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.

5 YEAR WARRANTY

Type Overview

Type	Measuring Range Pressure	Output Signal Active Pressure	Display Type	Additional Features
22ADP-58Q	0 to 250 Pa	4...20 mA, DC 0...5 V, DC 0...10 V	-	-
22ADP-58QA	0 to 250 Pa	4...20 mA, DC 0...5 V, DC 0...10 V	-	auto zero
22ADP-58QB	0 to 250 Pa	4...20 mA, DC 0...5 V, DC 0...10 V	LCD	auto zero
22ADP-58QL	0 to 250 Pa	4...20 mA, DC 0...5 V, DC 0...10 V	LCD	-

Technical Data

Electrical Data	Power Supply DC	15...24 V, ±10%, 1.1 W
	Power Supply AC	24 V, ±10%, 1.7 VA
	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)
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 to 250	0 to 1	✔
S1	0 to 100	0 to 0.4	
S2	0 to 50	0 to 0.2	
S3	0 to 25	0 to 0.1	
S4	-25 to 25	-0.1 to 0.1	
S5	-50 to 50	-0.2 to 0.2	
S6	-100 to 100	-0.4 to 0.4	
S7	-150 to 150	-0.6 to 0.6	

Accuracy Pressure	±0.004 inch WC (±1 Pa) @ range <1 inch WC (250 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
	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

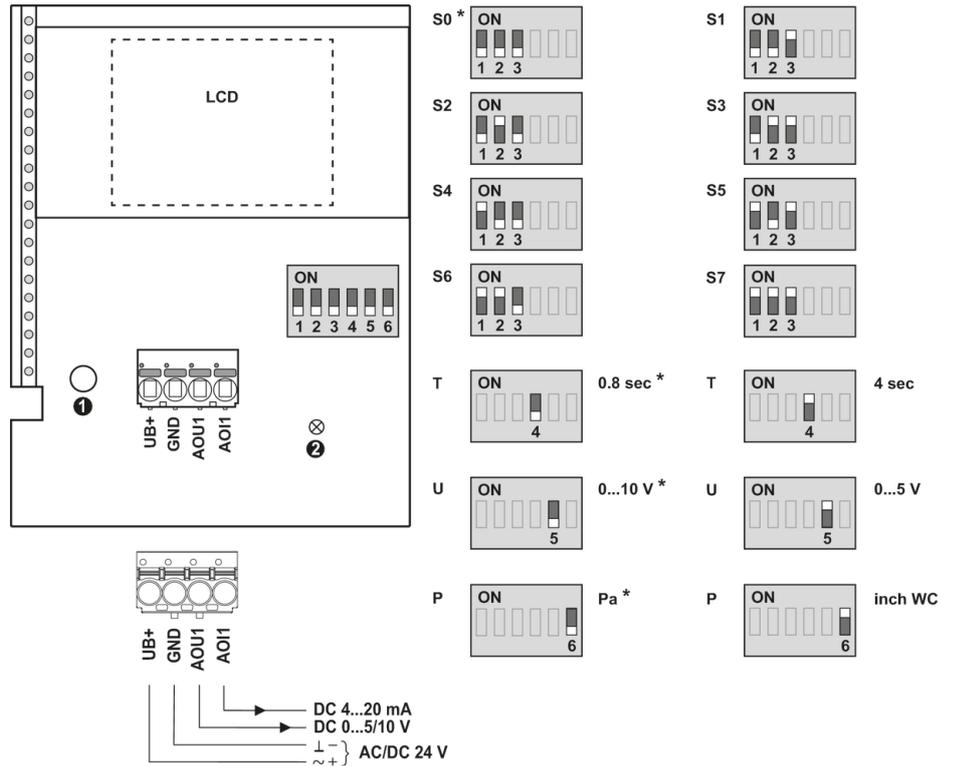| Automated Zero-Point Calibration (Auto Zero)	Transmitters equipped with the auto zero calibration are maintenance free.
	The auto-zero calibration electronically adjusts the transmitter zero every 10 minutes. The function eliminates all output signal drift due to thermal, electronic or mechanical effects. 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

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

S0 * | S1
S2 | S3
S4 | S5
S6 | S7

T   ON   0.8 sec *   T   ON   4 sec
U   ON   0...10 V *   U   ON   0...5 V
P   ON   Pa *   P   ON   inch WC

UB+ GND AOU1 AOI1

DC 4...20 mA
DC 0...5/10 V
AC/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 to 250	0 to 1	✓
S1	0 to 100	0 to 0.4	
S2	0 to 50	0 to 0.2	
S3	0 to 25	0 to 0.1	
S4	-25 to 25	-0.1 to 0.1	
S5	-50 to 50	-0.2 to 0.2	
S6	-100 to 100	-0.4 to 0.4	
S7	-150 to 150	-0.6 to 0.6	

Dimensions