



Features and Benefits

- Compact construction
- Easy mounting
- Duct fixing kit included
- Optional LCD Display
- IP65 Housing
- 3 Field selectable ranges to cover many applications

Technical Overview

The PA-699 range of differential pressure transmitters incorporates a proved ceramic fulcrum lever technology. They deliver calibrated, temperature-compensated sensor signals, available as standard voltage or current outputs.

They are ideal for registering low air flow in air conditioning systems and for the measurement of fine pressures in environmental, laboratory and clean room application (air and non-corrosive gases).

Product Codes

PA-699-01	±30, ±50 & ±100Pa, 4-20mA
PA-699-02	0 to 30, 50 & 100Pa, 4-20mA
PA-699-04	0 to 100, 300 & 500Pa, 4-20mA
PA-699-06	0 to 500, 1000 & 1600Pa, 4-20mA
PA-699-08	0 to 1600, 2500 & 5000Pa, 4-20mA

Add suffix to the partcode
-V 0-10Vdc voltage output

For option add suffix to the partcode (at extra cost):
-LCD For integral LCD option

Accessories

Accessories

DFK	Duct fixing kit
TEE	Tee piece air pressure (pack of 10)
PITOT	Aluminium pitot tubes (pair)
PA-TUBE-CLEAR	Clear tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-RED	Red tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-BLUE	Blue tube 8mm o/d x 1.5mm wall, 30m reel
PA-699-CAL	Calibration certificate

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

Specification

Accuracy, total of linearity, Hysteresis & repeatability & fs:		
PA-699-01 to 04	±1.0 max.	
Others	±0.6	
Thermal effect	TC zero point	TC sensitivity
Typical % fs/10K		
PA-699-01 & 02	±0.02	±0.03
Others	±0.01	±0.01
Rupture pressure	2 x Overload @ ambient temp.	
Power supply:		
Current output	8 to 33Vdc	
Voltage output	13.5 to 33Vdc or 24Vac ±15%	
Load impedance:		
Current	< $\frac{\text{Supply voltage} - 8V}{0.02A}$ ohm	
Voltage	>10K ohm	
Current consumption:		
Current	<20mA	
Voltage	<10mA	
Pressure connections	Push fit for 6mm ID tube	
Electrical connections	Screw terminals for 1.5mm ² max.	
Housing construction:		
Housing	Polycarbonate PC	
Diaphragm	Silicone	
Sensor	Al ₂ O ₃ (96%) / glass	
Temperature:		
Medium	0 to 70°C	
Ambient	0 to 70°C	
Storage	-10 to +70°C	
Dimensions	92 x 75 x 51mm	
Protection	IP65	
Country of origin	Switzerland	
Conformity	EMC, CE & UKCA Marked	

WEEE Directive:



At the end of the products useful life please dispose as per the local regulations.
Do not dispose of with normal household waste.
Do not burn.



For pricing or any further information, please contact Omni Instruments Ltd.

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Installation



Antistatic precautions must be observed when handling these sensors. The PCB contains circuitry that can be damaged by static discharge.

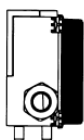
1. Mount the unit onto the duct or wall by drilling two holes at 80mm centres and fix with self-tapping pan head screws.
2. Push the pressure tubing onto the pressure ports on the unit. Ensure that the Hi and Lo ports have been correctly identified (P1 High, P2 Low).
3. Undo screw on hinged lid, pass cable through the cable gland PG11 and make connections as required.



CAUTION

The PA-699 will be damaged if subjected to excessive pressure. Do NOT test the unit by blowing into the inlet ports.

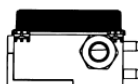
- The recommended installation position is vertical, with the pressure connections facing downwards (factory calibration).



- With the unit mounted horizontally, cover facing downward this will affect the signal by approximately 10Pa higher than the actual pressure.

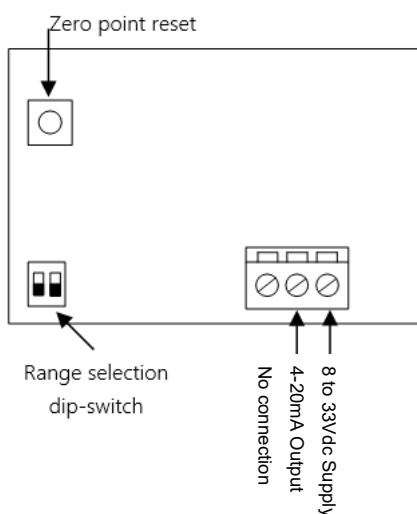


- With the unit mounted horizontally, cover facing upward this will affect the signal by approximately 10Pa lower than the actual pressure.

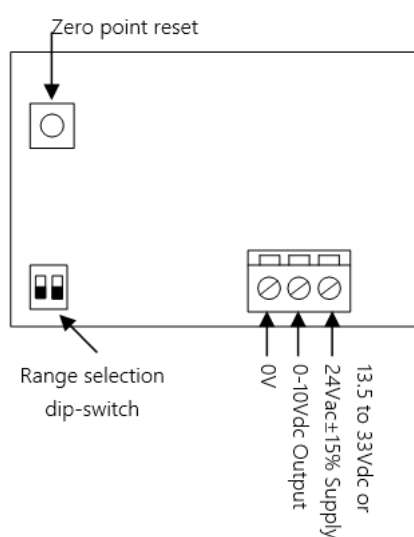


Connections & Zero Reset

4-20mA output:



0-10Vdc output:



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DIP-Switch Settings

Factory settings

Range 00



Range 01



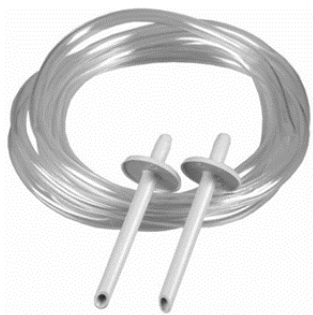
Range 10



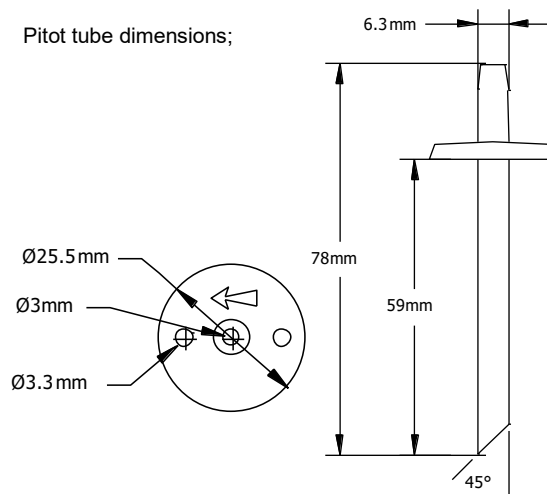
	Range 10	Range 01	Range 00
PA-699-01	-30 to 30Pa	-50 to 50Pa	-100 to 100Pa
PA-699-02	0 to 30Pa	0 to 50Pa	0 to 100Pa
PA-699-04	0 to 100Pa	0 to 300Pa	0 to 500Pa
PA-699-06	0 to 500Pa	0 to 1000Pa	0 to 1600Pa
PA-699-08	0 to 1600Pa	0 to 2500Pa	0 to 5000Pa

Duct Fixing Kit

A 'duct fixing kit' is supplied with the PA-699, consisting of 2m of 5mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.



Pitot tube dimensions;



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