

PA-267-AH

Air Differential Pressure Transmitter



Features:

- $\pm 0.4\%$ Accuracy
- Over pressure safety margin of 68kPa (10psi)
- Duct fixing kit included
- Optional LCD Display

Benefits:

- IP65 Housing
- Long term stability

Technical Overview

The PA-267-AH is a high accuracy differential pressure transmitter designed for overpressure, under pressure, and differential pressure measurements of air and other neutral gases. It is recommended that for applications where control is involved, the high accuracy version is used.

The measurement cell uses an advanced design of capacitive element to ensure excellent linearity and zero stability. The differential pressure to be measured induces a movement of the stainless steel diaphragm which is converted to an electronic output signal by a capacitance measurement and a unique electronic circuit.

Specification:

Accuracy RSS*	
(at constant temp)	$\pm 0.40\%$ fsd
Linearity (BFSL)	$\pm 0.33\%$ fsd
Hysteresis	$\pm 0.20\%$ fsd
Repeatability	$\pm 0.10\%$ fsd
Thermal effect**	
Compensated range	5 to 65°C (40 to 150°F)
Zero/span shift %FS	$\pm 0.06\%$ ($\pm 0.033^\circ\text{F}$)
Overpressure	68kPa (10 psi)
Warm-up shift	$\pm 0.1\%$ FS total
Pressure connections	Push fit for 6mm (0.24") i/d tube
Output:	
Current	4-20mA, load = 100 to 800 Ω
Voltage	0-10Vdc (o/p impedance <100k Ω)
Power supply:	
Current output	9 to 30Vdc
Voltage output	12-30Vac or 13-42Vdc
Speed of reaction:	
Without filter	20ms
With filter	40ms
Electrical Connections	Screw terminals for 1.5mm ² max.
Diaphragm	Stainless steel 304
Housing	Glass-filled Polycarbonate to UL94V-0
Protection	IP65
Operating Temp.	-18 to +65°C (0 to 149°F)
Dimensions	158 x 80 x 60mm (6.22 x 3.15 x 2.36")
Country of origin	USA

* RSS of Non-linearity, non-repeatability & hysteresis

** Units calibrated at nominal 21°C (70°F)



The products referred to in this data sheet meet the requirements of EU Directive 2004/108/EC

Part Codes:

PA-267-25-AH

0 to 25Pa (0 to 0.10" w/c), 4-20mA output

PA-267-50-AH

0 to 50Pa (0 to 0.20" w/c), 4-20mA output

PA-267-100-AH

0 to 100Pa (0 to 0.40" w/c), 4-20mA output

PA-267-300-AH

0 to 300Pa (0 to 1.20" w/c), 4-20mA output

PA-267-500-AH

0 to 500Pa (0 to 2.01" w/c), 4-20mA output

PA-267-1000-AH

0 to 1000Pa (0 to 4.01" w/c), 4-20mA output

PA-267-1600-AH

0 to 1600Pa (0 to 6.42" w/c), 4-20mA output

PA-267-2500-AH

0 to 2500Pa (0 to 10.04" w/c), 4-20mA output

PA-267-3000-AH

0 to 3000Pa (0 to 12.04" w/c), 4-20mA output

Add suffix to the partcode

-V

0-10Vdc voltage output

For options add suffix to the partcode (at extra cost):

-B

For Bi-directional output

-LCD

For integral LCD option

Accessories

DFK

Additional duct fixing kit

TEE

Tee piece (pack of 10)

PA-TUBE-8MM

PVC tube, 30m (98.5 ft) reel

PA-267-CAL

Calibration certificate

A 'duct fixing kit' is supplied with the PA-267-AH consisting of 2m of 6mm i/d plastic tubing, 2 x pitot tubes, 4 x fixing screws.

Velocity Measurement & Tubing:

The PA-267-AH can be used for accurate air velocity measurement in applications such as variable fan speed control in VAV applications.

NB The units are calibrated with the transducer in the vertical position. The zero adjustment may be used to correct any shift in output resulting in mounting the unit other than vertically. No adjustment of the span potentiometer is required.

It is recommended for best results (shortest response times)

- 6mm i/d tubing lengths up to 30.5m (100 ft)
- 7mm i/d tubing lengths up to 91.5m (300 ft)
- 9.5mm i/d for tubing lengths up to 274m (900 ft)

Bi-Directional:

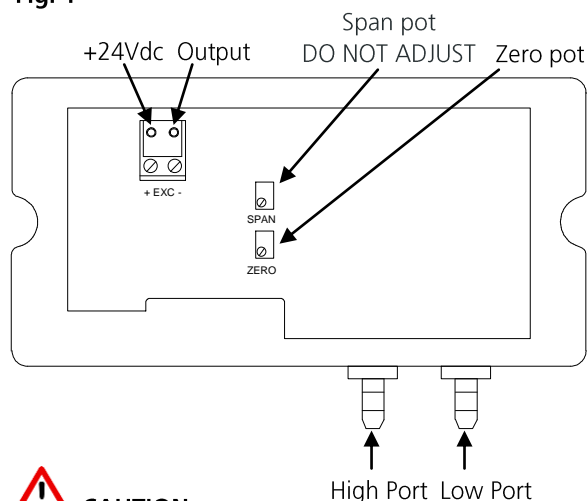
The PA-267-AH is also available with bi-directional pressure ranges, enabling measurement of both positive and negative pressures. The two output ranges are offered 0-10Vdc and 4-20mA.

Example, PA-267-50-AH-B at -50Pa the output is 4mA, 0Pa the output is 12mA and at +50Pa the output is 20mA. Therefore the output is linear across the range.

Installation & Connections:

1. Mount the unit on the duct or wall by drilling two holes at 142mm (5.59") centres and fixing the unit with self-tapping pan head screws.
2. Push fit the pressure tubing onto the pressure ports on the unit. Ensure that the Hi and Lo ports have been correctly identified.
- a) 4-20mA output version:
3. Wire to the unit with 2-core cable. See Fig. 1
- b) 0-10Vdc output version:
4. Wire to the unit with 3-core cable. See Fig. 2

Fig. 1

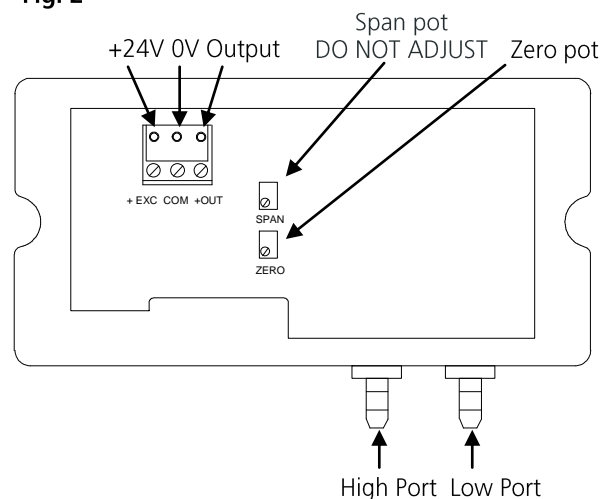


CAUTION

The PA-267-AH will be damaged if subjected to excessive pressure.

Do **NOT** test the unit by blowing into the inlet ports. Adjustment of the span potentiometer will void warranty.

Fig. 2

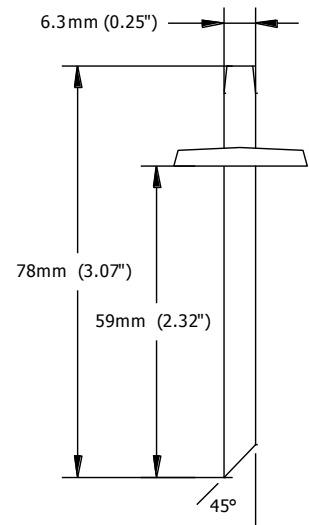
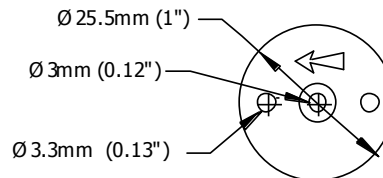


Duct Fixing Kit:

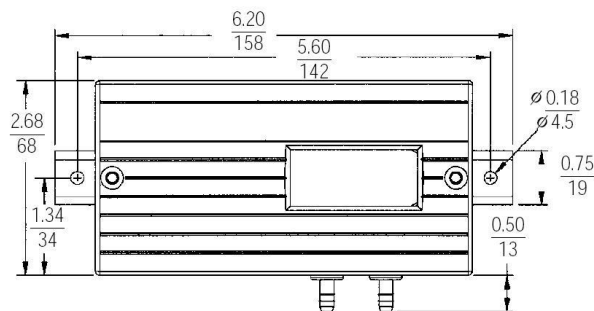
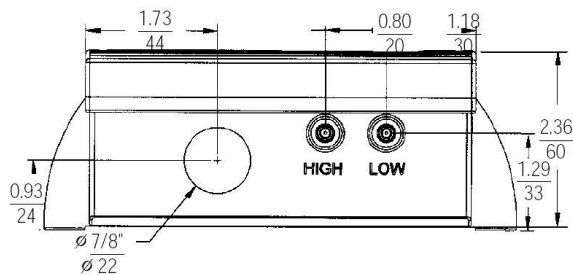
A 'duct fixing kit' is supplied with the PA-267-AH, consisting of 2m (6.56ft) of 6mm (0.24") i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.



Pitot tube dimensions;



Dimensions:



Whilst every effort has been made to ensure the accuracy of this specification, Sontay cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.