

**Differential Pressure Sensor Air**

Differential pressure transmitter with 8 selectable ranges and outputs 0...5 V, 0...10 V or 4...20 mA. For monitoring the differential pressure of air and other non-flammable and non-aggressive gases. Typical application in HVAC systems for monitoring air filters, fans V-belts or fire and smoke control dampers. Options available with LCD display. IP65 / NEMA 4X rated enclosure.


**Type Overview**

Type	Measuring range pressure [Pa]	Measuring range pressure [inch WC]	Output signal active pressure	Burst pressure	Display type
22ADP-586	0...7000	0...28	0...5 V, 0...10 V, 4...20 mA	40 kPa / 160 inch WC	-
22ADP-586L	0...7000	0...28	0...5 V, 0...10 V, 4...20 mA	40 kPa / 160 inch WC	LCD

**Technical Data**

<b>Electrical Data</b>	Nominal voltage	AC/DC 24 V			
	Nominal voltage range	AC 19...29 V / DC 15...35 V			
	Power consumption AC	1.7 VA			
	Power consumption DC	1.1 W			
	Electrical connection	Removable spring loaded terminal block max. 2.5 mm <sup>2</sup>			
	Cable entry	Cable gland with strain relief Ø6...8 mm (1/2" NPT conduit adapter included)			
<b>Functional Data</b>	Sensor Technology	piezo measuring element			
	Multirange	8 measuring ranges selectable			
	Output signal active note	Output 0...5/10 V selectable with switch Voltage output: min. 10 kΩ load current output: max. 500 Ω load			
	Display	LCD, 1.14x1.38" [29x35 mm] with backlight measured values: Pa, inchWC (configurable)			
	Application	air			
	Response time	adjustable 0.8 s or 4.0 s			
	<b>Measuring Data</b>	Measuring values	differential pressure		
Measuring fluid		air and non-aggressive gases			
Measuring range settings pressure		Setting	range [Pa]	range [inch WC]	Factory setting
		S0	0...7000	0...28	✓
		S1	0...5000	0...20	
		S2	0...4000	0...16	
		S3	0...3000	0...12	
		S4	0...2500	0...10	
		S5	0...2000	0...8	
		S6	0...1500	0...6	
S7	0...1000	0...4			
Accuracy pressure	measuring range ≤8 inch WC: ±0.04 inch WC measuring range >8 inch WC: ±0.1 inch WC				
Long-term stability	±2.5% FSO (Full Scale Output) over 4 years under normal environmental conditions				
<b>Materials</b>	Cable gland	PA6, black			
	Housing	cover: lexan, orange base: lexan, orange seal: 0467 NBR70, black UV resistant			
<b>Safety Data</b>	Ambient humidity	max. 95% r.H., non-condensing			
	Ambient temperature	15...120°F [-10...50°C]			
	Fluid temperature	15...120°F [-10...50°C]			
	Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)			
	Protection class UL	UL Class 2 Supply			
	EU Conformity	CE Marking			
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-6			
	Certification UL	cULus acc. to UL60730-1A/-2-6, CAN/CSA E60730-1:02			
	Degree of protection IEC/EN	IP65			
	Degree of protection NEMA/UL	NEMA 4X			
	Quality Standard	ISO 9001			

Safety Notes



This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application. Unauthorised modifications are prohibited. The product must not be used in relation with any equipment that in case of a failure may threaten humans, animals or assets.

Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.

The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Remarks

- Manual Zero-Point Calibration** In normal operation zero-point calibration should be executed every 12 months.  
 Attention! For executing zero-point calibration the power supply must be connected one hour before.
- Release both connection tubes from the pressure terminals + and -
  - Press the button until the LED lights permanently
  - Wait until the LED flashes again and reinstall the connection tubes to the pressure ports (note + and -)

Scope of delivery

Scope of delivery	Description	Type
	Duct connector kit, PVC tube 2 m, 2 connection elements (Plastic) for 22ADP-..	A-22AP-A08
	Mounting plate L housing	A-22D-A10
	Dowel	
	Screws	
	1/2" NPT conduit adapter	

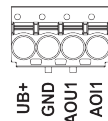
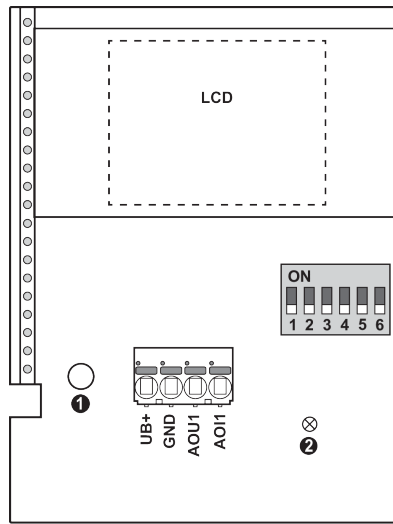
Accessories

Optional accessories	Description	Type
	Duct connector, Metal, L 1.5", Tube connection 0.2"	A-22AP-A01
	Duct connector, Metal, L 4", Tube connection 0.2"	A-22AP-A03

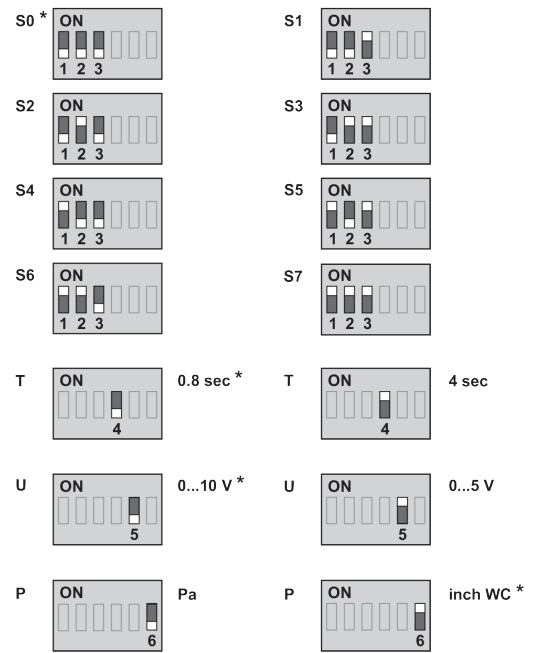
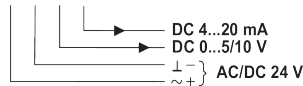
Wiring Diagram

**Notes** Function of output AOI1 (DC 4...20 mA) can only be used if the sensor is supplied with DC 24 V.



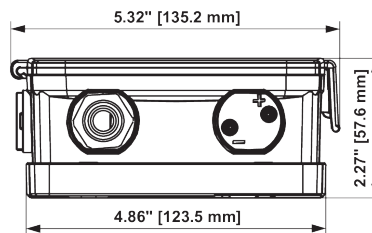
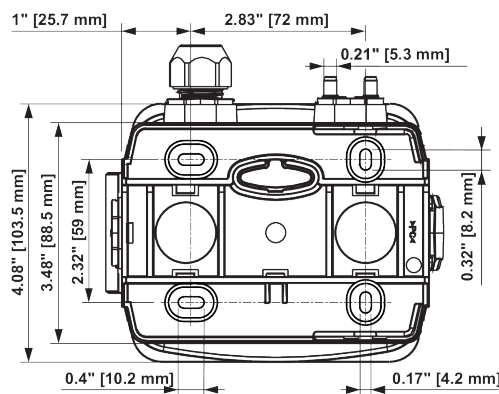


- ① Button
- ② Status LED
- \* Factory setting
- P Pressure unit
- T Response time
- U Output signal



Setting	range [Pa]	range [inch WC]	Factory setting
S0	0...7000	0...28	✓
S1	0...5000	0...20	
S2	0...4000	0...16	
S3	0...3000	0...12	
S4	0...2500	0...10	
S5	0...2000	0...8	
S6	0...1500	0...6	
S7	0...1000	0...4	

Dimensions



Type

22ADP-586

Weight

0.63 lb [0.29 kg]

22ADP-586L

0.66 lb [0.30 kg]

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