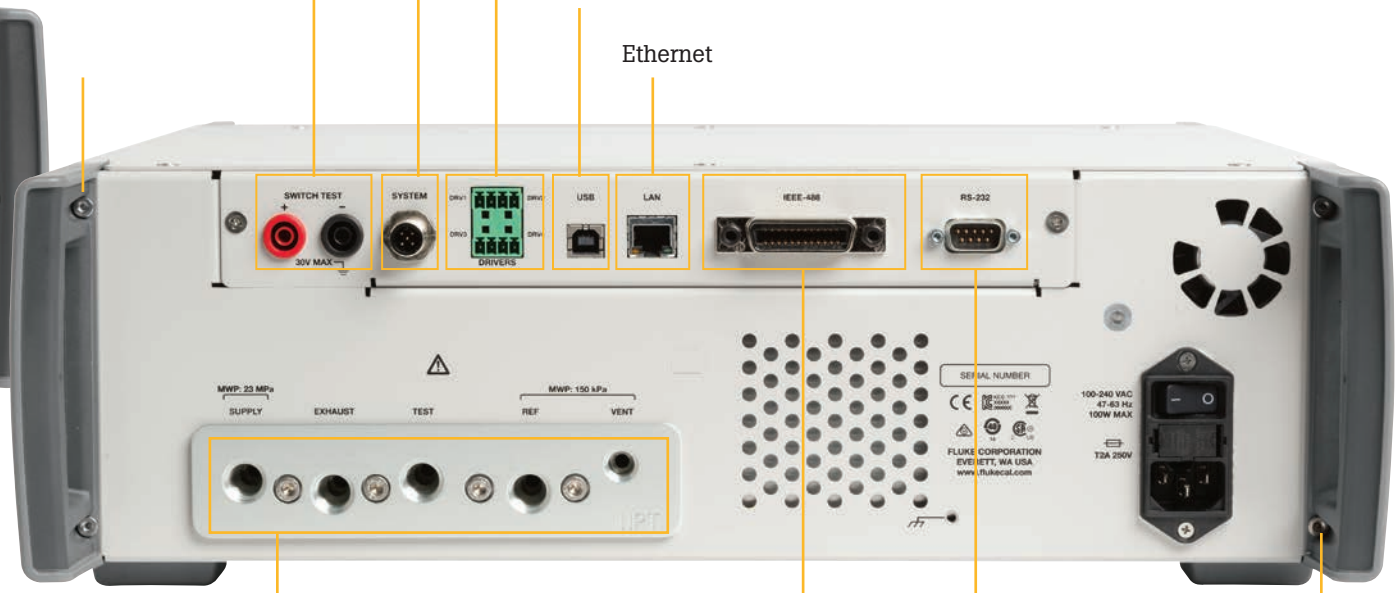
Switch Testing—6270A has built-in ability to read the state of a pressure switch allowing for closed loop testing of pressure switches.

System mode allows multiple units to be connected together, providing the ultimate in rangeability.

External valve drivers enable users to create fully automated custom systems and operate accessories like the optional Contamination Prevision System (CPS).

USB Connection

Ethernet

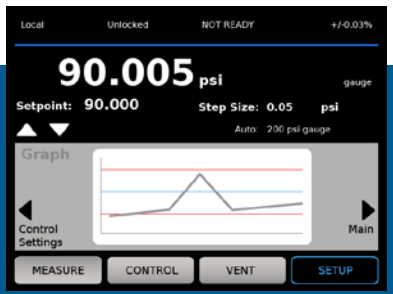


GPIB

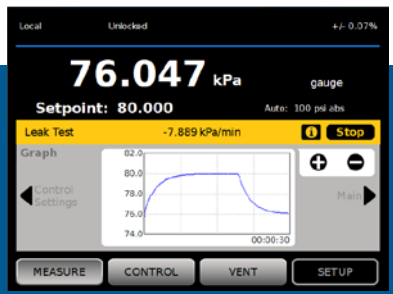
RS-232

All pressure connections are located on a single, easily replaceable manifold block. Connectors in NPT, BSP, or 7/16-20 SAE enable you to choose the most popular fitting type for your region.

An optional rack-mount kit enables the 6270A to be installed in a standard 19-inch rack.



Real time graph makes it easy to see pressure stability or procedure status.



Built-in leak testing simplifies the process for validating system integrity.

User-selectable choice of languages.

Summary and performance specifications

General specifications		
Power requirements	100 V ac to 240 V ac, 47 Hz to 63 Hz	
Fuse	T2A 250 V ac	
Max power consumption	100 W	
Operating ambient temperature range	15 °C to 35 °C	
Storage temperature	–20 °C to 70 °C	
Relative humidity	Operating: <80 % to 30 °C, <70 % to 40 °C, <40 % to 50 °C	
	Storage: <95 %, non-condensing. A power stabilization period of four days may be required after extended storage at high temperature and humidity.	
Vibration	MIL-T-28800E	
Altitude (operation)	<2000 m	
Ingress protection	IEC 60529: IP20	
Safety	IEC 61010-1, Installation Category II, Pollution degree 2	
Weight (Chassis only)	13 kg (28.5 lbs)	
Dimensions	Height: 147 mm (5.78 in)	
	Width: 454 mm (17.79 in)	
	Depth 488 mm (19.2 in)	
Rack mount dimensions	3U-19 inch rack	
Warm up time	15 minutes after power up or module installation, when items previously stored within operating ambient temperature range.	
Control specifications		
Control precision (dynamic mode)	PM200-BG2.5K range	± 0.005 % range
	PM500, ranges <= 20 kPa (80 inH20)	± 0.002 % range
	All other ranges	± 0.001 % range
Control turndown[1]	10:1	
Low control point	1 kPa (0.15 psi) absolute	
Interface/communications		
Primary remote interfaces	IEEE 488.2, Ethernet, RS232, USB	
System connection	Supports interconnection of two or three systems	
Switch test connection	Standard 4 mm jack: Nominal 24 v dc isolated drive Maximum 30 V dc w.r.t. chassis ground	
Aux drivers	4 external solenoid drivers 24 V dc drive (maximum drive 6 W continuous per channel)	

[1] To meet the control specifications, supply pressure should not be greater than 10 times the range of the measurement module. Control turndown is defined as the relationship between the provided supply pressure and the appropriate supply pressure for the range. For example, a unit with a 7 MPa (1000 psi) and 700 kPa range (100 psi) with a supply pressure of 7.7 MPa (1100 psi) will provide control precision of 0.001 % range because 7 MPa is 10 times greater than 700 kPa. A system with ranges of 20 MPa (3000 psi) and 700 kPa (100 psi) with supply pressure of 22 MPa (3300 psi) will have 0.001 % range control precision on the 20 MPa range but only 0.003 % control precision on the 700 kPa range. Control precision of 0.001 % on the low range can be achieved by reducing the supply pressure.

The performance specifications describe the complete instrumental uncertainty of the Product. The specifications include all relevant error components (linearity, hysteresis, repeatability, resolution, reference standard measurement uncertainty, 1-year drift, and temperature effects). The specifications are provided at a level of confidence of 95 %, k=2, normally distributed. Precision uncertainty includes linearity, hysteresis, repeatability, resolution, and temperature effects.

PM200 modules
Specifications are valid from 18 °C to 28 °C. For temperatures from 15 °C to 18 °C and 28 °C to 35 °C, add 0.003 % FS/°C.

Table 2. PM200 module measurement specifications

Model	Range (SI units)	Range (Imperial units)	Measurement mode[1]	1-year instrumental uncertainty (% FS)	Precision uncertainty (% FS)
PM200-BG2.5K	-2.5 kPa to 2.5 kPa	-10 inH_2O to 10 inH_2O	bi-directional gauge	0.2	0.055
PM200-BG35K	-35 kPa to 35 kPa	-5 psi to 5 psi	bi-directional gauge	0.05	0.015
PM200-BG40K	-40 kPa to 40 kPa	-6 psi to 6 psi	bi-directional gauge	0.05	0.015
PM200-BG60K	-60 kPa to 60 kPa	-8.7 psi to 8.7 psi	bi-directional gauge	0.05	0.015
PM200-BG100K	-100 kPa to 100 kPa	-15 psi to 15 psi	bi-directional gauge	0.02	0.01
PM200-A100K	2 kPa to 100 kPa	0.3 psi to 15 psi	absolute	0.1	0.02
PM200-A200K	2 kPa to 200 kPa	0.3 psi to 30 psi	absolute	0.1	0.02
PM200-BG200K	-100 kPa to 200 kPa	-15 psi to 30 psi	bi-directional gauge	0.02	0.01
PM200-BG250K	-100 kPa to 250 kPa	-15 psi to 36 psi	bi-directional gauge	0.02	0.01
PM200-G400K	0 kPa to 400 kPa	0 psi to 60 psi	gauge	0.02	0.01
PM200-G700K	0 kPa to 700 kPa	0 psi to 100 psi	gauge	0.02	0.01
PM200-G1M	0 MPa to 1 MPa	0 psi to 150 psi	gauge	0.02	0.01
PM200-G1.4M	0 MPa to 1.4 MPa	0 psi to 200 psi	gauge	0.02	0.01
PM200-G2M	0 MPa to 2 MPa	0 psi to 300 psi	gauge	0.02	0.01
PM200-G2.5M	0 MPa to 2.5 MPa	0 psi to 360 psi	gauge	0.02	0.01
PM200-G3.5M	0 MPa to 3.5 MPa	0 psi to 500 psi	gauge	0.02	0.01
PM200-G4M	0 MPa to 4 MPa	0 psi to 580 psi	gauge	0.02	0.01
PM200-G7M	0 MPa to 7 MPa	0 psi to 1000 psi	gauge	0.02	0.01
PM200-G10M	0 MPa to 10 MPa	0 psi to 1500 psi	gauge	0.02	0.01
PM200-G14M	0 MPa to 14 MPa	0 psi to 2000 psi	gauge	0.02	0.01
PM200-G20M	0 MPa to 20 MPa	0 psi to 3000 psi	gauge	0.02	0.01

[1] PM200 gauge mode modules support absolute mode measurement when used with a barometric reference module. Instrumental uncertainty for gauge mode modules used in absolute mode by addition of a barometric reference module is calculated as the uncertainty of the gauge mode module root sum squared with the uncertainty of the barometric reference module. Uncertainty for gauge mode assumes routine zeroing which is default operating mode when used in a chassis. Uncertainty for absolute mode modules includes 1-year zero stability. This specification can be reduced to 0.05 % FS if the PM200 module is zeroed on a continuing basis to remove the 1-year zero stability component.

PM500 modules
Specifications are valid from 15 °C to 35 °C.

Table 3. PM500 module measurement specifications

Model	Range (SI units)	Range (Imperial units)	Measurement mode[2]	1-year instrumental uncertainty (% of reading or % FS, whichever is greater) unless otherwise stated	1-year zero instrumental drift % FS, RSS with 1-year instrumental uncetainty[1]	Precision uncertainty (% of reading or % FS, whichever is greater)
PM500-G100K	0 kPa to 100 kPa	0 psi to 15 psi	gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-G200K	0 kPa to 200 kPa	0 psi to 30 psi	gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-G250K	0 kPa to 250 kPa	0 psi to 36 psi	gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-G350K	0 kPa to 350 kPa	0 psi to 50 psi	gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-G400K	0 kPa to 400 kPa	0 psi to 60 psi	gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-G600K	0 kPa to 600 kPa	0 psi to 90 psi	gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-G700K	0 kPa to 700 kPa	0 psi to 100 psi	gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG1M	-0.1 MPa to 1 MPa	-15 psi to 150 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG1.4M	-0.1 MPa to 1.4 MPa	-15 psi to 200 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035

Summary and performance specifications

PM500 modules
Specifications are valid from 15 °C to 35 °C.

Table 3. PM500 module measurement specifications (continued)

Model	Range (SI units)	Range (Imperial units)	Measurement mode[2]	1-year instrumental uncertainty (% of reading or % FS, whichever is greater) unless otherwise stated	1-year zero instrumental drift % FS, RSS with 1-year instrumental uncetainty[1]	Precision uncertainty (% of reading or % FS, whichever is greater)
PM500-BG2M	-0.1 MPa to 2 MPa	-15 psi to 300 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG2.5M	-0.1 MPa to 2.5 MPa	-15 psi to 400 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG3.5M	-0.1 MPa to 3.5 MPa	-15 psi to 500 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG4M	-0.1 MPa to 4 MPa	-15 psi to 600 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG7M	-0.1 MPa to 7 MPa	-15 psi to 1000 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG10M	-0.1 MPa to 10 MPa	-15 psi to 1500 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG14M	-0.1 MPa to 14 MPa	-15 psi to 2000 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BG20M	-0.1 MPa to 20 MPa	-15 psi to 3000 psi	bi-directional gauge	0.01 or 0.005	-	0.007 or 0.0035
PM500-BA120K	60 kPa to 120 kPa	8 psi to 17 psi	absolute	0.01 % of reading	0.05	0.005 % of reading
PM500-A120K	0.08 kPa to 120 kPa	0.01 psi to 16 psi	absolute	0.01 or 0.005	0.05	0.007 or 0.0035
PM500-A160K	0.08 kPa to 160 kPa	0.01 psi to 23 psi	absolute	0.01 or 0.005	0.05	0.007 or 0.0035
PM500-A200K	0.08 kPa to 200 kPa	0.01 psi to 30 psi	absolute	0.01 or 0.005	0.05	0.007 or 0.0035
PM500-A350K	0.08 kPa to 350 kPa	0.01 psi to 50 psi	absolute	0.01 or 0.005	0.03	0.007 or 0.0035
PM500-A700K	0.08 kPa to 700 kPa	0.01 psi to 100 psi	absolute	0.01 or 0.005	0.025	0.007 or 0.0035
PM500-A1.4M	0.035 MPa to 1.4 MPa	5 psi to 200 psi	absolute	0.01 or 0.005	0.015	0.007 or 0.0035
PM500-A2M	0.07 MPa to 2 MPa	10 psi to 300 psi	absolute	0.01 or 0.005	0.015	0.007 or 0.0035
				(% FS + % of reading)		**(% FS + % of reading)**
PM500-G2.5K	0 kPa to 2.5 kPa	0 inH_2O to 10 inH_2O	gauge	0.03 + 0.02	-	0.015 + 0.01
PM500-G7K	0 kPa to 7 kPa	0 inH_2O to 30 inH_2O	gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-G14K	0 kPa to 14 kPa	0 inH_2O to 50 inH_2O	gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-G20K	0 kPa to 20 kPa	0 inH_2O to 80 inH_2O	gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-G35K	0 kPa to 35 kPa	0 psi to 5 psi	gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-G70K	0 kPa to 70 kPa	0 psi to 10 psi	gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-NG100K	-100 kPa to 0 kPa	-15 psi to 0 psi	negative gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-BG1.4K	-1.4 kPa to 1.4 kPa	-5 inH_2O to 5 inH_2O	bi-directional gauge	0.03 + 0.02	-	0.015 + 0.01
PM500-BG2.5K	-2.5 kPa to 2.5 kPa	-10 inH_2O to 10 inH_2O	bi-directional gauge	0.03 + 0.02	-	0.015 + 0.01
PM500-BG3.5K	-3.5 kPa to 3.5 kPa	-15 inH_2O to 15 inH_2O	bi-directional gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-BG7K	-7 kPa to 7 kPa	-30 inH_2O to 30 inH_2O	bi-directional gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-BG14K	-14 kPa to 14 kPa	-50 inH_2O to 50 inH_2O	bi-directional gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-BG25K	-25 kPa to 25 kPa	-100 inH_2O to 100 inH_2O	bi-directional gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-BG40K	-40 kPa to 40 kPa	-6 psi to 6 psi	bi-directional gauge	0.01 + 0.01	-	0.005 + 0.005
PM500-BG60K	-60 kPa to 60 kPa	-9 psi to 9 psi	bi-directional gauge	0.01 + 0.01	-	0.005 + 0.005
				(% FS + % of reading)		**(% FS + % of reading)**
PM500-BG100K	-100 kPa to 100 kPa	-15 psi to 15 psi	bi-directional gauge	0.01	-	0.005
PM500-BG200K	-100 kPa to 200 kPa	-15 psi to 30 psi	bi-directional gauge	0.01	-	0.005
PM500-BG250K	-100 kPa to 250 kPa	-15 psi to 36 psi	bi-directional gauge	0.01	-	0.005
PM500-BG350K	-100 kPa to 350 kPa	-15 psi to 50 psi	bi-directional gauge	0.01	-	0.005

Table 3. PM500 module measurement specifications (continued)

Model	Range (SI units)	Range (Imperial units)	Measurement mode[2]	1-year instrumental uncertainty (% of reading or % FS, whichever is greater) unless otherwise stated	1-year zero instrumental drift % FS, RSS with 1-year instrumental uncetainty[1]	Precision uncertainty (% of reading or % FS, whichever is greater)
PM500-BG400K	-100 kPa to 400 kPa	-15 psi to 60 psi	bi-directional gauge	0.01	-	0.005
PM500-BG700K	-100 kPa to 700 kPa	-15 psi to 100 psi	bi-directional gauge	0.01	-	0.005

1 The 1-year instrumental uncertainty is specified with a zeroing technique in the Operators Manual. If not adhered to the 1-year instrumental uncertainty is:

$$\sqrt{\left(\frac{\text{1 year instrumental uncertainty}}{2}\right)^2+\left(\frac{\text{1 year zero drift}}{1.73}\right)^2}\ \text{x 2}$$

2 PM500 gauge or bi-directional mode modules support absolute mode measurement when used with a Barometric Reference Module. Instrumental uncertainty for gauge mode modules used in absolute mode by addition of a barometric reference module is calculated as the uncertainty of the gauge mode module root sum squared with the uncertainty of the barometric reference module. Uncertainty for gauge mode assumes routine zeroing which is defaul operation mode when used in a chassis.

PM600 modules

Specifications are valid from 15 °C to 35 °C.

Table 1. PM600 module measurement specifications

Model	Absolute mode range (SI units)	Absolute mode range (Imperial units)	Gauge mode range[3] (SI units)	Gauge mode range (Imperial units)	1-year instrumental uncertainty (% of reading or % FS, whichever is greater)	Precision uncertainty (% of reading or % FS, whichever is greater)
BRM600-BA100K	70 kPa to 110 kPa	10 psi to 16 psi	-	-	0.01 % of reading	0.008 or 0.0024
PM600-BG15K	-	-	-15 kPa to 15 kPa	-60 in$H_2$0 to 60 in$H_2$0	0.01 or 0.003	0.008 or 0.0024
PM600-G100K	-	-	0 kPa to 100 kPa	0 psi to 15 psi	0.01 or 0.003	0.008 or 0.0024
PM600-G200K	-	-	0 kPa to 200 kPa	0 psi to 30 psi	0.01 or 0.003	0.008 or 0.0024
PM600-A100K	6 kPa to 100 kPa	0.9 psi to 15 psi	-94 kPa to 0 kPa	-13.8 psi to 0 psi	0.01 or 0.003[1,3]	0.008 or 0.0024
PM600-A200K	10 kPa to 200 kPa	1.5 psi to 30 psi	-90 kPa to 100 kPa	-13.2 psi to 15 psi	0.01 or 0.003[1,3]	0.008 or 0.0024
PM600-A350K	10 kPa to 350 kPa	1.5 psi to 50 psi	-90 kPa to 250 kPa	-13.2 psi to 35 psi	0.01 or 0.003[1]	0.008 or 0.0024
PM600-A700K	18 kPa to 700 kPa	2.6 psi to 100 psi	-82 kPa to 700 kPa	-12.1 psi to 100 psi	0.01 or 0.003[1]	0.008 or 0.0024
PM600-A1.4M	0.035 MPa to 1.4 MPa	5 psi to 200 psi	-0.065 MPa to 1.4 MPa	-10 psi to 200 psi	0.01 or 0.003[1]	0.008 or 0.0024
PM600-A2M	0.07 MPa to 2 MPa	10 psi to 300 psi	-0.03 MPa to 2 MPa	-5 psi to 300 psi	0.01 or 0.003[1]	0.008 or 0.0024
PM600-A3.5M	0.07 MPa to 3.5 MPa	10 psi to 500 psi	-0.03 MPa to 3.5 MPa	-5 psi to 500 psi	0.01 or 0.003[1]	0.008 or 0.0024
PM600-A7M	ATM[2] to 7 MPa	ATM[2] to 1000 psi	0 MPa to 7 MPa	0 psi to 1000 psi	0.01 or 0.003[1]	0.008 or 0.0024
PM600-A10M	ATM[2] to 10 MPa	ATM[2] to 1500 psi	0 MPa to 10 MPa	0 psi to 1500 psi	0.01 or 0.003[1]	0.008 or 0.0024
PM600-A14M	ATM[2] to 14 MPa	ATM[2] to 2000 psi	0 MPa to 14 MPa	0 psi to 2000 psi	0.01 or 0.003[1]	0.008 or 0.0024
PM600-A20M	ATM[2] to 20 MPa	ATM[2] to 3000 psi	0 MPa to 20 MPa	0 psi to 3000 psi	0.01 or 0.003[1]	0.008 or 0.0024

[1] For PM600s absolute mode modules used in absolute mode, root sum square (RSS) with 0.007 % of FS (reduced to k=1 by square root of 3).

$$\sqrt{\left(\frac{\text{1 year instrumental uncertainty}}{2}\right)^2+\left(\frac{\text{0.007 \% FS}}{1.73}\right)^2}\ \text{x 2}$$

[2] ATM is any atmospheric pressure from 70 kPa to 110 kPa (10 psi to 16 psi).
[3] For absolute ranges used in gauge mode there is an additional uncertainty of ±7 Pa for dynamic barometric compensation. When combined with other uncertainties this changes the threshold uncertainty for the PM600-A100K to 0.008 % Span and for the PM600-A200K to 0.004 % Span.

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Calibration

Ordering Information

Models

6270A-NPT	Modular Pressure Controller Chassis, NPT Manifold
6270A-BSP	Modular Pressure Controller Chassis, BSP Manifold
6270A-7/16	Modular Pressure Controller Chassis, SAE 7/16-20 Manifold

Control modules

PCM-STD-20M	Pressure Control Module, Standard Turndown

Pressure modules

Please refer to the Summary Specifications for details about the pressure measurement modules.

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Accessories

RMK-XX70	Rack Mount Kit, 19 in width, 3U
CASE-6270	Shipping Case, 6270A
CASE-PMM	Shipping Case, 3 PMM Modules
PK-6270-NPT	Lines and Fittings Kit, 6270A NPT
PK-6270-BSP	Lines and Fittings Kit, 6270A BSP
KIT-PMM-CAL-40M	Pressure Measurement Module Calibration Kit, 40 MPa (6000 psi)
CPS-40M-HC40	Contamination Prevention System, 40 MPa (6000 psi) with HC40 Test Port and hand tight adaptors
TST-40M-HC40	Test Station, 40 MPa (6000 psi) with HC40 Test Port and hand tight adaptors
VA-PPC/MPC-REF-110	Vacuum Pump Package, 110 V
VA-PPC/MPC-REF-220	Vacuum Pump Package, 220 V
CDG-REF-1TORR	Capacitance Diaphragm Gauge for zeroing of absolute mode PM500 modules
PK-PMM-ZERO	Interconnection Kit for zeroing of Absolute mode PM500 modules

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Printed in U.S.A. 9/2018 6002251f-en

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