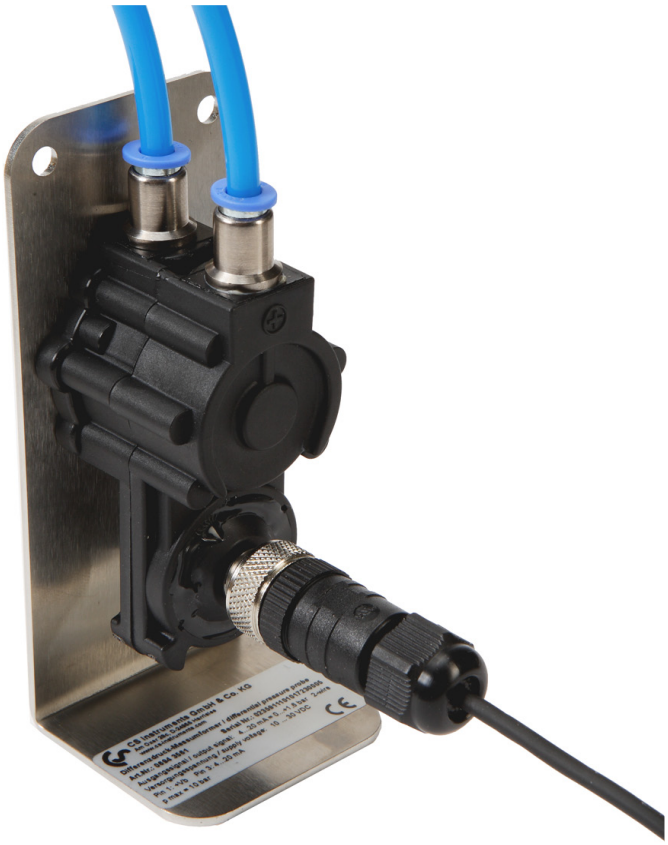
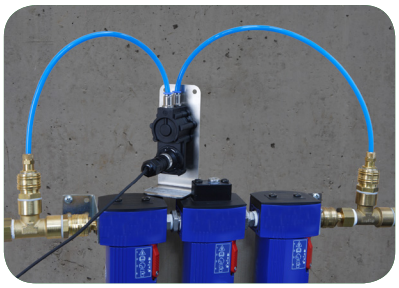
Affordable differential pressure sensor for testing filter performance.

The filter effectiveness is guaranteed by measuring the differential pressure across the filter element (an indication of how much the filter element is soiled). The sensor has a compact design with mounting bracket and sensor socket combined in one.





Typical operation of the differential pressure sensor: Connection with two PE hoses before and after the filter element.

Technical data:

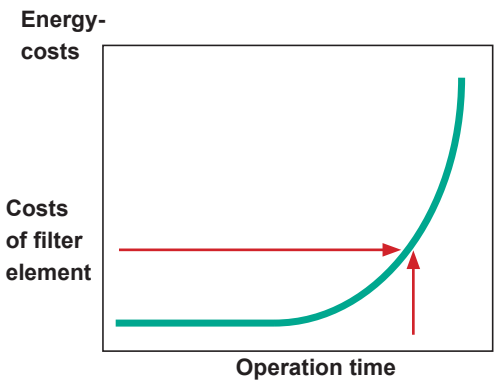
Meas. range	0 ... 1.6 bar differential pressure
Max. system pressure	10 bar
Max. overload capability two-way	15 bar
Max. overload capability one-way + page - page	 15 bar 10 bar
Bursting pressure	60 bar
Total error	2.0 % of full scale
Output	4 ... 20 mA two-wire
Power supply	DC 10 ... 30 Vat output 4 ... 20 mA
Operating temperature ambient	-20 ... +80 °C
Process connections	2× G 1/8 inner thread including plug-in coupling for 6-mm hose
Electrical connection	Round plug M12 × 1

Advantages at hand:

- Pressure drops (loss in energy) kept at a minimum
- Filter elements are being exchanged according to the differential pressure specifications of the manufacturer and not by a measure of time (activated carbon filter excluded). This ensures maximum performance of the filter element at all times.

Description	Order No.
Differential Pressure Sensor 1.6 bar diff	**0694 3561**
Connection cable for sensors 5 m with open ends	0553 0108
Connection cable for sensors 10 m with open ends	0553 0109
Connection cable for pressure, temperature or external sensors on mobile instruments, ODU / open ends, 5 m	0553 0501
Connection cable for pressure, temperature, or external sensors on mobile instruments, ODU / open ends, 10 m	0553 0502

The longer a filter element is in use the dirtier it gets, hence, increasing the differential pressure. This has a direct impact on its performance and the energy loss – see diagram below.



0.7 bar = 200 % element costs
0.6 bar = 170 % element costs
0.5 bar = 145 % element costs
0.4 bar = 115 % element costs
0.3 bar = 85 % element costs
0.2 bar = 60 % element costs
0.1 bar = 25 % element costs

Diagram: Typical differential pressure process, energy costs in relation to filter element

PI 500 Set for mobile measurement

1 PI 500 portable measuring instrument with integrated data logger	0560 0511
2 Differential Pressure Sensor 1.6 bar diff	0694 3561
3 Connection cable for pressure, temperature or external sensors on mobile instruments, ODU / open ends, 5 m	0553 0501

DS 52 Set for stationary measurement

1 DS 52 LED display in wall housing	0500 0009
2 Differential Pressure Sensor 1.6 bar diff	0694 3561
3 Connection cable for sensors 5 m with open ends	0553 0108