Multi-Range Air Differential Pressure Transmitter

Features

- User adjustable measurement range
- IP65 Housing
- Compact construction
- Easy mounting
- Duct fixing kit included

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	±0.02	±0.03
PA-699-02	±0.02	±0.03
PA-699-03	±0.02	±0.02
PA-699-04	±0.01	±0.01
Others	±0.01	±0.01
Rupture pressure	2 x Overload @ ambient temp.	
Power supply:		
Current output	11 to 33Vdc	
Voltage output	13.5 to 33Vdc or 24Vac ±15%	
Load impedence:		
Current	$< \frac{\text{Supply voltage} - 8V}{0.02A}$ ohm	
Voltage	>10K ohm	
Current consumption:		
Current	20mA	
Voltage	<10mA	
Pressure connections	Push fit for 6.2mm ID tube	
Electrical connections	Screw terminals for 1.5mm² max.	
Housing construction:		
Housing	Polycarbonate PC	
Diaphragm	Silicone	
Sensor	Al_2O_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	
CE Conformity:		
	EN 61000-6-2, EN 61000-6-3, EN 61326-1	
	CE Marked, EMC	
Country of origin	Switzerland	

Product Codes

PA-699-01
Bi-directional, 30, 50 & 100Pa 4-20mA multi-range air DP transmitter

PA-699-02
0 to 30, 50 & 100Pa 4-20mA multi-range air DP transmitter

PA-699-03
0 to 50, 100 & 300Pa 4-20mA multi-range air DP transmitter

PA-699-04
0 to 100, 300 & 500Pa 4-20mA multi-range air DP transmitter

PA-699-05
0 to 300, 500 & 1000Pa 4-20mA multi-range air DP transmitter

PA-699-06
0 to 500, 1000 & 1600Pa 4-20mA multi-range air DP transmitter

PA-699-07
0 to 1000, 1600 & 2500Pa 4-20mA multi-range air DP transmitter

PA-699-08
0 to 1600, 2500 & 5000Pa 4-20mA multi-range air DP transmitter

For option's add suffix to the partcode:

-V For 0-10V voltage version
-LCD Integral LCD option

Accessories

PA-699-CAL
Calibration certificate

A 'duct fixing kit' is supplied with the PA-699, consisting of 2m of 6mm ID plastic tubing, 2 x pitot tubes and 4 x fixing screws.

Technical Overview

The PA-699 range of differential pressure transmitters incorporate 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).

Installation

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.

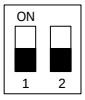
CAUTION

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

Dipswitch Settings

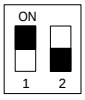
Factory settings

Range 00



Range 01

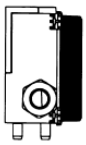
Range 10



Range 10	Range 01	Range 00
–30 to 30Pa	–50 to 50Pa	–100 to 100Pa
0 to 30Pa	0 to 50Pa	0 to 100Pa
0 to 50Pa	0 to 100Pa	0 to 300Pa
0 to 100Pa	0 to 300Pa	0 to 500Pa
0 to 300Pa	0 to 500Pa	0 to 1000Pa
0 to 500Pa	0 to 1000Pa	0 to 1600Pa
0 to 1600Pa	0 to 2500Pa	0 to 5000Pa

Mounting

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

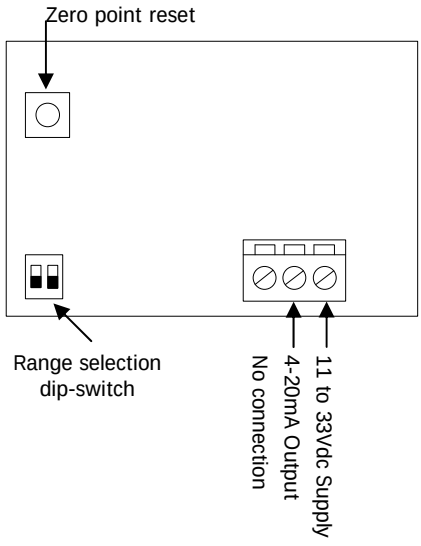


With the unit mounted horizontally, cover facing downward this will effect the signal by approximately 10Pa higher than the actual pressure.

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

Connections

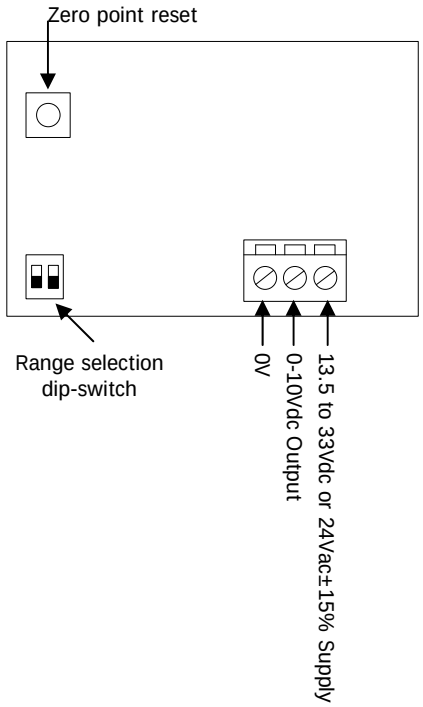
4-20mA output:



Please see next page for 0-10Vdc connections

Connections

0-10Vdc output



Trend Scaling

4-20mA output:

Range	Trange	Brange	Upper	Lower	Exp
–30 to 30Pa	30	-120	30	-30	2
–50 to 50Pa	50	-200	50	-50	3
–100 to 100Pa	100	-400	100	-100	3
0 to 30Pa	30	-45	30	0	2
0 to 50Pa	50	-75	50	0	3
0 to 100Pa	100	-150	100	0	3
0 to 300Pa	300	-450	300	0	3
0 to 500Pa	500	-750	500	0	4
0 to 1000Pa	1000	-1500	1000	0	4
0 to 1600Pa	1600	-2400	1600	0	4
0 to 2500Pa	2500	-3750	2500	0	4
0 to 5000Pa	5000	-7500	5000	0	5

Trend Scaling (continued)

0-10Vdc output:

Range	Trange	Brange	Upper	Lower	Exp
–30 to 30Pa	30	-90	30	-30	2
–50 to 50Pa	50	-150	50	-50	3
–100 to 100Pa	100	-300	100	-100	3
0-30Pa	30	-30	30	0	2
0 to 50Pa	50	-50	50	0	3
0 to 100Pa	100	-100	100	0	3
0 to 300Pa	300	-300	300	0	3
0 to 500Pa	500	-500	500	0	4
0 to 1000Pa	1000	-1000	1000	0	4
0 to 1600Pa	1600	-1600	1600	0	4
0 to 2500Pa	2500	-2500	2500	0	4
0 to 5000Pa	5000	-5000	5000	0	5