Differential Pressure Sensor (Air)

Differential pressure transmitter with 8 selectable ranges and outputs 0 to 5/10 V or 4 to 20 mA. NEMA 4X / IP65 rated enclosure. For monitoring the differential pressure of air and other non-flammable and non-aggressive gases. Monitoring air filters, fans, industrial cooling air cycles, control of air and fire dampers. Available with LCD display.

Type Overview

Type	Measuring Range Pressure	Output Signal Active Pressure	Display Type
22ADP-584	0 to 2500 Pa	DC 0...10 V, DC 0...5 V, 4...20 mA	-
22ADP-584L	0 to 2500 Pa	DC 0...10 V, DC 0...5 V, 4...20 mA	LCD

Technical Data

Electrical Data	Power Supply DC	15...24 V, ±10%, 1.1 W
	Power Supply AC	24 V, ±10%, 1.7 VA
	Electrical Connection	removable spring loaded terminal block max. 11 GA [2.5 mm²]
	Cable Entry	cable gland PG11 Ø6 to 10 mm, with strain relief Ø6 to 8 mm, 1/2" conduit adapter included
Functional Data	Sensor Technology	piezo measuring element
	Multirange	8 fields selectable
	Output Signal Active Note	output DC 0 to 5/10 V selectable with switch voltage output: min. 10 kΩ load current output: max. 500 Ω load
	Display	LCD, 1.14" x 1.38" [29 x 35 mm] with backlight measured values: Pa, inchWC (configurable)
	Media	air
Measuring Data	Measured Values	differential pressure
	Measuring media	air and non-aggressive gases

Measuring range settings pressure	Setting	range [Pa]	range [inch WC]	Factory setting
	S0	0 to 2500	0 to 10	✓
	S1	0 to 2000	0 to 8	
	S2	0 to 1500	0 to 6	
	S3	0 to 1000	0 to 4	
	S4	0 to 500	0 to 2	
	S5	0 to 250	0 to 1	
	S6	0 to 100	0 to 0.4	
	S7	-100 to 100	-0.4 to 0.4	

Accuracy Pressure	measuring range ≤2 inch WC (500 Pa): ±0.02 inch WC (±5 Pa) measuring range >2 inch WC (500 Pa): ±0.04 inch WC (±10 Pa)

Materials	Cable Gland	PA6, black
	Housing	cover: lexan, Belimo orange NCS S0580-Y6OR base: lexan, Belimo orange NCS S0580-Y6OR seal: 0467 NBR70, black
Safety Data	Ambient Humidity	max. 95% RH non-condensing
	Ambient temperature	15°F to 120°F [-10°C to 50°C]
	Medium temperature	15°F to 120°F [-10°C to 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	pending
	Degree of Protection IEC/EN	IP65
	Degree of Protection NEMA/ UL	NEMA 4X
	Quality Standard	ISO 9001
	Weight	0.29 lbs

Safety Notes

⚠ The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorized modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with
• Local laws, health & safety regulations, technical standards and regulations
• Condition of the device at the time of installation, to ensure safe installation
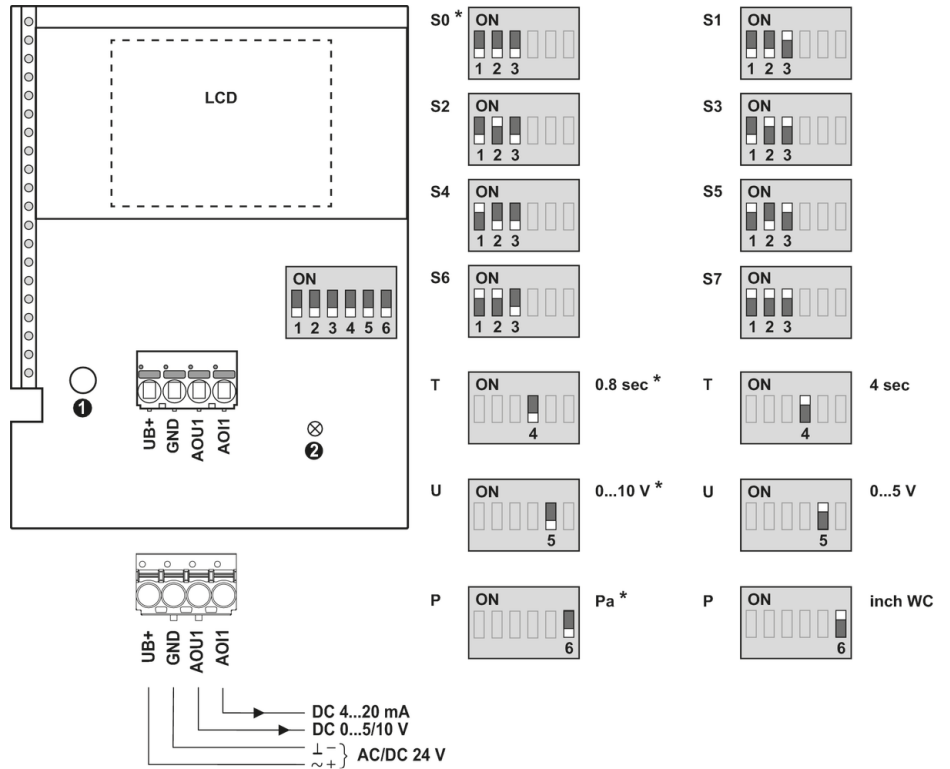• This data sheet and installation manual

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 S1 until the LED lights permanently
• Wait until the LED flashes again and reinstall the connection tubes to the pressure ports (note + and -)

Accessories

Scope of Delivery	mounting plate dowel screws cable gland nut conduit 1/2" NPT	
Optional Accessories	Description	Type
	metal duct connectors 1.57" [40 mm] metal duct connectors 4" [100 mm]	A-22AP-A01 A-22AP-A03

Wiring Diagram

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 to 2500	0 to 10	✔
S1	0 to 2000	0 to 8	
S2	0 to 1500	0 to 6	
S3	0 to 1000	0 to 4	
S4	0 to 500	0 to 2	
S5	0 to 250	0 to 1	
S6	0 to 100	0 to 0.4	
S7	-100 to 100	-0.4 to 0.4	

Dimensions

1" [25.7 mm]   2.5" [63.5 mm]

0.21" [5.3 mm]

0.28" [7.2 mm]

4.08" [103.5 mm]

3.48" [88.5 mm]

2.44" [62 mm]

0.4" [10.2 mm]   0.17" [4.2 mm]

5.32" [135.2 mm]

2.27" [57.6 mm]

4.86" [123.5 mm]