New Products

Contact: Fabian Repetz
PR team leader, wenglor sensoric GmbH
Tel.: +49 (0) 7542 5399-718
e-mail: fabian.repetz@wenglor.com

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Performance in a New Combination:
The U1RT Ultrasonic Distance Sensor Combines NFC and IO-Link in a Standard Housing

Low installation depth and easy integration of the sensor via an M18 thread or the drill holes on the housing – the advantages of the established R format have been appreciated for years in the field of photoelectronic sensors. Wenglor's ultrasonic distance sensors from the new U1RT series combine this format with the tried-and-tested ultrasonic technology of the U1KT and UMD product series, thus setting new standards in terms of range and integration options. Thanks to IO-Link 1.1 and NFC interface, the sensor offers flexible setting options and data storage.

Combining two successful products and installing these technologies in an established sensor housing design results in this new generation of U1RT ultrasonic reflex sensors. In through beam mode, it operates reliably up to 2,000 mm, in reflex operation up to 1,200 mm. In addition to the application range at temperatures between –30 and +60 °C, it is also possible to use the sensors in synchronous mode. Two independent switching outputs enable the measurement of minimum and maximum levels. All-round visible LED indicators and high IP67/IP68 degree of protection are just two of the many reasons why this format is so successful.

Flexibility and Smart Communication

The high flexibility in use is made possible not only by the low installation depth, but also by the availability of PNP and NPN variants. "But the new U1RT series sensors can do much more", explains wenglor product manager Maria Boos. "The integrated IO-Link 1.1 interface with COM3 standard enables fast and secure communication with controllers. Thanks to the Smart Sensor Profile, the product can be easily integrated into IO-Link in a standardized way and regularly sends status messages."

The integrated NFC interface even allows the sensors to be configured without power and wirelessly via the wenglorApp – which is ideal for applications with high quantities and saves a lot of time. Speaking of saving time: The sensor can be adjusted directly via the teach-in key with just a few buttons. Product manager Maria Boos is certain: "The long ranges combined with the tried-and-tested R format and smart integration options make the U1RT series a real all-rounder for the industry."

Versatile Portfolio for Every Application

In addition to extremely compact formats such as the U1KT housing (32 x 16 x 12 mm) and the R format (56.5 x 26 x 24 mm), the ultrasonic sensors product category also includes the metric designs in M18 and M30 format (UMD and UMF) made of stainless steel as well as the cuboidal UMS sensors (81 x 55 x 30/47 mm) for large working distances of up to 6,000 mm and the special U1H format as a fork sensor. Almost any application can be achieved with a sensor in this category.

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Ultrasonic Technology

Ultrasonic sensors are ideal for contactless detection of transparent, glossy and dark objects, reflective surfaces and materials of all kinds – whether solid or liquid, rough or smooth, porous or translucent. Environmental conditions such as dust, steam, dirt or the influence of ambient light do not disturb them. “By emitting and receiving pulsed ultrasonic waves, the sensors, like bats, use the time it takes for the sound to be reflected by the object to determine its distance”, Boos continues. “Level measurement, stack height checks, checking slack in roller material or even checking for the presence of e.g. cans or PET bottles in automatic return machines are just a few applications that can be solved with this technology.”

The Highlights at a Glance

- Long range up to 1,200 mm in reflex mode
- Long range up to 2,000 mm in through beam mode
- Two independent switching outputs with programmable error output
- Compact R format (56.5 x 26 x 24 mm)
- IO-Link 1.1 interface with COM3 standard
- NFC interface
- Reflex, through beam or synchronous mode possible
- PNP/NPN variants
- Temperature range –30 °C to +60 °C
- IP67/IP68 degree of protection

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Captions

True all-rounders in proven format: The new ultrasonic reflex sensors in R format.

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 60,000 customers from 45 countries all over the world are already placing their faith in wenglor’s innovative products.