The mechanical differential pressure switch / differential pressure monitor **APS** with 4-hole plastic base ring is used for monitoring above-atmospheric, differential and below-atmospheric pressures of clean air and other gaseous, non-aggressive non-combustible media in air ducts, air intake or exhaust devices, as a pressure difference detector or pressure monitor for flow detection at electric heating registers, for monitoring V-belts and filters, as air pressure deficiency protection, for monitoring fans and air dampers, or as a limit value controller. The switchpoint is adjusted using the internal precision scale.

These instruments are factory-calibrated. The differential pressure switch APS is supplied including connection set (2 m connection hose, two pressure connection nipples, screws) and mounting ring

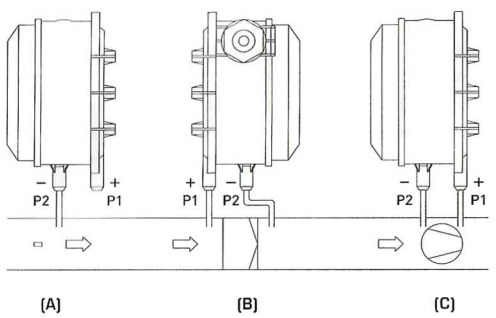
TECHNICAL DATA

Switching capacity: (Contact load)	5 (0.8) A, 250 V AC 4 (0.7) A, 30 V DC
Contact:	single-pole potential-free changeover contact, multi-layer contact, gold-plated (DDC compatible)
Pressure range:	see table, high adjustment accuracy due to individual laser-etched scale for each switch
Housing:	base: material PC (10 % GF), colour light grey (similar to RAL 7035), snap-on lid: material PC, transparent, cable gland PG 11 with strain relief
Temperature of medium:	–30...+85 °C
Membrane:	silicone, LSR (Liquid Silicon Rubber, tempered at +200 °C, non-outgassing, LABS-free, no emission of varnish-adhesion inhibiting substances), long-term stability of switching points due to trapezoidal bead membranes
Humidity:	< 90 % r. H., non-precipitating air
Electrical connection:	0.14 - 1.5 mm², via terminal screws with torsion protection
Pressure connection:	with connection nozzles for pressure hose Ø 6 mm
Mounting:	**by 4-hole base ring, plastic** (included in the scope of delivery), recommended mounting position: vertical (pressure connections downward) – factory setting, horizontal (cap up / down)
Protection class:	II (according to EN 60730)
Protection type:	**IP 54** (according to EN 60529) with top cover
Standards:	CE conformity, low-voltage directive 2014 / 35 / EU
Tests:	DVGW (according to DIN 1854), VDE 0630, EN 61058, directive on gas devices 2009 / 142 / EU, CE 0085 A P 0918
FUNCTION	Contact 1 - 2 breaks when pressure / differential pressure rises to the preset value. Contact 1 - 3 closes when pressure / differential pressure drops and can be used as signal contact.

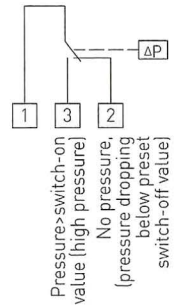
APS Differential pressure switches with mounting ring, *Standard*

Typ WG03B	Pressure range (adjustable)		Operating Difference approx.	Max. Pressure	Item No.
APS	*Standard*				**with mounting ring**
APS	20...300 Pa	(0.2...3.0 mbar)	0.1 mbar ± 15 %	5000 Pa (50 mbar)	2599 902
APS-NA	0.08...1.206 inch WC	(0.2...3.0 mbar)	0.1 mbar ± 15 %	5000 Pa (50 mbar)	2599 903

Mounting diagram **APS**



Connecting diagram **APS**



TYPES OF MONITORING:

(A) Below-atmospheric pressure:
P1 (+) is not connected but open against atmosphere
P2 (–) connected to inside of duct

(B) Filter:
P1 (+) connected upstream of filter
P2 (–) connected downstream of filter

(C) Ventilator:
P1 (+) connected downstream of ventilator
P2 (–) connected upstream of ventilator

Pressure connections at the pressure switch are marked with P1 (+) for higher pressure and P2 (–) for lower pressure.

Specifications regarding switching pressures relate to vertical mounting and it is recommended to install the connections downward.

In case of vertical mounting with pressure connections upward, the switch-on value increases by 0.2 mbar.

Connection P1 for
higher pressure or less below-atmospheric pressure.

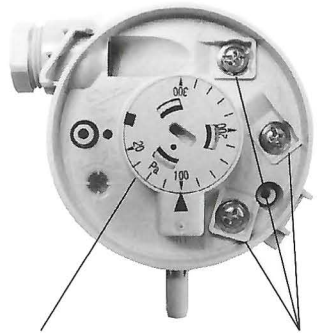
Connection P2 for
lower pressure or more below-atmospheric pressure.

Electrical connections:

Contacts 1 - 2 break when pressure / differential pressure rises to the preset value.

Simultaneously, contacts 1 - 3 close and can be used as signal contact.

Connection **APS**



Setting potentiometer (internal setting)

Connecting terminals secured against turning

Conversion table for pressure values:

Unit =	bar	mbar	Pa	kPa	mH_2O
1 Pa	0.00001 bar	0.01 mbar	1 Pa	0.001 kPa	0.000101971 mH_2O
1 kPa	0.01 bar	10 mbar	1000 Pa	1 kPa	0.101971 mH_2O
1 bar	1 bar	1000 mbar	100000 Pa	100 kPa	10.1971 mH_2O
1 mbar	0.001 bar	1 mbar	100 Pa	0.1 kPa	0.0101971 mH_2O
1 mH_2O	0.0980665 bar	98.0665 mbar	9806.65 Pa	9.80665 kPa	1 mH_2O