



## Product Overview

The AX-ADPT-DA air differential pressure transmitters are a cost effective solution for air flow monitoring applications.

The units are available in a number of pressure ranges and can be used for static pressure monitoring applications by simply allowing one of the ports to remain open to normal atmospheric pressure. AX-ADPT-DA units are suitable for use with air, non aggressive and non-combustible gases.

Optional LCD display for instantaneous read-out, append order code with -L suffix

## Features

- Cost-effective solution
- Multiple ranges in a single unit
- 0-10Vdc/4-20mA output
- Field selectable air velocity mode

## Product Specifications

Power Supply:	Volt version:	21.6 to 33Vac or 17-36Vdc at 40mA max
	Current version:	10-35Vdc at 40mA min
Output:	Volt version:	0-10V, minimum load resistance 1K $\Omega$
	Current version:	4-20mA, load resistance 0-1250 $\Omega$ maximum
Accuracy:		+/- 1% for 50Pa to 1250Pa, +/- 2% for 25Pa and 250Pa
Response time:		Adjustable 0.5s - 15s time constant, provides 95% response time of 1.5s - 45s
Maximum Pressure:		6.8kpa operation, burst 68.9kpa
Pressure Connection:		Plastic pipe suitable for use with 5mm ID plastic tube.
Electrical Connection:		Screw terminals suitable for use with cable up to 1.5mm <sup>2</sup>
Zero & Span adjustment:		Digital push button
Stability:		< $\pm$ 1% FS/Year
Display (optional):		4 digit LCD
	Output / Display:	Pascals, M/S, feet per minute or inches W.C. - Adhesive labels
Protection:		IP65
Ambient Temp range:		-18°C to 66°C
Weight & Dimensions:		230g, see drawings
Country of Origin:		USA

## Order Codes

AX-ADPT-DA1	ADPT 0-25Pa, 0-50Pa, 0-100Pa, 4-20mA output
AX-ADPT-DA1-V	ADPT 0-25Pa, 0-50Pa, 0-100Pa, 0-10V output
AX-ADPT-DA2	ADPT 0-250Pa, 0-500Pa, 0-1250Pa, 4-20mA output
AX-ADPT-DA2-V	ADPT 0-250Pa, 0-500Pa, 0-1250Pa, 0-10V output

Add suffix -L      Optional LCD Display

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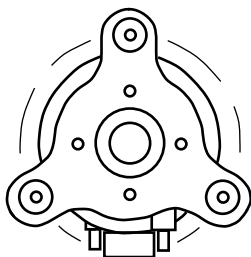
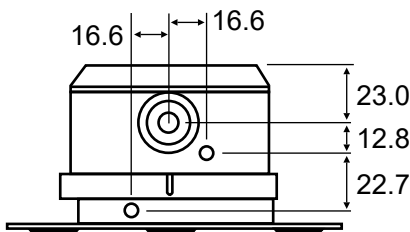
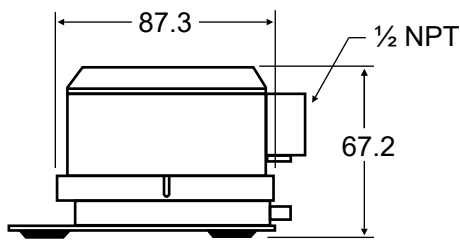
Email: sales@annicom.com Website: www.annicom.com

## Installation

The AX-ADPT-DA should be installed by a suitably qualified technician in accordance with prevailing regulations and any guidelines for the equipment to which it is to be connected. The AX-ADPT-DA is not suitable for use with mains Voltage.

The AX-ADPT-DA has three fixing lugs moulded into the base for use with screws up to 4mm in diameter. When fixing the switch, care should be taken not to stress the unit. The switch is designed (and calibrated) to be mounted on a vertical plane with the gland and pressure connections at the bottom of the unit.

## Dimensions (mm)



Mounting: 3 off 4.8mm dia holes equi-spaced on 105mm diameter

## Connections

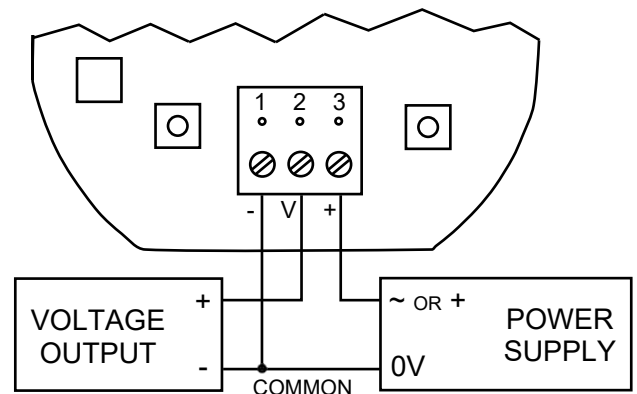
### Pressure:

Pressure connections are made by pushing 6mm PVC tube over the pressure pipes behind the cable gland. Connect the high pressure side to the inlet pipe marked +.

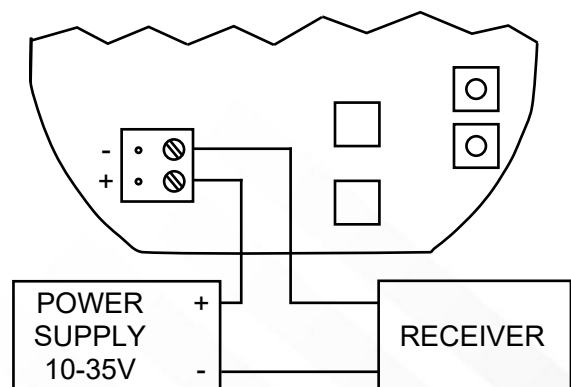
### Electrical:

The sensor should be wired as per the appropriate diagram below. The terminal block is a push-fit removable type for ease of wiring. Note the correct jumper setting - see page 3

### 3-Wire Operation

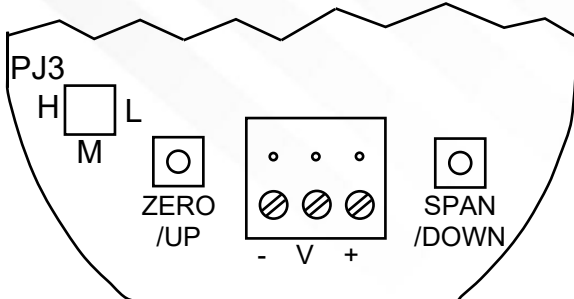


### 2-Wire Operation



## Jumper Settings

### 3-Wire Operation



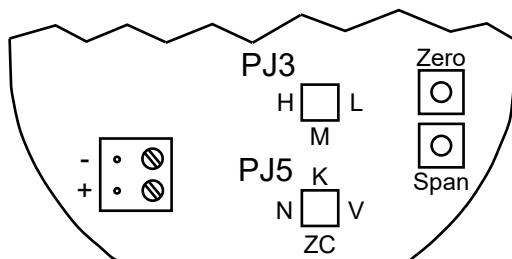
#### Setting the output range (PJ3):

Place jumper on the two pins nearest to H for the highest pressure range.

Place jumper on the two pins nearest to M for the middle pressure range.

Place jumper on the two pins nearest to L for the lowest pressure range.

### 2-Wire Operation



#### Setting the operating mode (PJ5):

Place jumper on the two pins nearest to N for Normal mode where zero pressure corresponds to 0V or 4mA output. If no jumper is placed on PJ5, the unit will default to Normal mode.

Place jumper on the two pins nearest to ZC for Zero Centre. In this mode zero pressure corresponds to 2.5V, 5V or 12mA, whilst the selected full scale range corresponds to 5V, 10V or 20mA. Negative full scale pressure will correspond to 0V or 4mA.

Place jumper on the two pins nearest to V for Velocity mode. This mode provides the ability to output in air velocity when used in conjunction with a pitot tube or flow sensor with a known K factor.

This mode will override the High, Medium and Low range setting and forces the unit into High range setting.

If the optional LCD display is present, this mode outputs air velocity to the display. The current or voltage output is modified to provide feet per minute or metres per second, such that the full scale output is;

$$4004 \times K \times \sqrt{(\Delta P)}$$

The factory default for the K factor is 1.0, but may be adjusted to suit different pitot tubes using the following procedure.

#### Adjusting K Factor

If the optional display is present, the K factor used in velocity measurement can be adjusted by moving the jumper on PJ5 to the upper two pins, labelled K. The display will now show the current pitot tube K factor which may be altered using the Zero and Span buttons as up and down.

Once the desired value for K factor has been set, replace the jumper on PJ5 to the V position. The K factor is adjustable between 0.5 to 3 and is factory programmed to 1.0.

#### User Calibration

It is not recommended that the user re-calibrates these units, as it requires use of a calibrated pressure source. If in doubt, the unit can be returned to factory calibration defaults by pressing both the zero and span buttons simultaneously for at least 5 seconds.

#### Datasheet Contents

Every effort has been taken in the production of this data sheet to ensure accuracy. Axio do not accept responsibility for any damage, expense, injury, loss or consequential loss resulting from any errors or omissions. Axio has a policy of continuous improvement and reserves the right to change this specification without notice.