

Application

The AFS is a general purpose airflow proving switch designed for HVAC and energy management applications. It may be used to sense positive, negative or differential air pressure.

General

The plated housing contains a diaphragm, a calibration spring and a snap-acting SPST (NC) switch.

The sample connections located on each side of the diaphragm accept a .25" OD tubing via the integral compression and nut.

An enclosure cover guards against accidental contact with the live switch terminal screws and the set point adjusting screw. The enclosure cover will accept a .5" conduit connection. The AFS-460 has a reset button located on the top surface of the enclosure cover.

Mounting

Select a mounting location which is free from vibration. The AFS pressure switch **MUST** be mounted with the diaphragm in any vertical plane in order to obtain the lowest specified operating set point. Avoid mounting with the sample line connections in the "UP" position. Surface mount via the two 3/16" diameter holes in the integral mounting bracket. The mounting holes are 3 7/8" apart.

Air Sampling Connection

The AFS is designed to accept sample lines of .25" OD tubing by means of ferrule and nut compression connections. Locate the sampling probe a minimum of 1.5 duct diameters down stream from the air source. Install the sampling probe as close to the air stream as possible. The low pressure side is designated by the stamped "LOW" on the housing of the diaphragm.

Positive Pressure Only:

Connect the sample line to the LOW side and the HIGH side remains open to atmosphere.

Negative Pressure Only:

Connect the sample line to the HIGH side and the LOW side remains open to atmosphere.

Two Negative Samples:

Connect the higher negative sample to the HIGH side and the lower negative sample to the LOW side.

Two Positive Samples

Connect the higher positive sample to the LOW side and the lower positive sample to the HIGH side.

One Positive and One Negative Sample

Connect the positive sample to the LOW side and connect the negative sample to the HIGH side.

Field Adjustment

From lowest operating point several turns of adjusting screw are necessary to engage the calibration spring. No change in set point will occur until the spring is engaged. For higher set points continue turning screw in a clockwise direction.

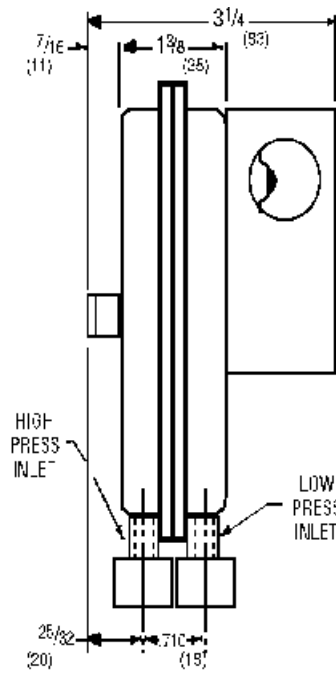
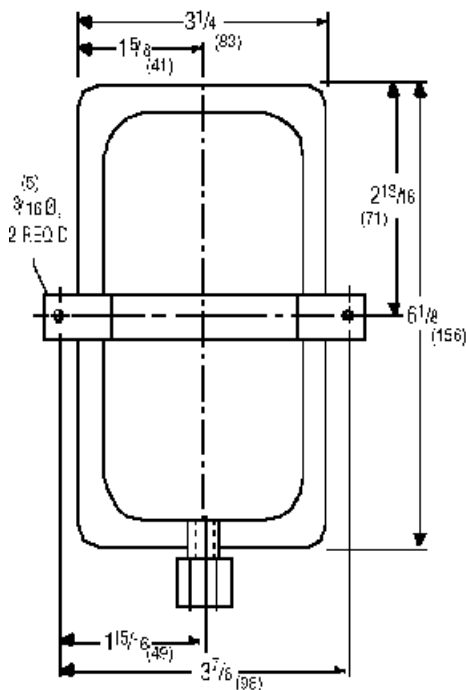
It may be useful to connect a manometer in parallel with the switch when adjusting, as the final operating point can be noted for future reference.

Please see specification sheet on reverse for actual ranges and set point information.

Specifications

MODEL	AFS-222	AFS-262	AFS-460
SAMPLE MEDIA	Air	Air	Air
MOUNTING POSITION	Diaphragm in any vertical plane	Diaphragm in any vertical plane	Diaphragm in any vertical plane
FIELD ADJUSTABLE RANGE	.05, ±.02" w.c. to 12" w.c.	.05, ±.02" w.c. to 2" w.c.	.40, ±.06" w.c. to 12" w.c.
SWITCH DIFFERENTIAL	Progressive, increasing from approximately .02±.01" w.c. at minimum set point, to approximately .8" w.c. at maximum set point.	Progressive, increasing from 0.02±0.01" w.c. at minimum set point to approximately 0.1" w.c. at maximum set point.	Progressive, increasing from approximately .06±.01" w.c. at minimum set point, to approximately .8" w.c. at maximum set point.
MAXIMUM PRESSURE	.5" (0.03 bar)	.5" (0.03 bar)	.5" (0.03 bar)
OPERATING TEMPERATURE RANGE	-40°C – 82.2°C (-40°F–180°F)	-40°C – 82.2°C (-40°F–180°F)	-40°C – 82.2°C (-40°F–180°F)
LIFE	100,000 cycles/min. at 5psi max pressure each cycle and at max electrical load.	100,000 cycles/min. at 5psi max pressure each cycle and at max electrical load.	600 cycles/min. at 5psi max pressure each cycle and at max electrical load.
ELECTRICAL RATING	300 va pilot duty at 115-277vac, 10 amp, non-inductive, 277 vac, 60Hz.	300 va pilot duty at 115-277vac, 10 amp, non-inductive, 277 vac, 60Hz.	300 va pilot duty at 115-277vac, 10 amp, non-inductive, 277 vac, 60Hz.
CONTACT ARRANGEMENT	SPDT	SPDT	SPDT
ELECTRICAL CONNECTIONS	Screw top terminals with cup washers	Screw top terminals with cup washers	Screw top terminals with cup washers
SAMPLE LINE CONNECTIONS	Ferrule and nut compression type connectors that accept .25" OD rigid tubing.	Ferrule and nut compression type connectors that accept .25" OD rigid tubing.	Ferrule and nut compression type connectors that accept .25" OD rigid tubing.
AUTOMATIC/MANUAL RESET	Automatic	Automatic	Manual
APPROVALS	UL and CSA	UL and CSA	UL and CSA

Dimensions



Alarm or Control

