Absolutely unique: measuring air gaps more accurately than ever before

Flow sensors / flow meters

Output of the air gap as an absolute value with repeat accuracy in the micrometre range

Accurate values at all times thanks to the pressure-compensated measuring principle

All important information including gap value, flow and pressure at a glance

The self-cleaning measuring channel even withstands the purge air pressure

Easy teaching of target status with just one click

IO-Link

Broad measurement dynamics

IP 65 IP 67

TEACH-IN

Display

4...20 mA
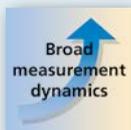
### Permanently accurate position monitoring

The SDP air gap sensor detects the distance between the surface and object with consistent high accuracy and outputs it as an absolute value. The sensor reliably detects even a flat position on the surface, the so-called zero gap. Since the gap is calculated on the basis of pressure and flow, the measurement remains accurate at all times within the usual operating pressure range between 1 and 3 bars, regardless of pressure fluctuations, number and diameter of the nozzles.

High pressure rating with self-cleaning effect

The robust measuring pipe also withstands the purge air pressure. This eliminates the need to switch between flushing and measuring. Positive effect: the measuring element is also cleaned and malfunctions due to contamination are prevented.

Type	Medium	Measuring range [µm]	Process connection	Order no.
	Compressed air	0…400	G1/4 (DN8)	**SDP110**
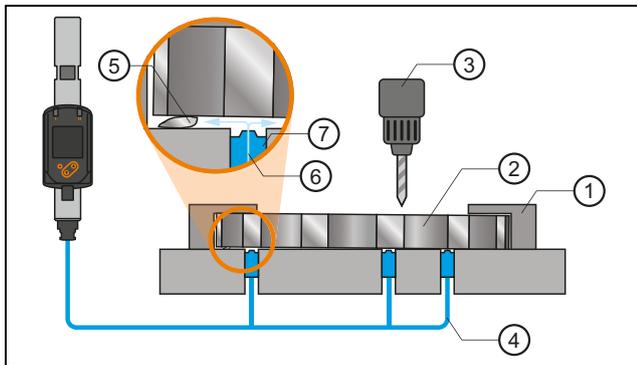
1) Clamping jaw
2) Toothed wheel
3) Drill
4) Compressed air line
5) Cutting chip
6) Air
7) Air nozzle

When smallest tolerances are required.

Air gap measurement can be used to ensure the exact positioning of a workpiece or a tool. Since the SDP is capable to reliably detect even the smallest deviations of the actual position from the target position, it is suitable for use wherever smallest tolerances must be guaranteed.

Quick set-up.

The air gap sensor can be taught to detect the target state both via the buttons and via the external input, or with just one click via IO-Link.

The set-up time of the system can therefore be greatly reduced during a production changeover.

Further technical data		
Distance measurement		
Measuring range	[µm]	0…400
Accuracy		± (5 % MW + 5 µm); (pressure 1…3 bars)
Repeatability		± (3 % MW + 2 µm); (pressure 1…6 bars)
Resolution	[µm]	1
Flow measurement		
Measuring range	[l/min]	0,8…100
Accuracy	[%]	± (2.0 MW + 1.0 MEW)
Repeatability	[%]	± (0.8 MW + 0.4 MEW)
Pressure		
Measuring range	[bar]	-1…16
Linearity error	[%]	< ± 0.5 (BFSL)
Repeatability	[%]	± 0.2
Response time	[s]	0.05
Response time		Switching output, analogue output, IO-Link (configurable)
Input signal		Distance teach input

MW = value of the measuring range
MEW = final value of the measuring range

ifm – close to you!