750PEx
Pressure Modules

Instruction Sheet

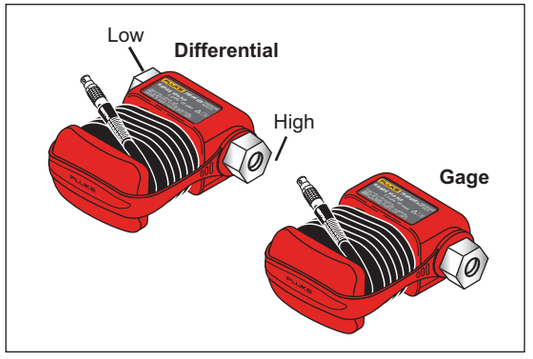
Introduction

The Fluke 750PEx Series Pressure Modules (the Product) are to be used with Fluke intrinsically safe calibrators such as the 718Ex.

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.



hhb001.jpg

Figure 1. Differential and Gage Pressure Modules

PN 4562480 September 2017 Rev. 1, 4/25

© 2017-2025 Fluke Corporation. Product specifications are subject to change without notice. All rights reserved.

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.**
- **Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.**

Ex-Hazardous Areas

The Product has been designed for use in Ex-Hazardous Areas. These are areas where potentially flammable or explosive vapors may occur. These areas are referred to as hazardous (classified) locations in the United States, as Hazardous Locations in Canada, as Potentially Explosive Atmospheres in Europe and as Explosive Gas Atmospheres by most of the rest of the world. The Product is designed as intrinsically safe. This means that connecting the Product to equipment that is used within intrinsically-safe circuits will not cause an ignition-capable arc as long as the entity parameters are suitably matched.

Refer to Control Drawing - FLUKE-750PEX CCD.

⚠⚠Warning

To prevent fire, explosion, or personal injury:

- **Check entity parameters before making any connections to this device.**
- **Use only specified replacement parts or Intrinsic Safety can be impaired.**
- **Precautions are required to ensure that a charge-generating mechanism is unlikely to be present, and/or discharge to earthed metal is improbable. The exposed metal parts are not earthed and have a capacitance of more than 3 pF with respect to an earthed conductor. If a charge-generating mechanism is present, an incendive level of charge could migrate to these metal parts and subsequently discharge to earthed metal.**

Table 1. Symbols

Symbol	Meaning
⚠	WARNING. RISK OF DANGER.
⎓	Direct Current
	Consult user documentation.
CE	Conforms to European Union directives.
	Pressure (found on Fluke calibrators)
Ex	Conforms to the European Explosive Atmospheres (ATEX) directive.
SS316	Medium compatibility: 316 Stainless Steel,
NC	Medium compatibility: noncorrosive gasses.
	This product complies with the WEEE Directive and its marking requirements. The affixed label indicates that you must not discard this electrical/ electronic product in domestic household waste. Do not dispose of this product as unsorted municipal waste. For information about take-back and recycling programs available in your country, see the Fluke website.

Mechanical Damage Prevention

⚠Caution

To avoid Product damage, never apply more than 10 lb-ft 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.

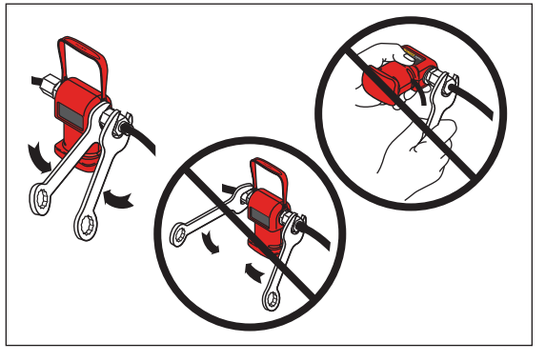
Over Pressure Damage Prevention

⚠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.



hhb002.eps

Figure 2. Applying Torque

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(s)

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 . . . . . .12 000 m (45 700 ft)
Ingress Protection. . . . . .IEC 60529: IP52 (not included in the third party certification)

Compliance Markings

Ex II 1G
SIRA 16ATEX2383X
CSAE 24UKEX1049X
IECEx SIR 16.0118X
Ex ia IIC T4 Ga
CSA 25CA80203486X
Class I, Division 1, Groups ABCD,T4,Ga
Class I, Zone 0, AEx ia IIC T4 Ga
Ui = 7.5 V; Ii = 200 mA; Pi = 0.375 W; Ci = 5.8 uF;
Li = 6.0 uH

Compliance

Safety . . . . . .IEC 60079-0, IEC 60079-11
IEC 61010-1: Pollution Degree 2

Electromagnetic Compatibility
International . . . . . .IEC 61326-1: Basic Electromagnetic Environment;
CISPR 11: Group 1, Class A

Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the internal function of the equipment itself. Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low-voltage power supply network that supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Korea (KCC) .....Class A Equipment
(Industrial Broadcasting & Communication Equipment)
Class A: Equipment meets requirements for industrial electromagnetic wave equipment and the seller or user should take notice of it. This equipment is intended for use in business environments and not to be used in homes.

USA (FCC) .....47 CFR 15 subpart B.
This product is considered an exempt device per clause 15.103.

Contact Fluke

Fluke Corporation operates worldwide. For local contact information, go to our website: www.fluke.com.

To register your product, view, print, or download the latest manual or manual supplement, go to our website.

+1-425-446-5500

fluke-info@fluke.com.

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.

Fluke Corporation
6920 Seaway Blvd.
Everett, WA 98203
U.S.A.
11/99

Fluke Europe B.V.
P.O. Box 1186
5602 BD Eindhoven
The Netherlands

Pressure Module Ranges [3]

750 Model Number	Parameter/Range	750 Burst Pressure (psi)	Burst Rating	Hi Side Media Compatibility [2]	Lo Side Media Compatibility [2]	Reference Uncertainty (23 ± 3 °C) [4]	Total Uncertainty 1 year (15-35 °C)	Total Uncertainty 1 year (0-50 °C) [1]	Total Uncertainty 6 month (15-35 °C)	Total Uncertainty 6 month (0-50 °C) [1]
750P01Ex	0 inch to 10 inch H2O (0 to 25 mBar)	30 inH2O	3X	NONCORROSIVE GASSES	NONCORROSIVE GASSES	±0.1 %	±0.2 %	±0.3 %	±0.15 %	±0.25 %
750P24Ex	0 psi to 15 psi (0 to 1 Bar)	60	4X	Stainless Steel SS-316	NONCORROSIVE GASSES	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P05Ex	0 psi to 30 psi (0 to 2 Bar)	120	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P06Ex	0 psi to 100 psi (0 to 7 Bar)	400	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P27Ex	0 psi to 300 psi (0 to 20 Bar)	1200	4X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P09Ex	0 psi to 1500 psi (0 to 100 Bar)	4500	3X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750P29Ex	0 psi to 3000 psi (0 to 200 Bar)	9000	3X	Stainless Steel SS-316	N/A	±0.0175 %	±0.035 %	±0.045 %	±0.03 %	±0.04 %
750PA4Ex	0 psia to 15 psia (0 to 1 Bar)	60	4X	Stainless Steel SS-316	N/A	±0.03 %	±0.06 %	±0.07 %	±0.05 %	±0.06 %

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. Burst rating specification refers to the multiplier times full scale of the module for the rated burst pressure.