

Flow Performance FP1

FP1 General Information

Warning:

The FP1 is not to be used for measuring pressures of flammable gasses or gasses containing flammable particles.

Warning:

The FP1 is not intended for use in "Mission Critical" applications. The FP1 is designed to work as a tool as well as a measuring device. Because of this, the FP1 allows the user to configure and adjust many settings and parameters of the FP1. While every attempt is made to check the user settings and parameters for valid entries, it is not possible to anticipate every possible combination for validity of data input by the user. The user is responsible for checking the validity of all data parameters and that the processor is functioning properly at all times.

Flow Rate Detection

The FP1 is designed to process the differential pressure obtained from pressure differential producing flow measuring devices, specifically, Pitot tube type velocity measuring devices or a measuring orifice.

PS2 (pressure sensor 2) is used to measure the actual differential pressure from the differential pressures.

PS1 (pressure sensor 1) is used as a reference pressure port for measuring test pressures and calculating standard flow rates. It is also used as a trigger for some modes of operation. For instance, in modes 0 - 2, the user can set a threshold pressure on PS1 to scroll the FP1 readings down the display screen when that pressure is met or exceeded. The FP1 also monitors PS1 for pressures greater than .1"wc to trigger other activities, such as resetting the FP1 processor sleep timer.

Pressure sensors PS1 and PS2

Pressure sensors PS1 and PS2 have a range of -38" wc to +38"wc.

Maximum allowed applied pressure is 11psi.

A negative pressure should not be applied to the positive pressure ports.

A Positive pressure should not be applied to the negative pressure ports.

Pressure readings are always displayed as a positive value, even when a negative pressure is applied to the negative pressure port.

Modes of Operation

The FP1 has 4 modes of operation. Modes 0 - 2 are flow rate calculating modes, while mode 3 is a manometer only mode.

Power Requirements

The FP1 uses a 9 volt battery for power. This battery should be an alkaline type for about 10 to 15 hours of normal use. A Ni-Mh rechargeable battery is recommended for "Power Users".

The FP1 has a user programmable sleep mode that will help prolong battery life. The sleep timer value (o) has a range between 1 and 255, and is units of seconds. The sleep mode timer value should be about 3 minutes, or a value of 180 seconds. If no user input is detected or no pressure applied to the pressure sensors before the sleep timer expires, the FP1 will enter sleep mode.

In sleep mode, the FP1 microprocessor is shut down to conserve battery power, but not the pressure sensors. The pressure sensors will remain powered and be ready to go when the processor is brought out of sleep mode.

Flow Performance FP1

FP1 General Information