

Limited Warranty

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Fluke's warranty obligation is limited, at Fluke's option, to refund of the purchase price, free of charge repair, or replacement of a defective product which is returned to a Fluke authorized service center within the warranty period.

To obtain warranty service, contact your nearest Fluke authorized service center or send the product, with a description of the difficulty, postage and insurance prepaid (FOB Destination), to the nearest Fluke authorized service center. Fluke assumes no risk for damage in transit. Following warranty repair, the product will be returned to Buyer, transportation prepaid (FOB Destination). If Fluke determines that the failure was caused by misuse, alteration, accident or abnormal condition of operation or handling, Fluke will provide an estimate of repair costs and obtain authorization before commencing the work. Following repair, the product will be returned to the Buyer transportation prepaid and the Buyer will be billed for the repair and return transportation charges (FOB Shipping Point).

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In Case of Difficulty

For service or calibration, call your nearest authorized Fluke Service Center. A list of service centers is provided in the 701/702 Users Manual.

For application or operation assistance or information on Fluke products, call:

800-44-FLUKE (800-443-5853) in the USA and Canada

(31 40) 723220 in Europe

206-356-5500 from other countries

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FLUKE®

700PCK Pressure Module Calibration Kit

Instruction Sheet

Introduction

Use this Windows software program and interface unit to verify and calibrate Fluke 700 Series Pressure Modules for zero and span errors at ambient temperature. You will need a pressure calibrator or dead weight tester that is at least 4X more accurate than the pressure module under test.

You do not use a 701 or 702 during this procedure. The PC communicates directly with the pressure module through the interface unit.

Safety Specifications

Designed to IEC-1010-1 Overvoltage Category II, ANSI/ISA-S82.01-1994.

Box Contents

Box contains an interface unit with serial interface cable, 9 to 25 pin serial adapter, floppy disk with software, power supply, line cord, and instruction sheet.

Loading the Software

With Microsoft Windows 3.1 running, from Program Manager select File Run. Enter **a:setup** (or another drive letter if necessary) in the dialog box. The install program loads 700PCK onto your **C:** drive and creates a program group.

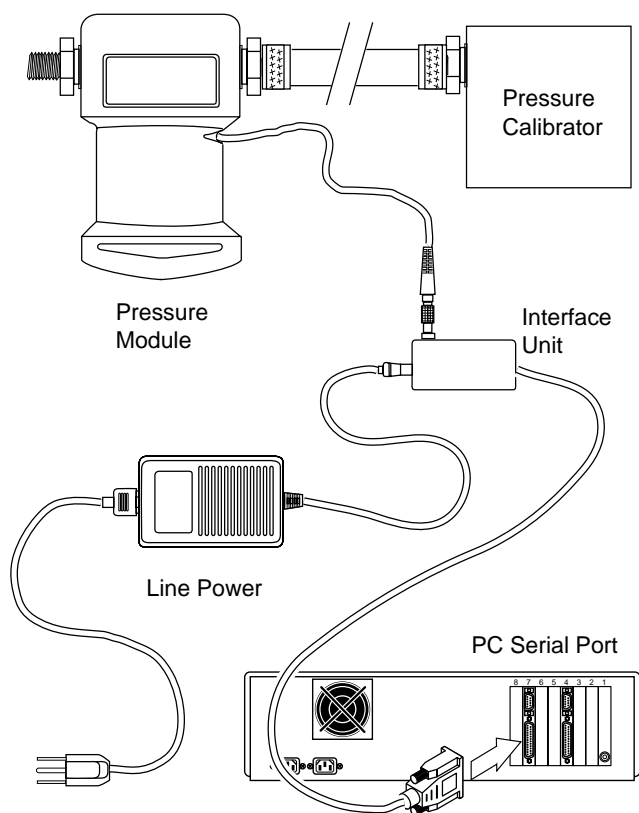
Connecting 700PCK to the Module

Plug the pressure module into the interface unit, connect the interface unit power supply to line power (90 to 270V ac), and connect the interface cable to an available serial port on your PC as shown on the next page. Connect the pressure module to the pressure calibrator or dead weight tester.

Click on the 700PCK icon to start the program. Select the desired communications port under Com Port. Click on Connect. If the connection is not successful, try another Com Port.

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If Verification Fails by More than 1%

If the pressure module is more than 1% out of tolerance, it needs full calibration over temperature at a Fluke Service Center, and possibly repair. Check for tolerance exceeding 1% of full scale by comparing the results of As Found Verification with the pressure module specifications.

Calibration Adjustment

Using the calibration adjustment procedure, you create new calibration coefficients and download them into the pressure module. Before you calibrate the module, exercise it by applying full scale pressure, then venting to atmosphere. Proceed as follows to adjust a module:

1. Click on Calibration Adjustment.
2. Apply a zero pressure (refer to Zero Pressures above).
Wait for the reading to settle (to typically less than 1 count change in 5 seconds) before you go on to the next step.
3. Apply full scale pressure $\pm 5\%$ as requested by the program. Again, wait for the reading to settle.
4. Test the module by applying any pressure between zero and full scale. The module is now working with the updated constants.
5. In cases where the zero error was large, you may have to perform calibration adjustment twice. To repeat the calibration adjustment, click on Calibration Adjustment again, before clicking on Disconnect.
6. Click on Save to Module to download the new constants and make the changes permanent (until you adjust it again).

As Left Verification

Proceed as follows to collect verification data for the module after you have adjusted it. Before you verify the module, exercise it by applying full scale pressure, then venting to atmosphere. As left data is saved in a plain text file named "nnnnnnn.lft," where "nnnnnnn" is the serial number of the pressure module. You can import this file into a database or spreadsheet program.

1. Click on As Left Verification.
2. Apply each requested pressure. Where a zero pressure is called for, refer to Zero Pressures.
Wait for the reading to settle (to typically less than 1 count change in 5 seconds) before you go on to each next step.
3. Click on Done to save the data to a text file.

NOTE

When using the 700PCK with 700P22, 700P23, or 700P24 Pressure Modules, derate module specification to 0.1% if electromagnetic field strength exceeds 2.5 V/m (above 3 V/m not specified).

Zero Pressures

In verification and calibration, these instructions refer to a zero pressure.

In verification, for standard (positive-only reading), vacuum, or dual-range modules this is equivalent to venting to the atmosphere. For absolute modules, it is best to apply a known vacuum pressure as low as possible, but any precisely known pressure will work.

In calibration, for standard (positive-only reading) and vacuum modules, the module or pressure calibrator should be vented to atmosphere. For absolute modules, a known vacuum must be applied. For dual or compound-range modules, a negative pressure should be applied that is close to the negative full span.

As Found Verification

Proceed as follows to collect verification data for the module before you adjust it. Before you verify the module, exercise it by applying full scale pressure, then venting to atmosphere. As found data is saved in a file named "nnnnnnn.fnd," where "nnnnnnn" is the serial number of the pressure module. You can import this file into a database or spreadsheet program.

1. Click on As Found Verification.
2. Apply each requested pressure. Where a zero pressure is called for, refer to Zero Pressures above.

Wait for the reading to settle (to typically less than 1 count change in 5 seconds) before you go on to each next step.

3. Click on Done to save the data to a text file.