

New Products

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weFlux²micro with M5 Thread: The Smallest Pressure Sensor for High Performance

Confined mounting spaces and compact system structures are a major challenge for the pressure measurement of liquids and gases. Thanks to its small diameter of just 14 mm, the new weFlux²micro pressure sensor enables measurements at previously inaccessible locations for the first time. Pressure ranges between -1 and $+25$ bar can therefore be installed for the first time in hydraulic clamping systems, tight lubrication bearings or compact 3D printers. A look at the details reveals why minimum size and maximum performance go together perfectly here.

Several factors contribute to the fact that the weFlux²micro is smaller than an AA battery: Not only the small diameter of only 14 mm, but also the small process connection with M5 thread saves space. The miniature pressure sensor is also just 22 mm high, making it perfect for extremely tight systems. Thanks to its low weight of only 13 g, it can even be mounted on robot arms and moving system parts. And it doesn't even have to compromise on performance: "System designers and engineers have long needed to monitor pressure in hard-to-reach places. Now there is a high-performance sensor product that also meets these requirements," explains wenglor project manager Lars Rieken. "The weFlux²micro fills this gap: It is small, light and powerful at the same time."

Robust Housing for High Performance

With a response time of less than one millisecond and a measurement error of less than 0.5%, the sensor is very fast and very precise. The robust stainless steel 316L housing is ideal for harsh industries. Thanks to the high IP68 degree of protection, the sensor is resistant to aggressive cleaning agents and chemicals. Thanks to the analog output signal (4 to 20 mA), the sensor can be ideally integrated into existing systems. Positive-locking segmented cable compression provides additional protection in the event of mechanical tensile and rotational loads.

New Fields of Application Thanks to the Small Installation Size

The miniature format of the weFlux²micro is ideal for monitoring pressure cylinders in hydraulic or pneumatic clamping systems. Any pressure changes in the interior must be detected with great accuracy. "There is practically no space in these clamping systems for machine tools. Nevertheless, our integrated sensor ensures precise measurement in the medium," says Rieken. "Due to its low dead weight, these systems can also be mounted on robot arms – another plus." The size advantage also comes into its own in lubrication systems for ball bearings, gears, chains or linear guides. There, the sensor records the values required for correctly monitoring the lubrication quantity. And also in enclosed systems such as 3D printers or welding and milling systems, the small sensor enables precise monitoring of extraction devices or vacuum chambers.

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The Highlights at a Glance

- Small diameter of just 14 mm
- Low weight of just 13 g
- Pressure range from –1 to +25 bar
- Process connection with M5 thread
- IP68 degree of protection thanks to stainless steel 316L housing
- Response time <1 ms
- Measuring error of $\leq 0.5\%$
- Analog output signal 4 to 20 mA
- Positive-locking segmented cable compression

Control

Approximately 2,906 characters

Text: Fabian Repetz, wenglor

Image: wenglor

Captions

Maximum performance in narrow space: Thanks to its small diameter of only 14 mm, the new Pressure Sensor weFlux²micro can perfectly be integrated into machines with tight spaces.

About wenglor sensoric GmbH

wenglor develops innovative automation technologies, such as sensors, security and 2D/3D camera systems with state-of-the-art communication standards for the global market. Founded as a two-man business in 1983, the family company has since evolved into one of the most important international sensor suppliers with more than 950 employees around the world. The company with headquarters on Lake Constance in Tettnang, Germany, meets industrial automation challenges for customers in all industry sectors – from automotive manufacturing to the packaging industry. More than 55,000 customers from 45 countries all over the world are already placing their faith in wenglor's innovative products.