

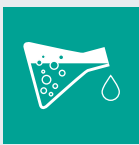
**Driving innovation.
Achieving flexibility.
Improving simplicity.**

Ultrasonic All Stainless Steel Sensor
UMB800



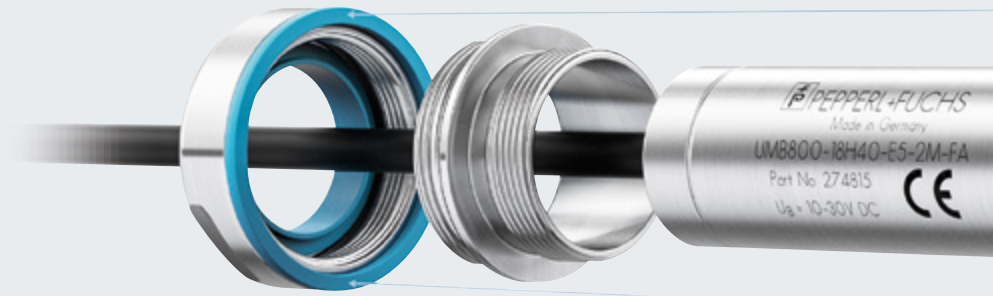
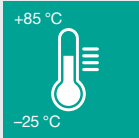
Your automation, our passion.

pf PEPPERL+FUCHS



EHEDG

IP68
IP69K



All Stainless Steel Ultrasonic Sensor: Innovation for Hygienic and Chemical Applications

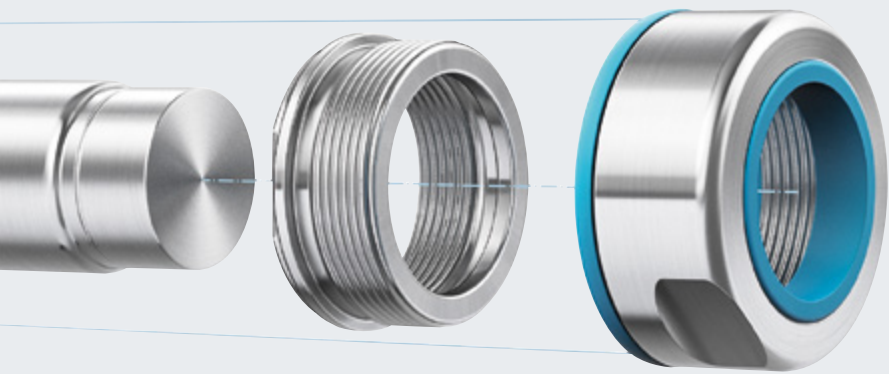
Excellent in extreme conditions – the UMB800 diffuse mode sensor convinces in terms of hygienic design and maximum robustness. The sensor is optimized for detection and measuring tasks in product contact zones in the food and beverage and pharmaceutical industries. In addition, the UMB800 offers high availability and durability in harsh machine environments of process plants.

Innovation from the Technology Leader in Ultrasonic Sensors

As technology leader in the field of industrial ultrasonic sensors, we are familiar with the requirements of the food, pharmaceutical, and chemical industries. The new UMB800 was specifically designed for use in these industries. The noncontact ultrasonic measurement principle is insensitive to environmental influences or contamination, regardless of object and surface properties. In addition to the most compact all stainless steel design in this class, the large operating distance and the robust, media-resistant design of UMB800 sets the new standard in this market segment.

Specially Designed for High Requirements

EHEDG and ECOLAB certificates confirm: The UMB800 meets the highest requirements for hygienic design and easy cleaning. All sensor parts are made of corrosion-resistant and FDA-compliant materials like stainless steel AISI 316L (1.4404). The sensor head and all other parts are laser-welded and hermetically sealed against the ingress of vapor and liquids. The gapless design ensures that cleaning media runs completely off the sensor and that no microbacterial contamination is left behind. The UMB800 ensures the highest product and process safety during the filling and packaging of food and medicine and in the chemical and process engineering industries.



Compact and Easy to Integrate

With a diameter of 18 mm and a length of just 55 mm, the extremely compact ultrasonic sensor is particularly easy to integrate into systems. The operating distance of 800 mm combined with a very small dead band allows the detection range of the sensor to be used to its maximum potential. The extended temperature range of $-25\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$ allows reliable detection and distance measurement even under difficult conditions.

EHEDG-Compliant, Tool-Free Mounting

Not only the UMB800 itself, but also the mounting fixture consisting of high-quality stainless steel and only FDA-compliant materials is specially designed to meet the stringent hygiene requirements of EHEDG. A tool for mounting the sensor is not required – thanks to the ingenious design of the mounting flange, which includes a swivel lock and an integrated silicone seal. A simple and clean solution.

Highlights:

- Ultracompact all stainless steel ultrasonic sensor AISI 316L (1.4404)
- EHEDG and ECOLAB certification
- Specifically designed for use in the food contact zones (hygienic design)
- Resistant against aggressive chemicals and detergents
- IP68/IP69K high-pressure washdown and steam-clean immunity



Augmented Reality – Experiencing Innovation

Want to see more? Please download our augmented reality app. Hold your smartphone or tablet over the picture above and you will learn more about the UMB800's unique mounting concept.



www.pepperl-fuchs.com/umb800-ar

Perfect Performance in the Product Contact Zone

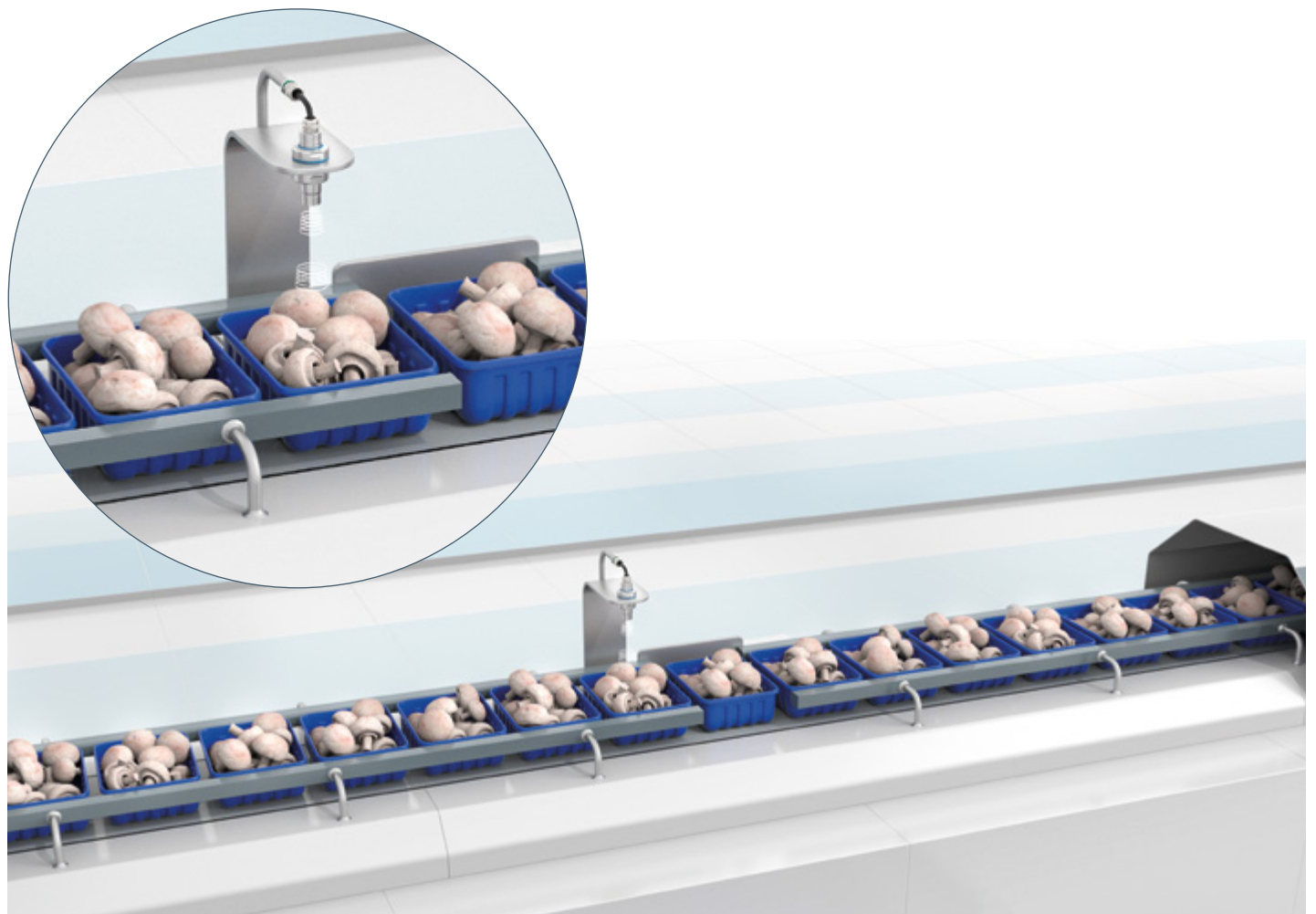
Sensors that come into contact with the product must meet specific requirements for their integration, robustness, and cleaning. The compact UMB800 can also be easily mounted inside containers. Its high chemical resistance ensures the highest reliability and enables residue-free cleaning. In addition, proven CIP and SIP processes can be maintained unchanged, both in food as well as in pharmaceutical manufacturing.

Reliably Detect and Safely Package Food Products

When food products are packaged using automated machinery, measures must be taken to ensure that the package is filled with the correct amount of product before the plastic thermoformed tray is sealed. The UMB800 reliably detects an object regardless of color, the surface, or the amount of moisture present in the product. The large detection range and precise measurement enable the UMB800 to reliably check packaging shells even with different filling levels.

Shorter Cleaning Cycles for Increased Availability

Combining the UMB800's resistance to aggressive chemical cleaning agents and its appropriate certifications makes the sensor particularly easy to integrate into existing systems. By using the hygienic design sensor, cleaning cycles can be significantly shortened. This enables maximum machine availability.



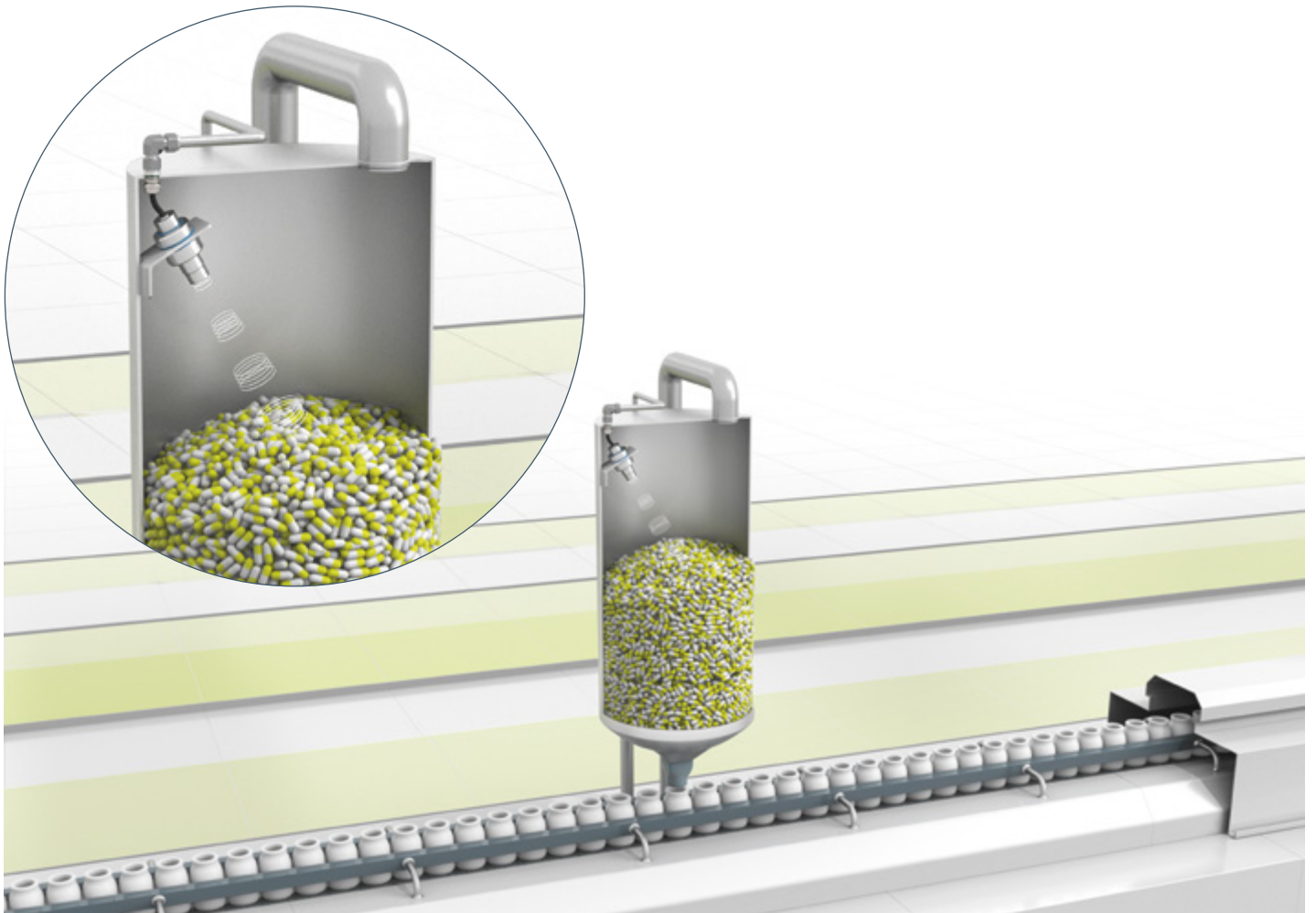
Food industry: Fill level check before sealing the shells

Process Safety when Dispensing Tablets, Capsules, and Granules

Before they are packed in blister packaging or poured into bottles, free-flowing pharmaceutical products are often temporarily stored in hoppers on the machine to ensure a constant supply in the packaging process. Being able to detect when the minimum fill quantity is reached is just as important as preventing a container from overflowing at the product supply area. The compact UMB800 detects and measures fill levels and limit levels directly in the hoppers.

Perfectly Adapted to GMP-Directed Pharmaceutical Production

Uncompromising cleanliness and hygiene after each cleaning cycle and at each batch change – the UMB800 is ideally suited for the thorough Good Manufacturing Practice employed in pharmaceutical production. Its gapless design prevents bacterial hot spots from developing. Cleaning media can run completely without residue. There is no risk of any substances adhering to the device – even when it is in continuous contact with medicines inside a hopper. IP69K degree of protection enables the device to be cleaned with water vapor and steam jets. Continuous high temperatures of up to +85 °C as well as low temperature conditions down to -25 °C do not affect the switching characteristics or service life of the sensor.



Pharmaceutical industry: Reliable fill level monitoring in a hopper

Extremely Robust – Even with the Most Aggressive Media

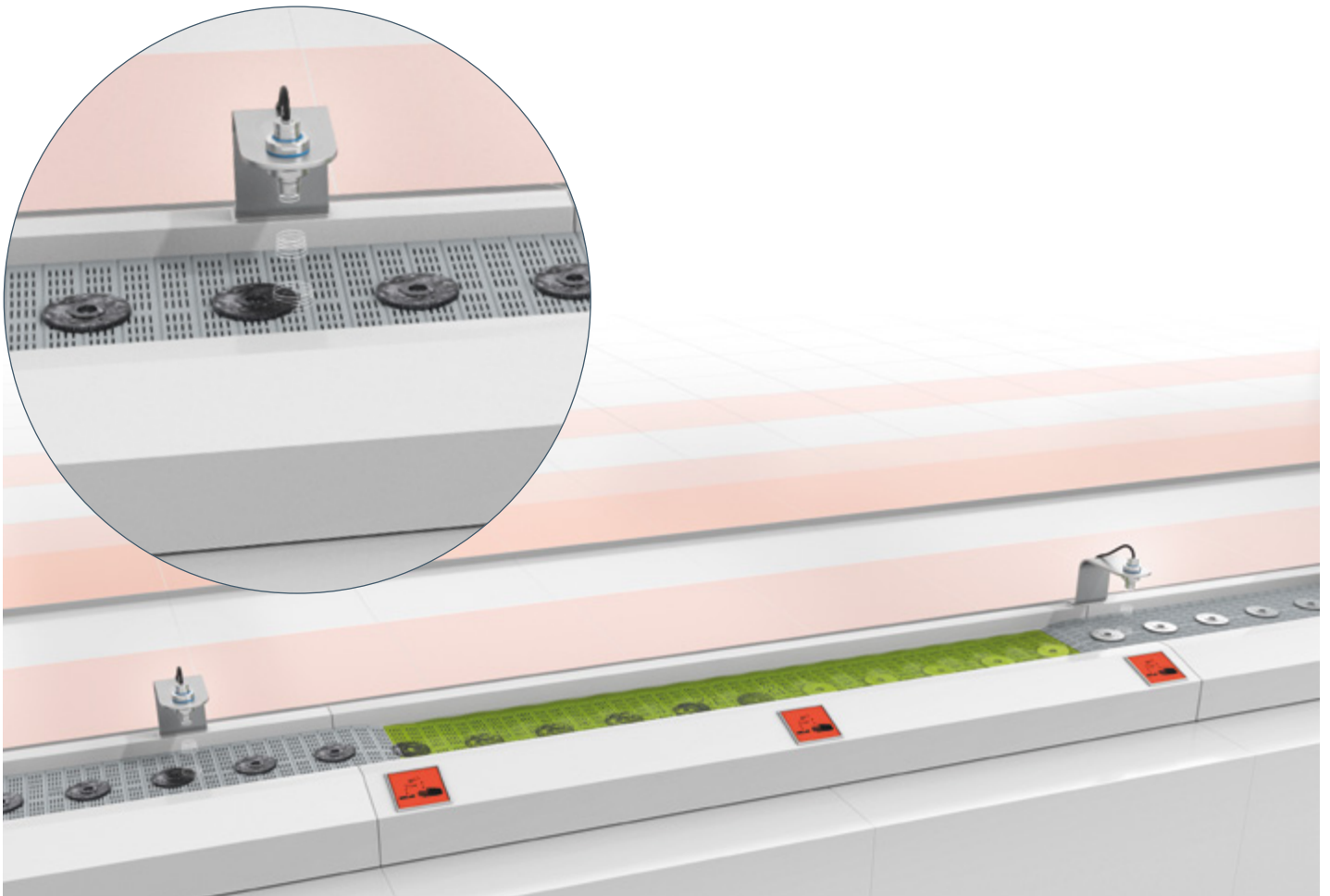
The most extreme conditions prevail in the chemical industry. Aggressive vapors, corrosive gas emissions, and moisture in the air place high demands on automation components. The UMB800 withstands all these harsh environments. Its particularly robust design ensures a long service life and maximum availability during these processes.

Presence Monitoring in Automated Coating Processes

Before metal parts can be coated or painted, processing residues containing oil and fat must be removed from the surface – a process that takes place in an acid immersion bath. The fill level of the bath has to be continuously monitored to ensure a safe cleaning process. A UMB800 with analog output detects the level in the immersion bath. Based on its precise measurements, the connected controller regulates the fill level in the dip tank accurately and continuously ensuring an uninterrupted degreasing process.

Presence Detection on a Conveyor Belt

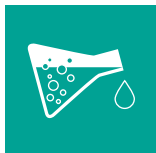
The feed of the immersion bath and the continuing transport of the cleaned parts are detected by two UMB800s with switching output. The detection is independent of the color, the material, and reflection properties of the parts. Since the operating distance can be adjusted very precisely, even with flat components, a reliable presence check is guaranteed. If a component is left behind, the process can be stopped immediately by the second UMB800. It detects the missing object and initiates the stop of the conveyor belt. A safe process flow is assured at all times.



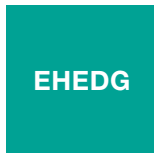
Galvanizing and painting processes: Presence detection of parts to be cleaned in an acid immersion bath

Highly Resistant and Perfect for Retrofitting

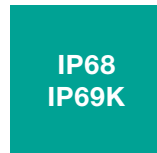
Regardless of whether it is used for level measurement or part detection, the UMB800 is – due to its hermetically sealed design – absolutely resistant to direct contact with chemically aggressive media. Also acid vapors or cleaners in hygiene applications cannot harm the sensor. With its compact design and the tool-free mounting flange, the sensor is also easy to integrate as part of a machine modification or retrofit.



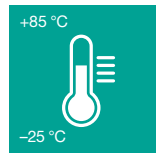
Chemically resistant



EHEDG certified



IP68/IP69K protection class



Extended temperature range



Maximum Resistance Ensures a Long Service Life

In addition to reliably detecting objects or measuring distances, the appropriate design and material selection of the sensors is equally important. The encapsulation and the particularly high quality of the stainless steel makes the UMB800 ultrasonic sensor ideally suited to the toughest applications with a long lifetime. Measuring the fill level and indicating the limit level in tanks and silos or detecting green tires in vulcanizing hot presses are just some of the many potential capabilities. By combining powerful features, the UMB800 offers maximum flexibility and reliability for a variety of applications.

Additional information is available at www.pepperl-fuchs.com/umb800



Technical Information

Operating distance	70 ... 800 mm
Dead band	0 ... 70 mm
Housing design	18 mm diameter, 55 mm length
Degree of protection	IP68/IP69K
Operating temperature	-25 °C ... +85 °C
Housing material	AISI 316L (1.4404) stainless steel
Output types	1 switching output (NPN or PNP) 1 analog output (4 ... 20 mA or 0 ... 10 V)
Certificates	EHEDG, ECOLAB
Order code	UMB800

Your automation, our passion.

Explosion Protection

- Intrinsically Safe Barriers
- Signal Conditioners
- Fieldbus Infrastructure
- Remote I/O Systems
- HART Interface Solutions
- Wireless Solutions
- Level Measurement
- Purge and Pressurization Systems
- Industrial Monitors and HMI Solutions
- Electrical Explosion Protection Equipment
- Solutions for Explosion Protection

Industrial Sensors

- Proximity Sensors
- Photoelectric Sensors
- Industrial Vision
- Ultrasonic Sensors
- Rotary Encoders
- Positioning Systems
- Inclination and Acceleration Sensors
- AS-Interface
- Identification Systems
- Logic Control Units