

Designed for special demands: Yours.

The new generation of 80 GHz radar sensors – Micropilot

Your benefits at a glance

Simplicity

- Intuitive operation via Bluetooth® connectivity or a control system with a digital communication interface
- Wizards simplify commissioning significantly
- Easier troubleshooting as recommended measures are shown on the display
- The HistoROM mobile data unit ensures the safe and easy transmission of parameters when the electronics are replaced

Smart safety

- Wizards guide you through SIL locking and proof testing, thus keeping systematic errors to a minimum
- Safety by design: Devices developed in accordance with IEC 61508
- A checksum (CRC) ensures that safety parameters are not changed inadvertently
- A change in the backlighting from green to red highlights errors immediately

Increased productivity

- Maximum measurement performance, even in challenging applications, thanks to a new 80 GHz radar chip developed in-house
- Process monitoring, device verification and diagnostics during operation thanks to Heartbeat Technology
- Easy device integration into asset management systems due to digital communication



In the development of the new generation of 80 GHz radar measuring instruments, one thing was paramount: the customer's requirements. Regardless of whether the measuring point is difficult to access, requires a SIL-certified measuring device or is surrounded by particularly high or low process temperatures, the right solution is always available with the new generation Micropilot FMR60B, FMR62B, FMR63B, FMR66B and FMR67B.

An innovative radar chip coupled with Heartbeat Technology combine precision and customer benefits. In the primary industry, ease of use is an important factor. In the chemical industry and in the oil and gas industry, the main focus is on maximum safety and plant availability. One thing that matters equally in all of these industries and in the food and life sciences industry is the need to continuously increase in efficiency.

Simplicity

The user interface is intuitive to operate. It can be accessed via the SmartBlue app and a mobile terminal or in a control room. Due to its ease of use and the availability of wizards to guide you through commissioning, not much training is required to operate the device. Also, in the event of an error condition, the Micropilot immediately displays the cause and recommended remedial measures in accordance with NAMUR standards. This saves time and effort, as there is no need to search for manuals and decipher error codes. With the HistoROM mobile data memory, measuring point parameters are transferred to the new sensor without error when the electronics are replaced.

Smart safety

In the chemical or oil and gas industry, for example, high safety standards are an increasingly important factor. The availability of the plant cannot be compromised even if proof tests or maintenance work is necessary. Self-explanatory and efficient operating options prevent systematic errors during the configuration of device parameters. An extensive testing concept increases the level of safety of the plant, while also reducing the maintenance effort required. The new radar sensors offer guided operating sequences for commissioning, SIL locking and SIL proof testing. They guide the user through each step of the test procedure. Once the test is completed, a test protocol is created automatically, which can be accessed via the Endress+Hauser SmartBlue app, for example.

Another instrument designed to eliminate systematic errors is the automatically generated checksum (CRC). It is composed of all the safety-related parameters and noted in the test report. If a single parameter changes, the checksum changes. It is thus possible to see at a glance if a parameter has been changed. This speeds up inspection procedures significantly.

Another safety feature is the backlighting of the display, which changes from green to red in the event of an error. This means that malfunctions are immediately apparent from a distance of up to 10m (32ft).

Endress+Hauser draws on more than 20 years of experience in the development of devices according to SIL standards. The new product line has also been developed in accordance with IEC 61508. This means that these products can be used directly in SIL2 and SIL3 applications, with homogeneous redundancy for example.

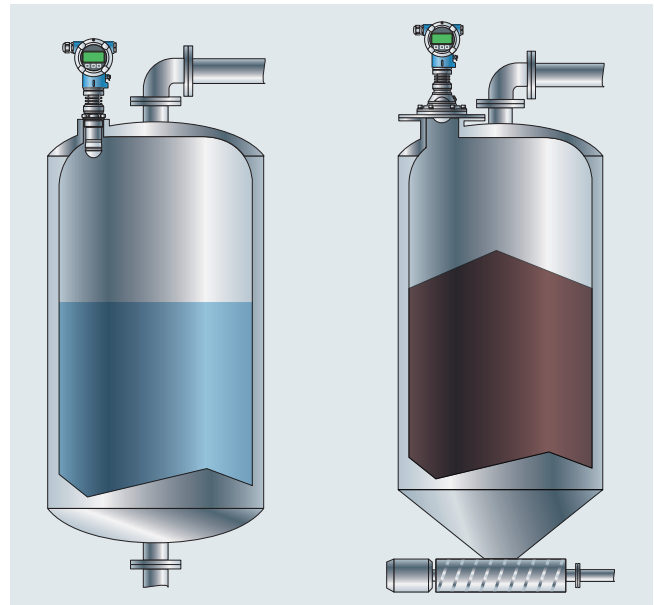
Typical applications

Level measurement in

- Media with particularly high or low temperatures
- Aggressive media
- Liquids with foam formation
- Solids with build-up
- Hygienic applications

Increased productivity

The new generation of the Micropilot provides data-based insights into the process and thus creates the scope for production processes to be optimized. Heartbeat Technology provides the user with transparency regarding the condition of their measuring devices and processes. Process monitoring is easily implemented by accessing real-time data via the SmartBlue app or through integration into an asset management system. In this way, irregularities such as foam formation or build-up for example, can be detected at an early stage. A verification report on the correct function of the measuring device can also be created in less than three minutes at any time, without interrupting the process. These monitoring functions facilitate decision-making with regard to targeted advance planning of predictive maintenance processes and plant inspections and reducing downtime. Digital communication reports, such as Profibus PA, HART as well as the new innovative Ethernet-APL communication, enable process diagnostics via asset management systems. Thanks to Ethernet-APL, the measuring device can also be integrated via the cloud, making it possible to perform monitoring and adjust process parameters remotely.



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Endress+Hauser 

People for Process Automation