Ultrasonic Sensor

Series UC18GS with IO-Link

Your automation, our passion.

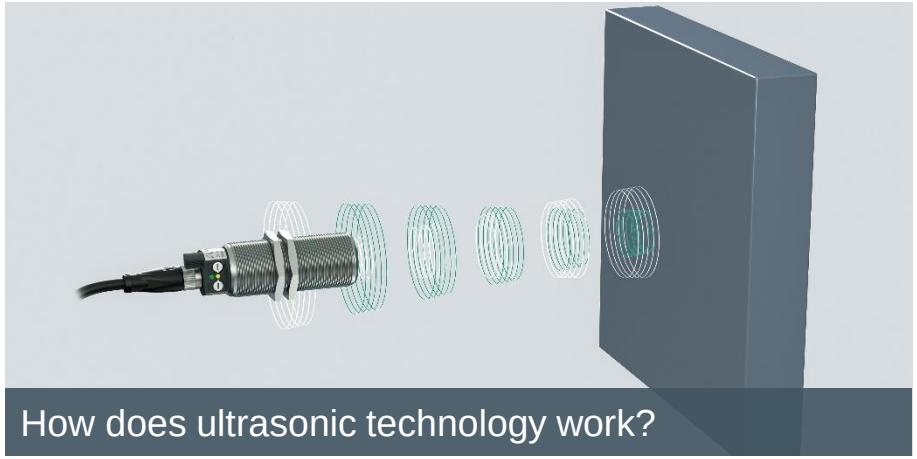
PEPPERL+FUCHS

Series UC18GS with IO-Link

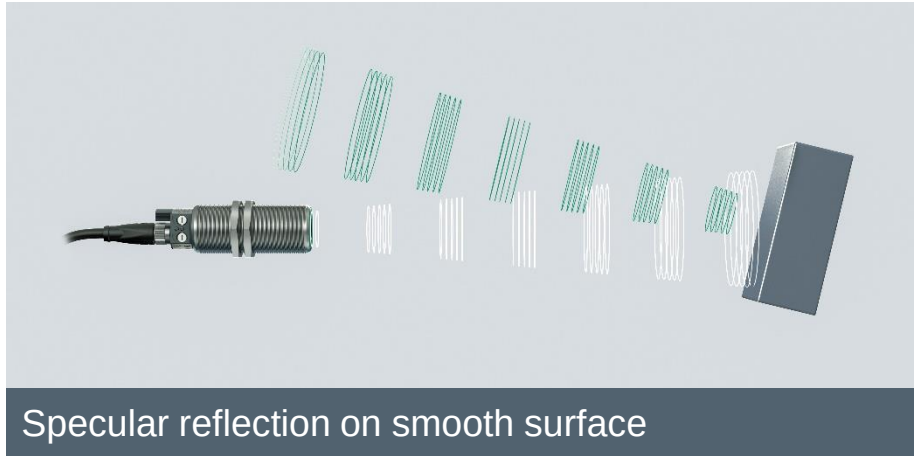
State-of-the-Art Ultrasonic Sensors

Series UC18GS with IO-Link

Ultrasonic Technology in General



How does ultrasonic technology work?

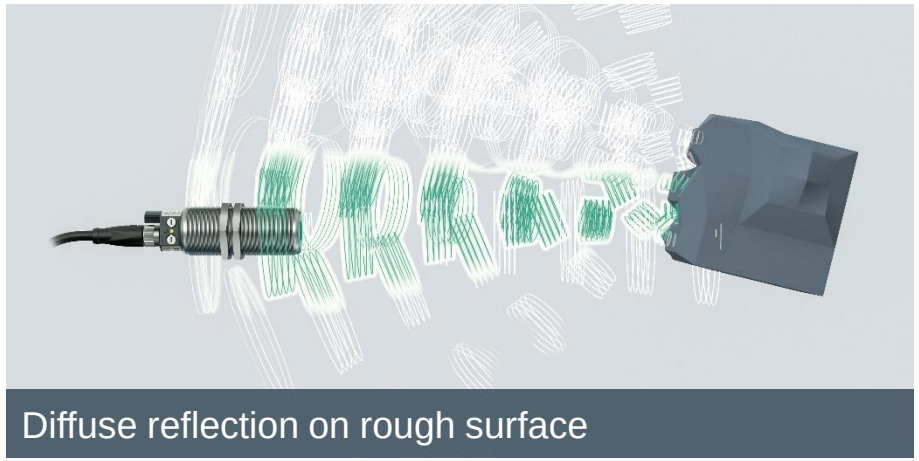


Specular reflection on smooth surface

s = (t*c)/2

c = 344 m/s

(speed of sound in air at room temperature)



Diffuse reflection on rough surface

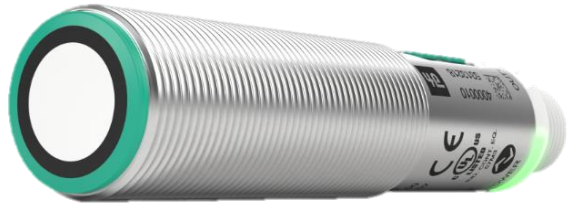
Series UC18GS with IO-Link

State-of-the-Art Ultrasonic Sensors

The new ultrasonic sensor series from Pepperl+Fuchs combines the advantages of ultrasonic technology with powerful features to create a sensor solution that meets virtually any application challenge.

Use the possibilities that technology offers today to optimize your application solution:

- ✓ Adjustable sound beam width
- ✓ Interference target suppression
- ✓ Automatic synchronization
- ✓ High noise immunity
- ✓ Small dead bands
- ✓ Temperature compensation
- ✓ IO-Link Smart Sensor Profile 2
- ✓ Programming via push buttons, IrDA or IO-Link interface (with DTM for PACTware)
- ✓ Different output options



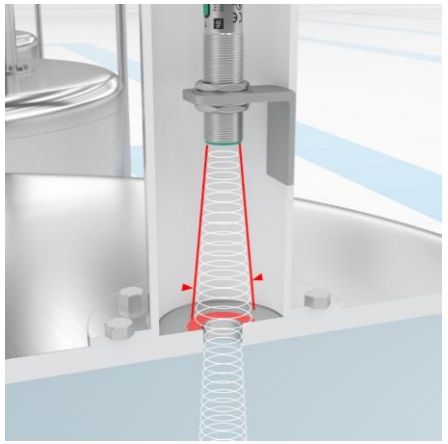
Series UC18GS with IO-Link

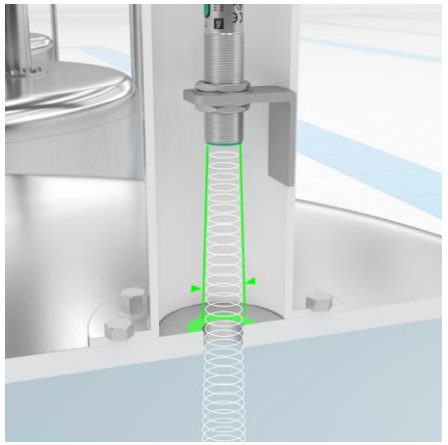
Features in Detail

Adjustable sound beam width

The small dead band and the adjustable sound beam width allow fault-free operation in a wide variety of possible applications.

The sound beam can be adjusted without loss of range. If objects are causing interference—like the interior of a container or other machine parts—the sound signal can be narrowed.





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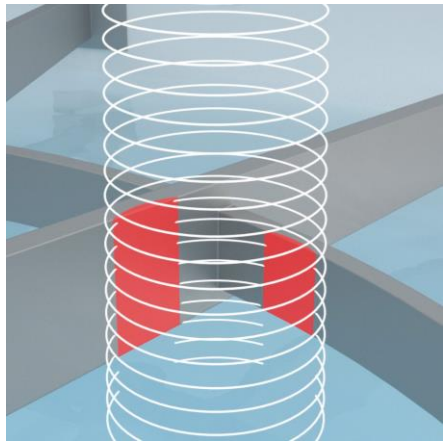
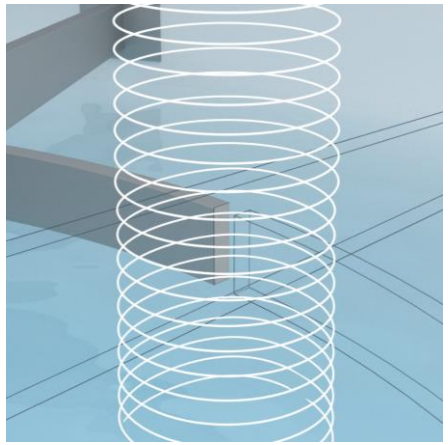
Features in Detail

Interference target suppression

Possibly occurring interference echoes from machine parts can be easily suppressed via software without affecting the measurement.

Target distances (e.g. liquid levels) are precisely being detected even in the suppressed range.





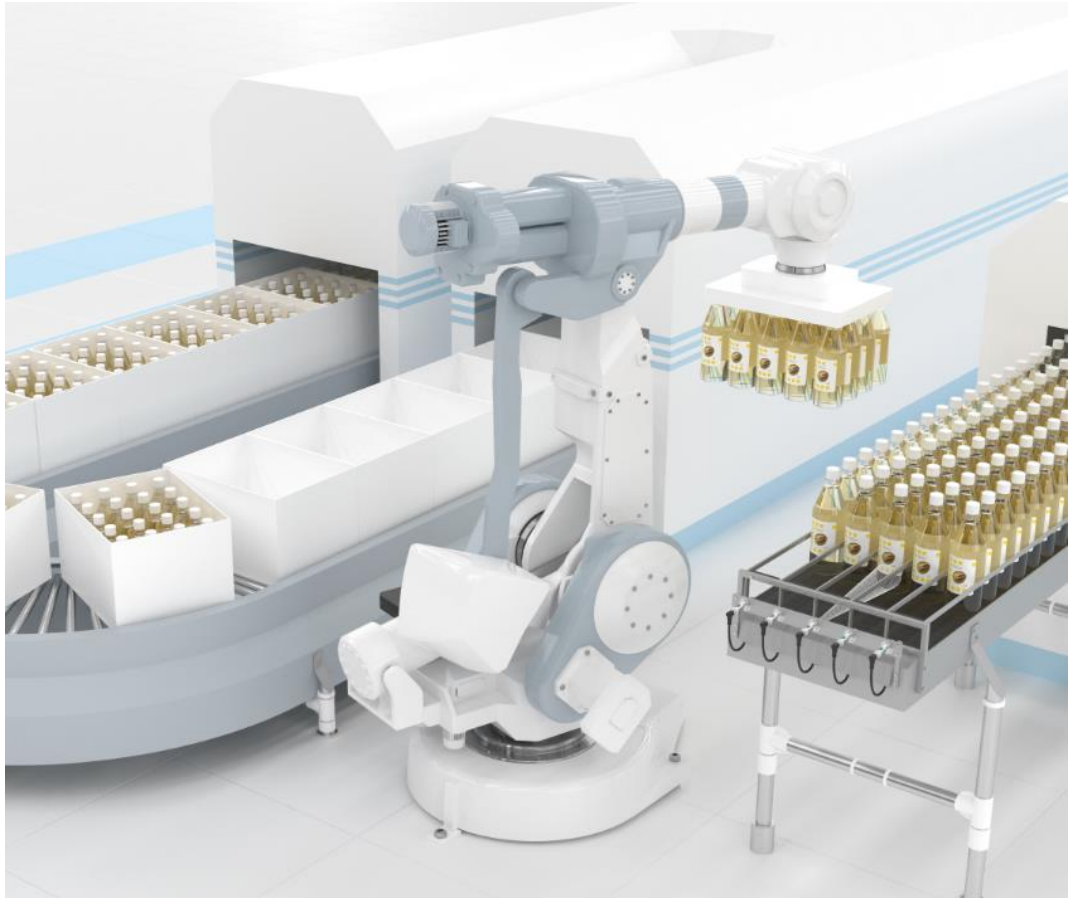
Series UC18GS with IO-Link

Features in Detail

Automatic synchronization

When using several sensors in tight spaces, they can interfere with each other. To correct this the series offers different synchronization modes: common, multiplex or externally triggered mode.

Up to 10 sensors can be connected to each other via their synchronization input.



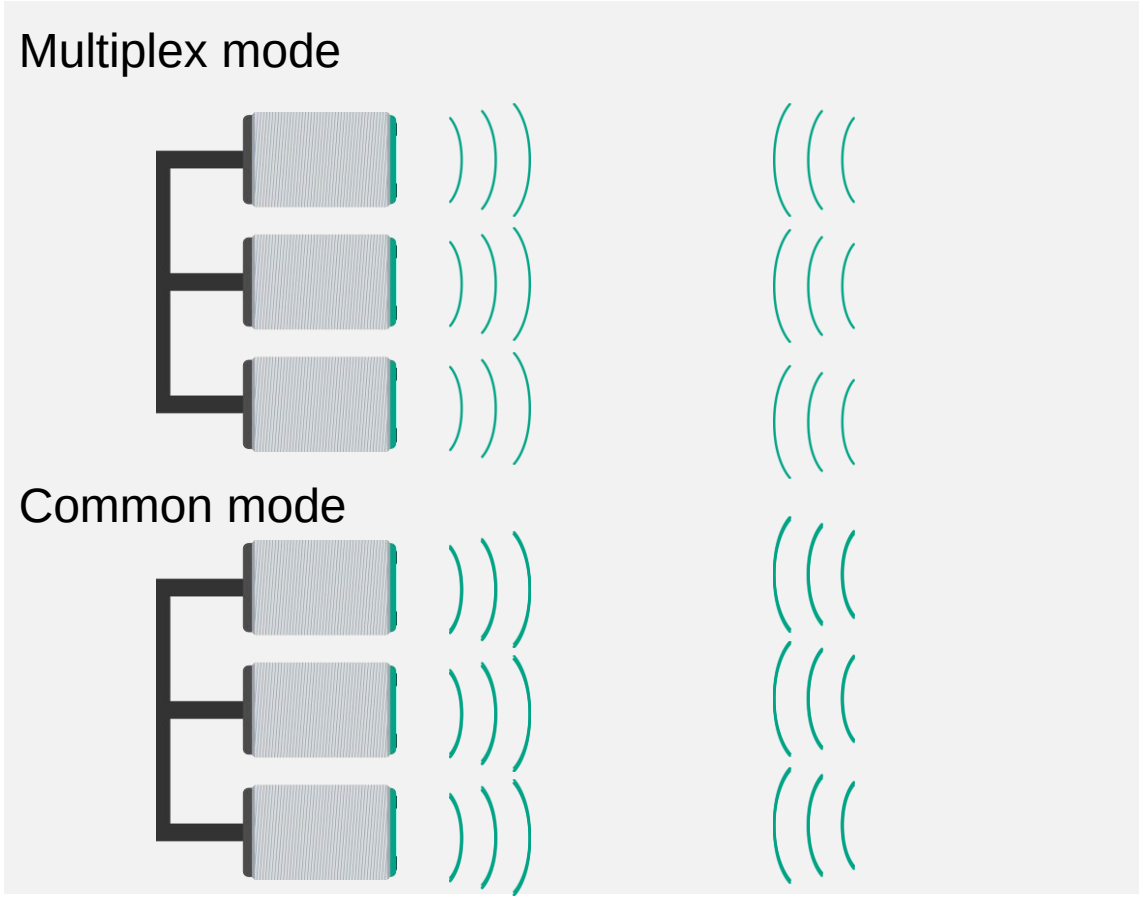
Series UC18GS with IO-Link

Features in Detail

Automatic synchronization

The sensors are synchronized automatically and without parameterization.

In common mode, all sensors transmit at the same time and analyze all received echoes.
When synchronized in multiplex mode, the sensors send signals alternately and analyze their own echo.



Series UC18GS with IO-Link

Features in Detail

Flexible commissioning

Convenient programming and parameterization via push buttons, infrared interface (IrDA) or IO-Link allow highest flexibility during commissioning.

Set the output configuration or the sound beam width easily via **push buttons** on the sensor.

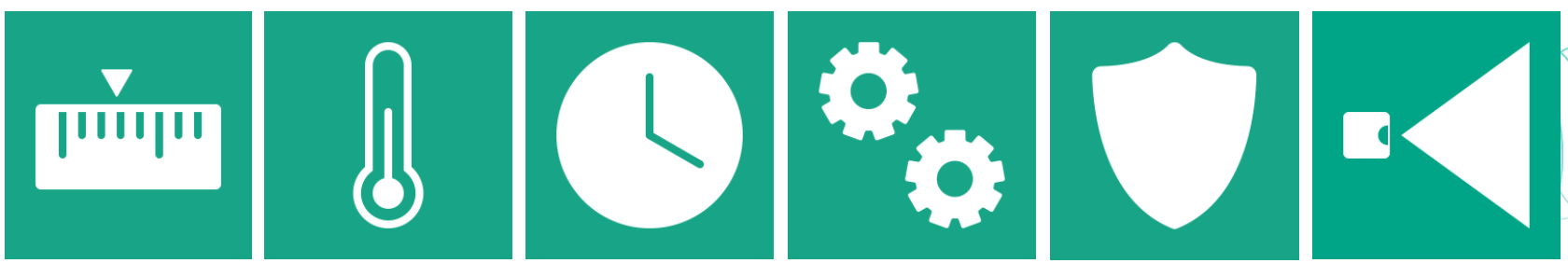
IrDA infrared interface allows direct access to sensor data during running IO-Link operation – ideal for analysis and maintenance purposes without affecting the IO-Link application.

Series UC18GS with IO-Link

Features in Detail

Flexible commissioning

IO-Link allows for convenient configuration and enables process and service data to be transmitted.



Distance measurement

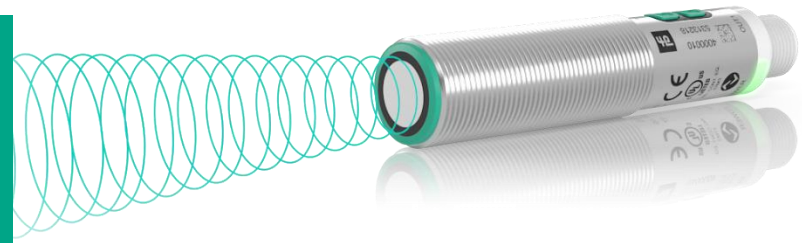
Temperature

Operating time

Config-uration

Interference suppression

Sound beam width



Series UC18GS with IO-Link

Excerpt of Technical Data

Extract Technical Data		
Model number	**UC500-18GS-2EP-IO-V15** **UC500-18GS-IUEP-IO-V15**	**UC1000-18GS-2EP-IO-V15** **UC1000-18GS-IUEP-IO-V15**
Sensing range	30 … 500 mm	70 … 1000 mm
Interface 1	IO-Link 1.1	
Interface 2	IrDA (Infrared-Interface)	
Outputs	2x push-pull switching output; or 1x push-pull switching output and 1x analog output (current/voltage)	
Temperature range	-25 ... +70 °C	
Connectors	Connector plug M12 x 1, 5-pin	
Degree of protection	IP 67	

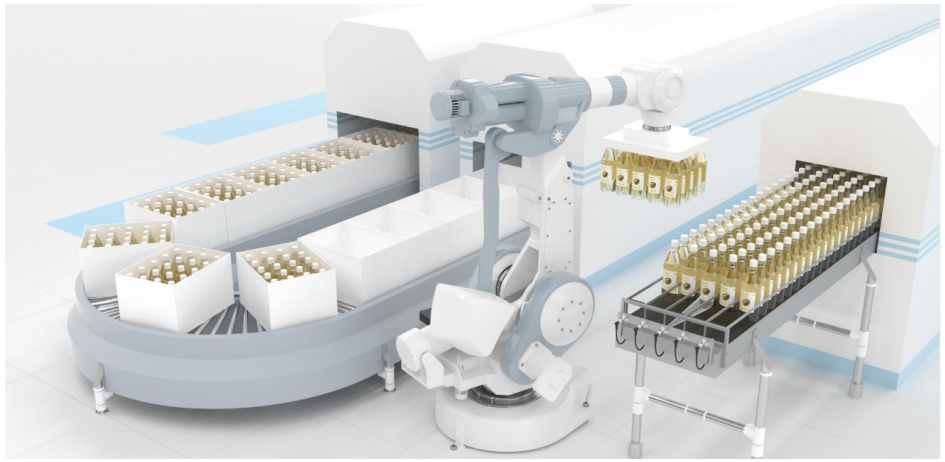
Series UC18GS with IO-Link

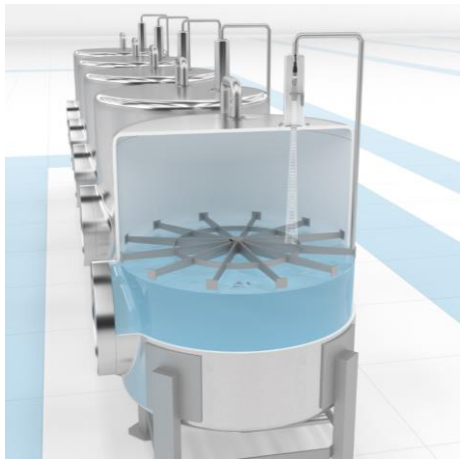
Portfolio and Availability

Part Number	Name	Description	Availability
304928-100000	UC500-18GS-2EP-IO-V15	Ultrasonic sensor	Available
304928-100001	UC500-18GS-IUEP-IO-V15	Ultrasonic sensor	Available
304928-100002	UC1000-18GS-2EP-IO-V15	Ultrasonic sensor	Available
304928-100003	UC1000-18GS-IUEP-IO-V15	Ultrasonic sensor	Available

Series UC18GS with IO-Link

Applications





Main Accessories and Peripherals

Article Number	Name	Description
274846	UC-PROG-IR-USB	Interface cable for parameterization of sensors with IrDA interface
304074	IO-Link-Master02-USB	IO-Link master, supply via USB port or separate power supply, LED indicators, M12 plug for sensor connection
114700	V1-G-2M-PVC-V1-G	Connecting cable, M12 to M12, PVC cable 4-pin

Series UC18GS with IO-Link

Highlights at a Glance

Using Technology to Its Full Potential – UC18GS Series Ultrasonic Sensor

- Versatility: Broad range of applications solved in one compact sensor
- Reliable processes: Interference target suppression for consistent measurement values
- Individual modification: Adjustable sound beam for rapid adaption to the application–without losing range
- Fault-free operation: Automatic sensor synchronization when using several sensors in tight spaces
- Flexible commissioning: convenient programming and parameterization via push buttons, IrDA interface or IO-Link (DMT/Pactware)
- Future-proof automation: IO-Link for seamless integration into I4.0 applications

Series UC18GS with IO-Link

Highlights at a Glance

More information is available online.

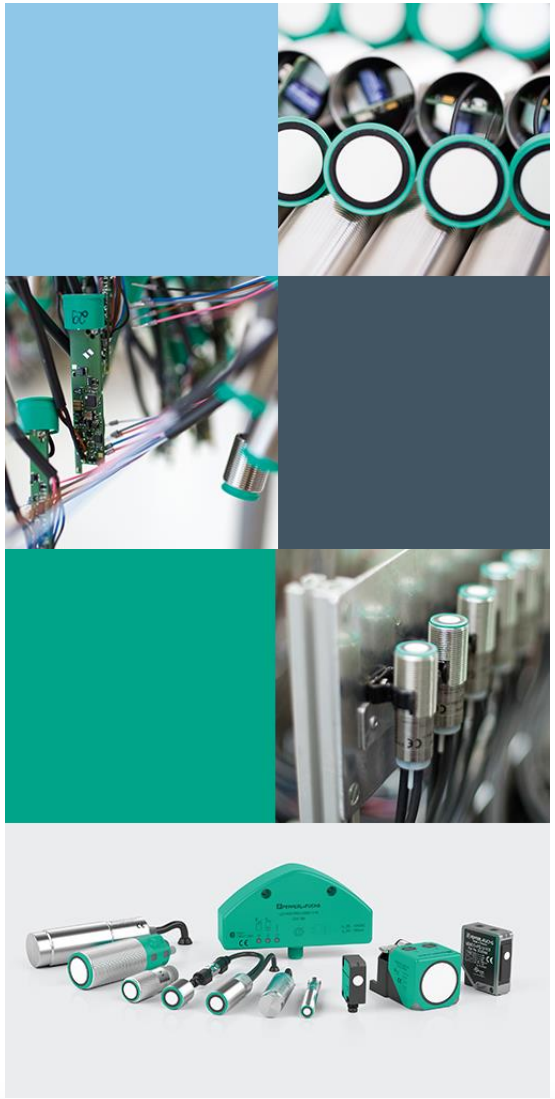
Take a look at the features, benefits and applications of the new series.

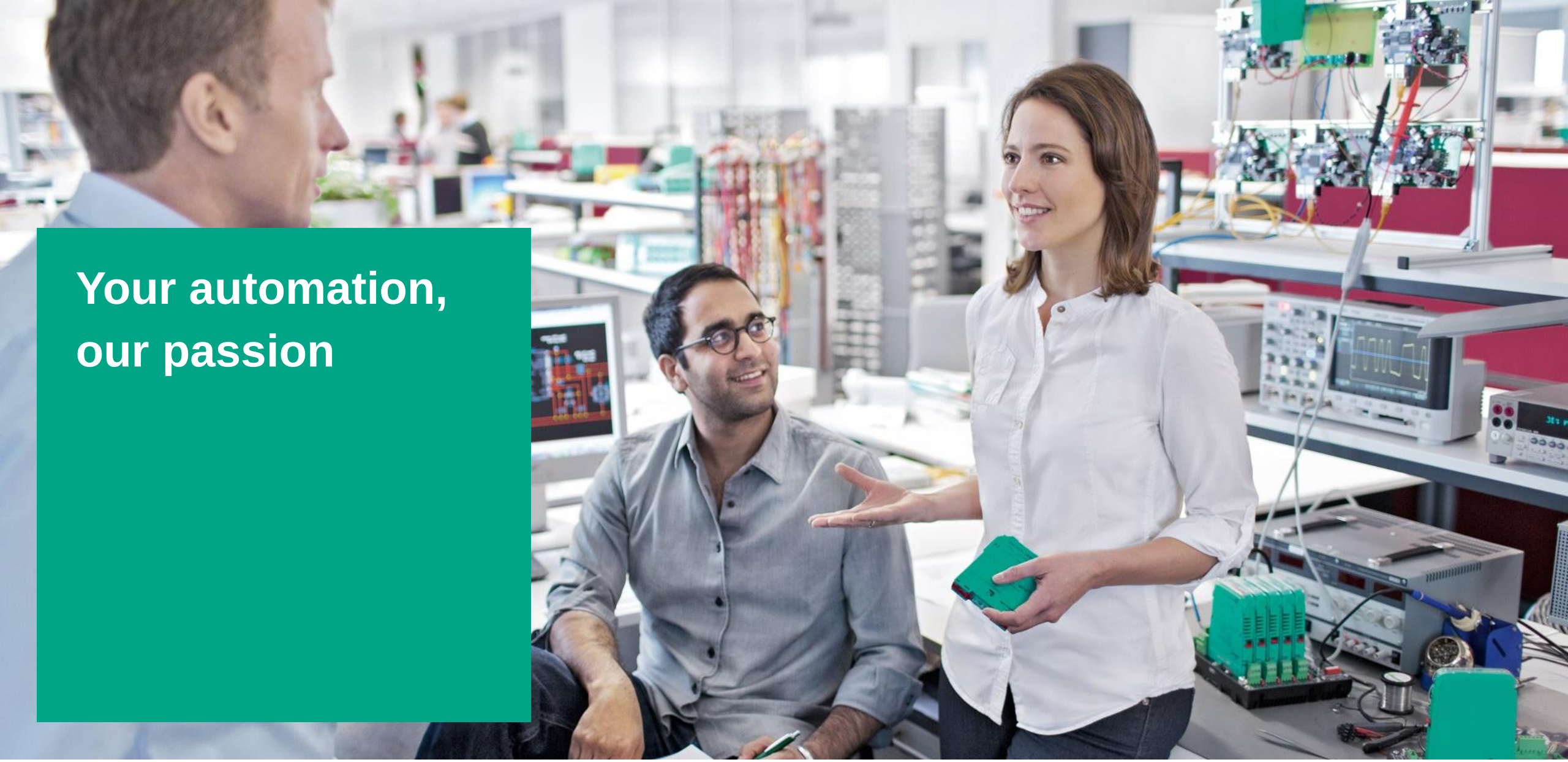
www.pepperl-fuchs.com/px-UC18GS

Ultrasonic Sensors from Pepperl+Fuchs

In-House Quality That You Can Rely On

- Ultrasonic sensors from Pepperl+Fuchs are built in our **own technology center**, where transducer development and manufacturing take place.
- For **more than 30 years**, our forward-thinking team of experts has been working continually to advance ultrasonic technology for the solutions of tomorrow.
- That means our customers always receive the highest performance products on the market.





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