

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	Measuring range pressure	Output signal active pressure	Display type	Additional features
22ADP-18Q	0...250 Pa	DC 0...10 V, DC 0...5 V, 4...20 mA	-	-
22ADP-18QA	0...250 Pa	DC 0...10 V, DC 0...5 V, 4...20 mA	-	Auto-Zero
22ADP-18QB	0...250 Pa	DC 0...10 V, DC 0...5 V, 4...20 mA	LCD	Auto-Zero
22ADP-18QL	0...250 Pa	DC 0...10 V, DC 0...5 V, 4...20 mA	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			
	Cable entry	Cable gland PG11 $\varnothing 6...10$ mm, with strain relief $\varnothing 6...8$ mm			
Functional data	Sensor Technology	Piezo measuring element			
	Multirange	8 measuring ranges selectable			
	Output signal active note	Output DC 0...5/10 V selectable with switch Voltage output: min. 10 k Ω load Current output: max. 500 Ω load			
	Display	LCD, 29 x 35 mm with backlight Measured values: Pa, inchWC (configurable)			
Measuring data	Media	Air			
	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...120 °F]
	Medium temperature	-10...50 °C [15...120 °F]
	Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)
	Protection class UL	UL Class 2 Supply
	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 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.

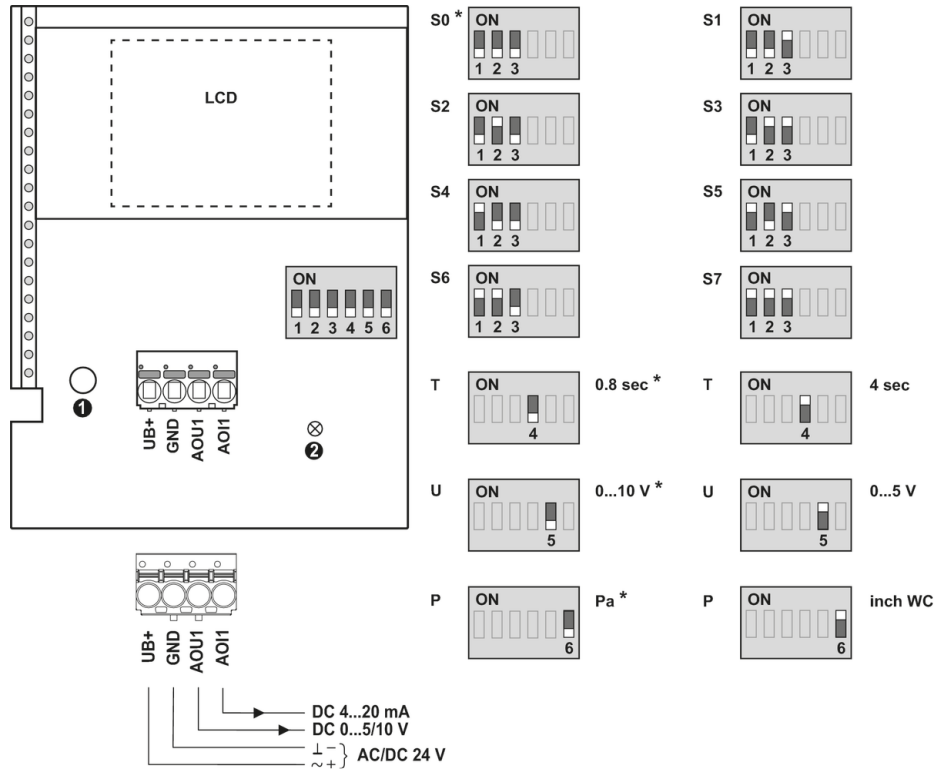
Attention! For executing zero point calibration the power supply must be connected one hour before.

- Release both connection tubes from the pressure terminals + and -
- Press the button 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	
Optional accessories	Screws	
	Description	Type
	Duct connector (metal) 40 mm	A-22AP-A02
	Duct connector (metal) 100 mm	A-22AP-A04

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...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

