

Differential Pressure Sensor

Differential pressure transmitter with 8 selectable ranges and outputs 0...5 V, 0...10 V or 4...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. Options available with LCD display, Autozero feature.


Type Overview

Type	Output Signal	Measuring range pressure	Display type	Additional features
22ADP-18Q	DC 0...5 V, DC 0...10 V, 4...20 mA	0...250 Pa	-	-
22ADP-18QA	DC 0...5 V, DC 0...10 V, 4...20 mA	0...250 Pa	-	Autozero
22ADP-18QB	DC 0...5 V, DC 0...10 V, 4...20 mA	0...250 Pa	LCD	Autozero
22ADP-18QL	DC 0...5 V, DC 0...10 V, 4...20 mA	0...250 Pa	LCD	-

Technical Data

Electrical data	Power Supply DC	15...24 V, $\pm 10\%$, 1.1 W
	Power Supply AC	24 V, $\pm 10\%$, 1.7 VA
	Electrical connection	Removable spring loaded terminal block max. 2.5 mm ²
	Cable entry	cable gland PG11 $\varnothing 6...10$ mm, with strain relief $\varnothing 6...8$ mm
Functional data	Sensor Technology	Piezo measuring element
	Multirange	YES
	Output signal active pressure	DC 0...10 V DC 0...5 V 4...20 mA
	Output signal active note	Output DC 0...5/10 V selectable with switch Voltage output: min. 10 k Ω load Current outout: max. 500 Ω load
	Display	LCD, 37.5 x 31.6 mm Measured values: Pa, inchWC, mmWC, kPa, mbar, psi (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...250	0...1 ✓
		S1	0...100	0...0.4
		S2	0...50	0...0.2
		S3	0...25	0...0.1
		S4	-25...25	-0.1...0.1
		S5	-50...50	-0.2...0.2
		S6	-100...100	-0.4...0.4
	S7	-150...150	-0.6...0.6	
	Accuracy pressure	deviation compared to the reference device ±1 Pa at range <250 Pa		
Materials	Cable gland	PA6, black		
	Housing	Cover: Lexan, Belimo orange NCS S0580-Y6OR Bottom: Lexan, Belimo orange NCS S0580-Y6OR Seal: 0467 NBR70, black		
Safety data	Ambient humidity	95% r.h., non-condensing		
	Ambient Temperature	-10...50 °C [15...122 °F]		
	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	0.150 kg			

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. Unauthorised 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
Automated Zero-Point calibration (Auto Zero)

Transmitters equipped with the auto zero calibration are maintenance free.

The auto-zero calibration electronically adjusts the transmitter zero every 10 minutes. The function eliminates all output signal drift due to thermal, electronic or mechanical effects. The auto-zero adjustment takes approx. 4 seconds after which the device returns to its normal measuring mode. During the 4 second adjustment period, the output and display values will freeze to the latest measured value.

Manual Zero-Point calibration

In normal operation zero-point calibration should be executed every 12 months.

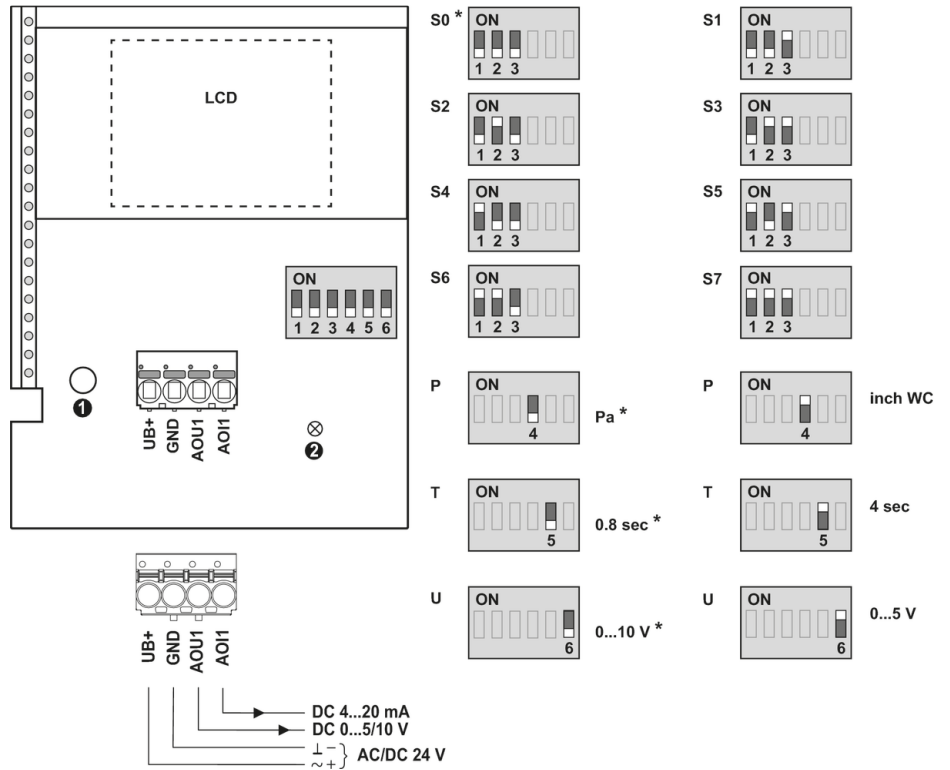
Attention! For executing zero point calibration the power supply must be connected one hour before.

- 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

Optional accessories	Description	Type
	Duct connector (metal) 40 mm	A-22AP-A02
	Duct connector (metal) 100 mm	A-22AP-A04
Scope of delivery	Mounting plate Dowel Screws	

Wiring diagram



- ① Auto-zero 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...250	0...1	✓
S1	0...100	0...0.4	
S2	0...50	0...0.2	
S3	0...25	0...0.1	
S4	-25...25	-0.1...0.1	
S5	-50...50	-0.2...0.2	
S6	-100...100	-0.4...0.4	
S7	-150...150	-0.6...0.6	

Dimensions

