

# Fluke 750P Series Pressure Modules

## Technical Data

### Precision pressure measurement for 75X and 720 series calibrators

The 750P Series Pressure Modules are the ideal pressure modules to enable gage, differential and absolute pressure measurement with Fluke 750 and 740 series DPCs and 725, 726 MPCs to measure pressure.

- 0.025 % reference uncertainty
- 6-month and 1-year specifications
- Temperature compensated 0 °C to 50 °C
- Digital communication to calibrators, no analog losses or errors
- Broad selection of ranges
- Gage, differential, dual range, absolute and vacuum measurement models

### A complete family of pressure modules

A family of 48 pressure modules covers pressure calibrations from 0 to 1 in H<sub>2</sub>O to 10000 psi (2.5 mBar to 690 bar).

Gage pressure modules have one pressure fitting and measure the pressure with respect to atmospheric pressure. Differential pressure modules have two pressure fittings and measure the difference between the applied pressure on the high fitting versus the low fitting. Each module is clearly labeled for range, over-pressure and media compatibility. All modules include NPT, metric (BSP) and M20 adapters.

### Quick and easy measurements

Fluke 750P Series Pressure Modules are easy to use. To measure pressure, connect the pressure module to a pressure source or hand pump and then connect the pressure module cable to the calibrator. Apply pressure from the pressure source and it is displayed digitally on the calibrator. At the touch of a button, the pressure may be displayed in up to 11 different engineering units. When used with the 750 Series Documenting Process Calibrators, pressure readings can be date/time stamped and stored electronically for later retrieval. This saves time, eliminates errors, and supports compliance with quality standards and regulations.



### Pressure module performance and technology

Fluke 750P Series pressure modules are highly accurate, with specifications that apply from 0 °C to 50 °C (32 °F to 122 °F), a feature that sets them apart from other pressure calibrators. Many ranges have total uncertainties of 0.04 % of full scale and reference uncertainties of 0.01 % of full scale (see specification table).

This performance is possible through the innovative application of mathematics and micro-processor power. Fluke pressure modules have silicon piezo-resistor sensors which consist of a resistive bridge fabricated in a silicon diaphragm. Pressure applied to the diaphragm causes a change in the balance of the bridge which is proportional to the applied pressure. The bridge balance change is not linear and is very sensitive to temperature. However, since these effects are quite stable with time and with repetitive changes of condition, the sensors are carefully characterized.

During manufacture, Fluke pressure module sensors are characterized by reading temperature and pressure at multiple points. A least-squares regression is used to calculate the coefficients of a polynomial expression for pressure. The coefficients, unique to that pressure module, are stored in the module's memory.

Each module has its own microprocessor, allowing it to run the measurement circuitry and to communicate digitally with a calibrator. When connected to the calibrator, the modules coefficients are uploaded from the pressure module to the calibrator. Then, as pressure measurements are made, raw sensor values for pressure and temperature are digitally loaded to the calibrator, where the raw sensor values and coefficients are manipulated to derive and display the pressure reading.

#### This innovative technique provides several benefits:

1. Digital communication eliminates errors due to poor connections and electrical interference.
2. The modules are inherently temperature-compensated from 0 °C to 50 °C (32 °F to 122 °F).

3. The modules are fully interchangeable because all measurements are completed in the pressure module itself and then communicated to the calibrator in digitized form. Modules are calibrated independently of the calibrator, and can be used with any 740, 750 or compatible 720 or 710 series calibrator. Each module has its own serial number to maintain independent traceability.

### Sensor protection in isolated modules

Many of these modules (see table) incorporate a stainless steel diaphragm to isolate the sensor. With these modules, any medium that is compatible with stainless steel can be used on the high side of the module.

### Rugged construction








A urethane overmolding protects against shock if a module is accidentally dropped and also seals against dirt, dust, and moisture. Pressure connections are 1/8" NPT female connection. A 1/4" NPT Male, 1/4" BSP/ISO and M20 male adapter are also provided with each pressure module.

### Convenient setup

A one-meter cable between the pressure module and calibrator reduces the length of connecting tubing to the pressure source. The remote pressure head also provides an extra margin of safety and convenience by removing the calibrator and operator from the pressure source in the event or need for semi-remote measurements.



## Pressure accessories

Image	Description	Application
<b>Fluke 700PTP-1 Pneumatic Test Pump</b>		
	<p>The Fluke 700PTP-1 is a handheld pressure pump designed to generate either vacuum to -13 psi/-0.9 bar or pressure to 600 psi/40 bar</p> <p>The Fluke 700PTP-1 has two pressure ports:</p> <ul style="list-style-type: none"> <li>• 1/4" NPT female parallel thread fitting for the reference gauge or pressure module</li> <li>• 1/4" NPT female parallel thread fitting for the unit under test</li> </ul>	<p>The Fluke 700PTP-1 features an integral pressure adjustment vernier which varies the pressurized volume by 2.0 cc over approximately eleven turns of the vernier knob. The pressure variation achievable with the vernier will depend on the nominal pressure and total pressurized volume, but with a minimum volume and maximum pressure, the vernier provided 600 ± 20 psi adjustment range. With a minimum volume and no pressure applied, the vernier can also be used to provide a 0 to 70" H2O range. Larger volumes will provide a smaller range of adjustment, but greater resolution. The length of the stroke can be adjusted to limit the maximum output pressure. Maximum output pressure is adjustable from 2.5 psi to 600 psi.</p> <p><b>For use with:</b> Fluke 700 and 750P Series Pressure Modules and the Fluke 710 and 720 Series Pressure Calibrators</p>
<b>Fluke 700HTP-2 Hydraulic Test Pump</b>		
	<p>The Fluke 700HTP-1 is designed to generate pressures up to 10000 psi/700 bar. The Fluke 700HTP-1 has two pressure ports:</p> <ul style="list-style-type: none"> <li>• 1/4" NPT female parallel thread fitting for the reference gauge or pressure module</li> <li>• 1/4" NPT female parallel thread fitting for the unit under test</li> </ul> <p><b>Note:</b> The user must provide a hose with appropriate end fittings from this port to the unit under test.</p>	<p>This pump can provide up to 10000 psi using distilled water or mineral-based hydraulic oil. The pump is operated by pumping several strokes to prime the system, then switching to high pressure mode when the resistance increases. An integral pressure adjustment vernier knob varies the pressurized volume by 0.6 cc. The pressure variation achievable with the vernier will depend on the nominal pressure and total pressurized volume, but with a minimum volume, the vernier provided 150 psi to 3000 psi (at 150 psi nominal) and 3000 psi to 10000 psi (at 3000 psi nominal) adjustment ranges. With a minimum volume and no pressure applied, the vernier can also be used to provide a 0 to 1.7 psi range. Larger volumes will provide a smaller range of adjustment, but greater resolution.</p> <p><b>For use with:</b> Fluke 700 and 750P Series Pressure Modules and the Fluke 710 and 720 Series Pressure Calibrators</p>
<b>Fluke 700LTP-1 Low-Pressure Test Pump</b>		
	<p>The Fluke 700LTP-1 is a hand operated pressure pump designed to generate either vacuum to -12 psi/-0.85 bar or pressures to 100 psi/6.9 bar. The Fluke 700LTP-1 has two pressure ports with push fit connectors. These push fit connectors, one for the reference port for connection to a Fluke 700 Series Pressure Module and one to connect to a unit under test, connect to the supplied test hoses.</p>	<p>The Fluke 700LTP-1 is primarily intended for low pressure applications. It features a fine adjust vernier with .00145 psi resolution at low pressures. The pressure variation achievable with the vernier will depend on the nominal pressure and total pressurized volume, but with minimum volume and maximum pressure the vernier provides 30 psi ± 6 psi. The adjustable pressure relief valve features a slow-bleed capability that allows the user to slowly release pressure at a controlled rate to achieve a desired pressure.</p>
<b>Fluke 700HTH-1 Hydraulic Test Hose</b>		
	<p>The Fluke 700HTH-1 Hydraulic Test Hose is a 10000 psi, 700 bar working pressure test hose. The hose uses self-sealing fittings with easy finger tight connections.</p>	<p>The Fluke 700HTH-1 allows connections to a unit under test from a Fluke 700HTP-1 hydraulic test pump in use with the Fluke 700 and 750P Series Pressure Modules. The 700HTH-1 is compatible with water and non-corrosive oil.</p>
<b>Fluke 71X Hose Kit</b>		
	<p>The Fluke 71X hose kit includes (2) quick disconnect fittings to connect to the 718 or 719, (3) 1-meter translucent hoses and one BSP adapter.</p>	<p>For use with: Fluke 718 and 719 Pressure Calibrators</p>
<b>Fluke 700PRV-1 Pressure Relief Valve Kit</b>		
	<p>The Fluke 700PRV-1 consists of two relief valves (1360 and 5450 psi) to be used with the 700HTP-1 Hydraulic Test Pump. These relief valves will protect the Fluke pressure modules from damage due to over-pressurization. 1/4 BSP male parallel thread to fit Fluke 700HTP-1.</p>	<p>Repeatability ± 10 % of nominal setting. Multiturn adjustment screw to set preload on internal disc springs.</p> <p><b>For use with:</b> Fluke 700HTP-1 Hydraulic Test Pump.</p>
<b>Fluke 700 PMP Pressure Pump</b>		
	<p>The Fluke 700PMP is a hand-operated pressure pump to provide pressures up to 150 psi/1000 kPa. Output fitting is 1/8 FNPT.</p>	<p>Linear stroke of 1.6 in (4 cm). Multi-turn vernier for fine adjustment of pressure. Includes controlled pressure bleed valve.</p> <p><b>For use with:</b> Fluke 700 and 750P Series Pressure Modules and the Fluke 710 and 720 Series Pressure Calibrators.</p>

## General specifications

Model	Parameter/ Range	Burst Rating <sup>6</sup>	Hi Side Media <sup>2</sup>	Lo Side Media <sup>2</sup>	Reference Uncertainty <sup>4</sup>	Total Uncertainty 1-year (15-35 °C)	Total Uncertainty 1-year <sup>1</sup>	Total Uncertainty 6-month (15-35 °C)	Total Uncertainty 6-month <sup>1</sup>
<b>Differential</b>									
750P00	0 to 1 in H <sub>2</sub> O (0 to 2.5 mBar)	30X	Dry Air	Dry Air	±0.15 %	± 0.3 %	± 0.35 %	± 0.25 %	± 0.30 %
750P01	0 to 10 in H <sub>2</sub> O (0 to 25 mBar)	3X	Dry Air	Dry Air	±0.1 %	± 0.2 %	± 0.3 %	± 0.15 %	± 0.25 %
750P02	0 to 1 psi (0 to 70 mBar)	3X	Dry Air	Dry Air	±0.050 %	± 0.1 %	± 0.15 %	± 0.075 %	± 0.125 %
750P22	0 to 1 psi (0 to 70 mBar)	3X	316 SS	Dry Air	±0.050 %	± 0.1 %	± 0.15 %	± 0.075 %	± 0.125 %
750P03	0 to 5 psi (0 to 350 mBar)	3X	Dry Air	Dry Air	±0.02 %	± 0.04 %	± 0.05 %	± 0.035 %	± 0.04 %
750P23	0 to 5 psi (0 to 350 mBar)	4X	316 SS	Dry Air	±0.02 %	± 0.04 %	± 0.05 %	± 0.035 %	± 0.04 %
750P04	0 to 15 psi (0 to 1 bar)	3X	Dry Air	Dry Air	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P24	0 to 15 psi (0 to 1 bar)	4X	316 SS	Dry Air	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
<b>Gage</b>									
750P05	0 to 30 psi (0 to 2 bar)	4X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P06	0 to 100 psi (0 to 7 bar)	4X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P27	0 to 300 psi (0 to 20 bar)	4X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P07	0 to 500 psi (0 to 35 bar)	4X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P08	0 to 1000 psi (0 to 70 bar)	3X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P09	0 to 1500 psi (0 to 100 bar)	3X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P2000	0 to 2000 psi (0 to 140 bar)	3X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
<b>High</b>									
750P29	0 to 3000 psi (0 to 200 bar)	3X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P30	0 to 5000 psi (0 to 340 bar)	3X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750P31	0 to 10000 psi (0 to 700 bar)	2X	316 SS	N/A	±0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
<b>Absolute</b>									
750PA3	0 to 5 psia (0 to 350 mBar)	4X	316 SS	N/A	±0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PA4	0 to 15 psia (0 to 1 bar)	4X	316 SS	N/A	±0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PA5	0 to 30 psia (0 to 2 bar)	4X	316 SS	N/A	±0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PA6	0 to 100 psia (0 to 7 bar)	4X	316 SS	N/A	±0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PA27	0 to 300 psia (0 to 20 bar)	4X	316 SS	N/A	±0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PA7	0 to 500 psia (0 to 35 bar)	4X	316 SS	N/A	±0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PA8	0 to 1000 psia (0 to 70 bar)	3X	316 SS	N/A	±0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PA9	0 to 1500 psia (0 to 100 bar)	3X	316 SS	N/A	±0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %

## General specifications (continued)

Model	Parameter/ Range	Burst Rating <sup>6</sup>	Hi Side Media <sup>2</sup>	Lo Side Media <sup>2</sup>	Reference Uncertainty <sup>4</sup>	Total Uncertainty 1-year (15 °C to 35 °C)	Total Uncertainty 1-year <sup>1</sup>	Total Uncertainty 6-month (15 °C to 35 °C)	Total Uncertainty 6-month <sup>1</sup>
<b>Vacuum</b>									
750PV3	-5 psi (-350 mBar)	4X	316 SS	Dry Air	± 0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PV4	-15 psi (-1 bar)	4X	316 SS	Dry Air	± 0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
<b>Dual</b>									
750PD2	-1 to 1 psi (-70 to 70 mBar)	4X	316 SS	Dry Air	± 0.05 %	± 0.1 %	± 0.15 %	± 0.075 %	± 0.125 %
750PD3	-5 to 5 psi (-350 to 350 mBar)	4X	316 SS	Dry Air	± 0.03 %	± 0.06 %	± 0.07 %	± 0.05 %	± 0.06 %
750PD10	-10 to 10 psi (-700 to 700 mBar)	4X	316 SS	Dry Air	± 0.025 %	± 0.05 %	± 0.07 %	± 0.04 %	± 0.06 %
750PD4	-15 to 15 psi (-1 to 1 bar)	4X	316 SS	Dry Air	± 0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750PD5	-15 to 30 psi (-1 to 2 bar)	4X	316 SS	—	± 0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750PD50	-15 to 50 psi (-1 to 3.5 bar)	4X	316 SS	—	± 0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750PD6	-15 to 100 psi (-1 to 7 bar)	4X	316 SS	—	± 0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750PD7	-15 to 200 psi (-1 to 14 bar)	4X	316 SS	—	± 0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
750PD27	-15 to 300 psi (-1 to 20 bar)	4X	316 SS	—	± 0.0175 %	± 0.035 %	± 0.045 %	± 0.03 %	± 0.04 %
<b>Reference</b>									
750R04 <sup>5</sup>	0 to 15 psi (0 to 1 bar)	3X	Dry Air	Dry Air	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750R06 <sup>5</sup>	0 to 100 psi (0 to 7 bar)	4X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750R27	0 to 300 psi (0 to 20 bar)	4X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750R07	0 to 500 psi (0 to 35 bar)	4X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750R08 <sup>5</sup>	0 to 1000 psi (0 to 70 bar)	3X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750R29	0 to 3000 psi (0 to 200 bar)	3X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750R30	0 to 5000 psi (0 to 340 bar)	3X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750R31 <sup>5</sup>	0 to 10000 psi (0 to 700 bar)	2X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750RD5	-15 to 30 psi (-1 to 2 bar)	4X	Dry Air	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750RD6 <sup>5</sup>	-12 to 100 psi (-1 to 7 bar)	4X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS
750RD27	-12 to 300 psi (-0.8 to 20 bar)	4X	316 SS	—	± 0.01 % of FS	± 0.02 % of FS	± 0.04 % of FS	± 0.015 % of FS	± 0.035 % of FS

1. Total uncertainty, % of full span for temperature range 0 °C to +50 °C, one year interval. Total uncertainty, 1.0% of full span for temperature range -10 °C to 0 °C, one year interval. No 6 month specification available for range -10 °C to 0 °C.
2. "NONCORROSIVE GASSES" indicates dry air or non-corrosive gas as compatible media. "Stainless Steel 316-SS" indicates media compatible with Type 316 Stainless Steel.
3. Specifications % of Full Span unless otherwise noted.
4. \* Reference Uncertainty is the specification for as left data for 24 hours.
5. When reference class modules are used with fixed resolution products (717, 718, 719 series, 725 and 726) calibrators add ± 1 count to the overall accuracy specification.
6. Burst rating specification refers to the multiplier times full scale of the module for the rated burst pressure.

## Ordering information

<b>FLUKE-750P00</b>	Pressure Module, 0 psi to 1 psi in H <sub>2</sub> O (0 to 2.5 mBar), (0 to 0.25 kPa)
<b>FLUKE-750P01</b>	Pressure Module, 0 psi to 10 psi in H <sub>2</sub> O (0 to 25 mBar), (0 to 2.5 kPa)
<b>FLUKE-750P22</b>	Pressure Module, 0 psi to 1 psi (0 to 70 mBar), (0 to 7 kPa)
<b>FLUKE-750P23</b>	Pressure Module, 0 psi to 5 psi (0 to 350 mBar), (0 to 35 kPa)
<b>FLUKE-750P04</b>	Pressure Module, 0 psi to 15 psi (0 to 1 bar), (0 to 100 kPa)
<b>FLUKE-750P24</b>	Pressure Module, 0 psi to 15 psi (0 to 1 bar), (0 to 100 kPa)
<b>FLUKE-750P05</b>	Pressure Module, 0 psi to 30 psi (0 to 2 bar), (0 to 200 kPa)
<b>FLUKE-750P06</b>	Pressure Module, 0 psi to 100 psi (0 to 7 bar), (0 to 700 kPa)
<b>FLUKE-750P27</b>	Pressure Module, 0 psi to 300 psi (0 to 20 bar), (0 to 2000 kPa)
<b>FLUKE-750P07</b>	Pressure Module, 0 psi to 500 psi (0 to 35 bar), (0 to 3500 kPa)
<b>FLUKE-750P08</b>	Pressure Module, 0 psi to 1000 psi (0 to 70 bar), (0 to 7000 kPa)
<b>FLUKE-750P09</b>	Pressure Module, 0 psi to 1500 psi (0 to 100 bar), (0 to 10 MPa)
<b>FLUKE-750P2000</b>	Pressure Module, 0 psi to 2000 psi (0 to 140 bar), (0 to 14 MPa)
<b>FLUKE-750P29</b>	Pressure Module, 0 psi to 3000 psi (0 to 200 bar), (0 to 20 MPa)
<b>FLUKE-750P30</b>	Pressure Module, 0 psi to 5000 psi (0 to 340 bar), (0 to 34 MPa)
<b>FLUKE-750P31</b>	Pressure Module, 0 psi to 10000 psi (0 to 700 bar), (0 to 70 MPa)
<b>FLUKE-750PA3</b>	Pressure Module, 0 psi to 5 psi (0 to 350 mBar), (0 to 35 kPa)
<b>FLUKE-750PA4</b>	Pressure Module, 0 psi to 15 psi (0 to 1 bar), (0 to 100 kPa)
<b>FLUKE-750PA5</b>	Pressure Module, 0 psi to 30 psi (0 to 2 bar), (0 to 200 kPa)
<b>FLUKE-750PA6</b>	Pressure Module, 0 psi to 100 psi (0 to 7 bar), (0 to 700 kPa)
<b>FLUKE-750PA27</b>	Pressure Module, 0 psi to 300 psi (0 to 20 bar), (0 to 2000 kPa)
<b>FLUKE-750PA7</b>	Pressure Module, 0 psi to 500 psi (0 to 35 bar), (0 to 3500 kPa)
<b>FLUKE-750PA8</b>	Pressure Module, 0 psi to 1000 psi (0 to 70 bar), (0 to 7000 kPa)
<b>FLUKE-750PA9</b>	Pressure Module, 0 psi to 1500 psi (0 to 100 bar), (0 to 10 MPa)
<b>FLUKE-750PV3</b>	Pressure Module, -5 psi (-350 mBar), (-35 kPa)
<b>FLUKE-750PV4</b>	Pressure Module, -15 psi (-1 bar), (-100 kPa)
<b>FLUKE-750PD2</b>	Pressure Module, -1 psi to 1 psi (-70 to 70 mBar), (-7 to 7 kPa)
<b>FLUKE-750PD3</b>	Pressure Module, -5 psi to 5 psi (-350 to 350 mBar), (-35 to 35 kPa)
<b>FLUKE-750PD10</b>	Pressure Module, -10 psi to 10 psi (-0.7 to 0.7 bar), (-70 to 70 kPa)
<b>FLUKE-750PD4</b>	Pressure Module, -15 psi to 15 psi (-1 to 1 bar), (-100 to 100 kPa)
<b>FLUKE-750PD5</b>	Pressure Module, -15 psi to 30 psi (-1 to 2 bar), (-100 to 200 kPa)
<b>FLUKE-750PD50</b>	Pressure Module, -15 psi to 50 psi (-1 to 3.5 bar), (-100 to 350 kPa)
<b>FLUKE-750PD6</b>	Pressure Module, -15 psi to 100 psi (-1 to 7 bar), (-100 to 700 kPa)
<b>FLUKE-750PD7</b>	Pressure Module, -15 psi to 200 psi (-1 to 14 bar), (-100 to 1400 kPa)
<b>FLUKE-750PD27</b>	Pressure Module, -15 psi to 300 psi (-1 to 20 bar), (-100 to 2000 kPa)
<b>FLUKE-750R04</b>	Pressure Module, 0 psi to 15 psi (0 to 1 bar) (0 to 100 kPa)
<b>FLUKE-750R06</b>	Pressure Module, 0 psi to 100 psi (0 to 7 bar), (0 to 700 kPa)
<b>FLUKE-750R27</b>	Pressure Module, 0 psi to 300 psi (0 to 20 bar), (0 to 2000 kPa)
<b>FLUKE-750R07</b>	Pressure Module, 0 psi to 500 psi (0 to 35 bar), (0 to 3500 kPa)
<b>FLUKE-750R08</b>	Pressure Module, 0 psi to 1000 psi (0 to 70 bar), (0 to 7000 kPa)
<b>FLUKE-750R29</b>	Pressure Module, 0 psi to 3000 psi (0 to 200 bar), (0 to 20 MPa)
<b>FLUKE-750R30</b>	Pressure Module, 0 psi to 5000 psi (0 to 340 bar), (0 to 34 MPa)
<b>FLUKE-750R31</b>	Pressure Module, 0 psi to 10000 psi (0 to 700 bar), (0 to 70 MPa)
<b>FLUKE-750RD5</b>	Pressure Module, -15 psi to 30 psi (-1 to 2 bar), (-100 to 200 kPa)
<b>FLUKE-750RD6</b>	Pressure Module, -12 psi to 100 psi (-0.8 to 7 bar), (-80 to 700 kPa)
<b>FLUKE-750RD27</b>	Pressure Module, -12 psi to 300 psi (-0.8 to 20 bar), (-80 to 2000 kPa)
<b>FLUKE-750P03</b>	Pressure Module, 0 psi to 5 psi (0 to 350 mBar), (0 to 35 kPa)
<b>FLUKE-750P02</b>	Pressure Module, 0 psi to 1 psi (0 to 70 mBar), (0 to 7 kPa)

## Included equipment

Manual, traceable calibration certificate, and adapters.

**Fluke.** *The Most Trusted Tools in the World.*

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# 750P/750R Pressure Modules

## Instruction Sheet

### Introduction

The Fluke 750P/750R Series Pressure Modules (the Product) let you measure pressure with a wide range of Fluke calibrators. These calibrators include but are not limited to the:

- 701 and 702 Documenting Process Calibrator
- 717 Series Pressure Calibrators
- 718 Series Pressure Calibrators
- 719 Portable Pressure Calibrator
- 719Pro Pressure Calibrator
- 721 Pressure Calibrator
- 725 Multifunction Process Calibrator
- 726 Multifunction Process Calibrator
- 741B, 743B, 744 Documenting Process Calibrator
- 753, 754 Documenting Process Calibrator
- 3130 Portable Pneumatic Pressure Calibrator
- 525B Temperature/Pressure Calibrator
- 7526A Precision Process Calibrator
- 5520A and 5522A Multi-Product Calibrator

While the 750P provides basic pressure measurement with various Fluke calibrators, the 750R provides similar functionality with reference-grade accuracy. However on certain calibrators with limited display resolution this may impair the precision of pressure measurement. See Pressure Module Ranges chart for more information.

The Product measures pressure with an internal microprocessor compensated sensor. It receives power from and sends digital information to the Fluke calibrator.

Gage pressure modules have one pressure fitting and measure pressure with respect to atmospheric pressure. Differential pressure modules have two pressure fittings and measure the difference between the applied pressure on the high fitting versus the low fitting. A differential pressure module functions like a gage module when the low fitting is open. The absolute pressure modules measure pressure with respect to an absolute vacuum. The vacuum pressure modules measure negative pressure.

See the Users Manual for your specific Fluke calibrator for operation instructions. Differential and Gage models are shown in Figure 1.

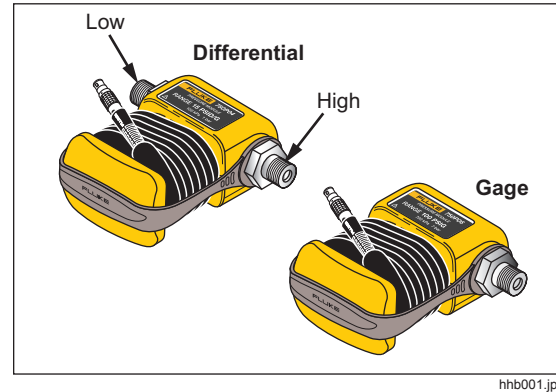


Figure 1. Differential and Gage Pressure Modules

### Safety Information

A Warning identifies conditions and procedures that are dangerous to the user. A Caution identifies conditions and procedures that can cause damage to the Product or the equipment under test.

#### Warning

**To avoid injury due to the release of high-pressure fluid:**

- Use only adapters and fittings rated to withstand the appropriate pressure. Ensure that all adapters and fittings are securely connected.
- Never exceed the specified BURST PRESSURE for the product.
- To avoid a violent release of pressure in a pressurized system, shut off the isolation valve and slowly bleed off the pressure before you attach or remove the pressure module from the pressure line.

### Mechanical Damage Prevention

#### Caution

To avoid Product damage, never apply more than 10 ft-lbs of torque between the pressure module fittings or between the fittings and the body of the module. Always apply appropriate torque between the pressure module fitting and connecting fittings or adapters.

### Over Pressure Damage Prevention

#### Caution

To avoid Product damage:

- Use the Product only with specified media as shown on the Product label to avoid Product damage from corrosion.
- To avoid product damage do not apply pressure in excess of 120 % of the specified upper limit.

Figure 2 shows correct and incorrect ways to use a wrench to apply torque to the pressure module fitting.

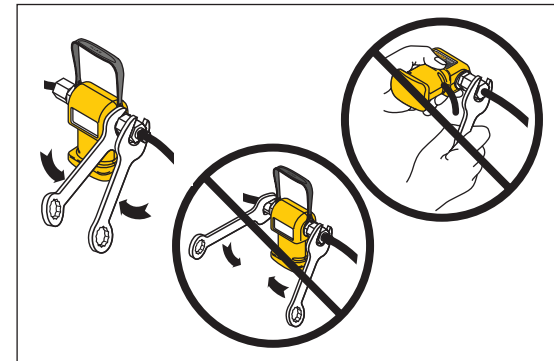


Figure 2. Applying Torque

Table 1. Symbols

Symbol	Meaning
	Risk of Danger. Important. See Manual.
	Conforms to European Union directives.
	Conforms to relevant North American Safety Standards.
	Conforms to relevant South Korean EMC Standards.
	Pressure (found on Fluke calibrators)
	Conforms to relevant Australian EMC requirements.
	This product complies with the WEEE Directive (2002/96/EC) marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.

### Recommended Measurement Technique

For best results, before you zero the Product or take measurements, pressurize the Product to full scale and then vent to zero pressure (atmosphere).

#### Note

Low-range pressure modules may be sensitive to gravity. For best results, pressure modules 30 psi and below should be held at the same physical orientation from the time they are zeroed until the measurement is complete.

### Box Contents

The Product package should contain the listed items below. If it does not, contact Fluke immediately. See "Contact Fluke".

- Pressure module
- 1/8 NPT male to 1/4 NPT male adapter
- 1/8 NPT male to 1/4 BSP male adapter
- 1/8 NPT male to M20 male adapter
- O-RING, (-111) CAST URETHANE
- Certificate of calibration
- User documentation packet

## Pressure Calibration Kit

The optional Fluke 700PCK (Pressure Calibration Kit) accessory lets you calibrate the pressure modules at your facility with your precision pressure standards. A pressure calibrator or dead weight tester that is at least 4X more accurate than the pressure module under test is recommended.

## Performance Test

If you need to check that the pressure module meets its accuracy specification, use a dead weight tester or suitable pressure calibrator. The accuracy of the dead weight tester or pressure calibrator should be significantly better than the Product pressure specification. Proceed as follows to verify that a pressure module is operating within specification:

1. Read the pressure value with no externally applied pressure to make sure the 0 % of scale is correct. When reading the pressure, press the ZERO key to remove any zero offset.
2. Connect the pressure module to a dead weight tester.
3. Set the dead weight tester to 20 % of the pressure module's full scale value.
4. Make sure the reading agrees with the dead weight tester value within the specifications.
5. Set the dead weight tester to 40, 60, 80, and 100 % of full scale and compare the respective readings.

## Specifications


### Mechanical Specifications

Size (H X W X L) . . . . . 45 mm X 94 mm X 110 mm  
. . . . . (1.77 in X 3.70 in X 4.33 in)  
Weight . . . . . 292 g (10.3 oz)  
Physical Interface . . . . . Serial Connector, Pressure Port

### Environmental Specifications

Operating Temperature. . . -10 °C to +50 °C (14 °F to 122 °F)  
Storage Temperature . . . -20 °C to +60 °C (-4 °F to 140 °C)  
Operating Humidity. . . . . Non condensing (<10 °C) (<50 °F)  
90 % RH (10 °C to 30 °C) (50 °F to 86 °F)  
75 % RH (30 °C to 40 °C) (86 °F to 104 °F)  
45 % RH (40 °C to 50 °C) (104 °F to 122 °C)  
Operating Altitude . . . . . 2000 m (6,561 ft)  
Storage Altitude . . . . . 12000 m (45,700 ft)  
IP Rating. . . . . IP 52

### Compliance

Agency Approvals. . . . .    
CE. . . . . IEC 61010-1  
Protection Class II  
Pollution Degree 2  
EMI, RFI, EMC . . . . . EN61326-1  
Electromagnetic Compatibility  
Applies to use in Korea only.  
Class A equipment (Industrial Broadcasting & Communication Equipment)<sup>[1]</sup>  
[1] This Product meets requirements for industrial (Class A) electromagnetic wave equipment and the seller or user should take notice of it. This equipment is intended for use in business environments and is not to be used in homes.

## How to Contact Fluke

To contact Fluke, call one of the following telephone numbers:

- Technical Support USA: 1-800-44-FLUKE (1-800-443-5853)
- Calibration/Repair USA: 1-888-99-FLUKE (1-888-993-5853)
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31 402-675-200
- Japan: +81-3-6714-3114
- Singapore: +65-6799-5566
- Anywhere in the world: +1-425-446-5500

Or, visit Fluke's website at [www.fluke.com](http://www.fluke.com).

To register your product, visit <http://register.fluke.com>.

To view, print, or download the latest manuals or manual supplement, visit <http://us.fluke.com/usen/support/manuals>.

### LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for three years from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. FLUKE IS NOT LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

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6502 BD Eindhoven  
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**Pressure Module Ranges <sup>[3]</sup>**

750 Model Number	Parameter/Range	Burst Rating <sup>[6]</sup>	Hi Side Media Compatibility <sup>[2]</sup>	Lo Side Media Compatibility <sup>[2]</sup>	Reference Uncertainty (23 +/- 3degC) <sup>[4]</sup>	Total Uncertainty 1 year (15-35 degC)	Total Uncertainty 1 year (0-50 degC) <sup>[1]</sup>	Total Uncertainty 6 month (15-35 degC)	Total Uncertainty 6 month (0-50 degC) <sup>[1]</sup>
750P00	0 to 1 Inch H2O (0 to 2.5 mBar)	30X	NONCORROSIVE GASSES	NONCORROSIVE GASSES	±0.15 %	±0.3 %	±0.35 %	±0.25 %	±0.30 %
750P01	0 to 10 Inch H2O (0 to 25 mBar)	3X	NONCORROSIVE GASSES	NONCORROSIVE GASSES	±0.1 %	±0.2 %	±0.3 %	±0.15 %	±0.25 %
750P02	0 to 1 psi (0 to 70 mBar)	3X	NONCORROSIVE GASSES	NONCORROSIVE GASSES	±0.050 %	±0.1 %	±0.15 %	±0.075 %	±0.125 %
750P22	0 to 1 psi (0 to 70 mBar)	3X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.050 %	±0.1 %	±0.15 %	±0.075 %	±0.125 %
750P03	0 to 5 psi (0 to 350 mBar)	3X	NONCORROSIVE GASSES	NONCORROSIVE GASSES	±0.02 %	±0.04 %	±0.05 %	±0.035 %	±0.04 %
750P23	0 to 5 psi (0 to 350 mBar)	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.02 %	±0.04 %	±0.05 %	±0.035 %	±0.04 %
750P04	0 to 15 psi (0 to 1 Bar)	3X	NONCORROSIVE GASSES	NONCORROSIVE GASSES	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P24	0 to 15 psi (0 to 1 Bar)	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P05	0 to 30 psi (0 to 2 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P06	0 to 100 psi (0 to 7 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P27	0 to 300 psi (0 to 20 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P07	0 to 500 psi (0 to 35 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P08	0 to 1000 psi (0 to 70 Bar)	3X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P09	0 to 1500 psi (0 to 100 Bar)	3X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P2000	0 to 2000 psi (0 to 140 Bar)	3X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P29	0 to 3000 psi (0 to 200 Bar)	3X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P30	0 to 5000 psi (0 to 340 Bar)	3X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P31	0 to 10000 psi (0 to 700 Bar)	2X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750PA3	0 to 5 psia (0 to 350 mBar)	4X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PA4	0 to 15 psia (0 to 1 Bar)	4X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PA5	0 to 30 psia (0 to 2 Bar)	4X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PA6	0 to 100 psia (0 to 7 Bar)	4X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PA27	0 to 300 psia (0 to 20 Bar)	4X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PA7	0 to 500 psia (0 to 35 Bar)	4X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PA8	0 to 1000 psia (0 to 70 Bar)	3X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PA9	0 to 1500 psia (0 to 100 Bar)	3X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PV3	-5 psi (-350 mBar)	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PV4	-15 psi (-1 Bar)	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PD2	-1 to 1 psi (-70 to 70 mBar)	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.05 %	±0.1 %	±0.15 %	±0.075 %	±0.125 %
750PD3	-5 to 5 psi (-350 to 350 mBar)	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %
750PD10	-10 to 10 psi (-700 to 700 mBar)	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.025 %	±0.05 %	±0.07 %	±0.04 %	±0.06 %
750PD4	-15 to 15 psi (-1 to 1 Bar)	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750PD5	-15 to 30 psi (-1 to 2 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750PD50	-15 to 50 psi (-1 to 3.5 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750PD6	-15 to 100 psi (-1 to 7 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750PD7	-15 to 200 psi (-1 to 14 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750PD27	-15 to 300 psi (-1 to 20 Bar)	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750R04 <sup>[5]</sup>	0 to 15 psi (0 to 1 Bar)	3X	NONCORROSIVE GASSES	NONCORROSIVE GASSES	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750R06 <sup>[5]</sup>	0 to 100 psi (0 to 7 Bar)	4X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750R27	0 to 300 psi (0 to 20 Bar)	4X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750R07	0 to 500 psi (0 to 35 Bar)	4X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750R08 <sup>[5]</sup>	0 to 1000 psi (0 to 70 Bar)	3X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750R29	0 to 3000 psi (0 to 200 Bar)	3X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750R30	0 to 5000 psi (0 to 340 Bar)	3X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750R31 <sup>[5]</sup>	0 to 10000 psi (0 to 700 Bar)	2X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750RD5	-15 to 30 psi (-1 to 2 Bar)	4X	NONCORROSIVE GASSES	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750RD6 <sup>[5]</sup>	-12 to 100 psi (-1 to 7 Bar)	4X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS
750RD27	-12 to 300 psi (-0.8 to 20 Bar)	4X	Stainless Steel SS-316	N/A	±0.01 % of FS	±0.02 % of FS	±0.04 % of FS	±0.015 % of FS	±0.035 % of FS

1. Total uncertainty, % of full span for temperature range 0°C to +50°C, one year interval. Total uncertainty, 1.0% of full span for temperature range -10°C to 0°C, one year interval. No 6 month specification available for range -10°C to 0°C.  
 2. "NONCORROSIVE GASSES" indicates dry air or non-corrosive gas as compatible media. "Stainless Steel 316-SS" indicates media compatible with Type 316 Stainless Steel.  
 3. Specifications % of Full Span unless otherwise noted.

4. Reference Uncertainty is the specification for as left data for 24 hours.  
 5. When reference class modules are used with fixed resolution products (717, 718, 719 series, 725 and 726) calibrators add +/- 1 count to the overall accuracy specification.  
 6. Burst rating specification refers to the multiplier times full scale of the module for the rated burst pressure.