Ultrasonic sensors target difficult applications

Balluff's new ultrasonic sensors are suited for distance measurement or position detection of granules, fluids and powders. They measure fill levels, heights and sag without making contact as well as count and monitor the presence of objects. They are asserted to be extremely versatile, operate independently of color and surface finish, and are not affected by transparent objects that generate strong reflections. According to the company, they are not affected by dust, dirt and steam, making them suitable for critical applications. Balluff ultrasonic sensors are available in a variety of form factors and output types. With detection ranges that extend from 20 mm to 8 m, their high resolution and small blind zones ensure extreme precision. Each ultrasonic series is available as a switching or analog version. All analog versions are available with voltage or current output (0...10 V or 4...20 mA). The M30 version includes variants with two switching outputs (one switching and one analog output, or two switching outputs and one analog output) so that one sensor can adopt the function of a second sensor.

Because the distance to the object is determined via a sound transit time, ultrasonic sensors have excellent background suppression. With their transit time measurement, ultrasonic sensors can record the measured value with highly-precise resolution (some sensors to even 0.025 mm). The sensors are able to measure in dusty air or through paint spray mist. Nearly all materials that reflect the sound are detected. Even thin foils, crystal clear materials and different colors are no problem for ultrasonic sensors. Thin deposits on the sensor membrane do not affect sensor function.

Balluff ultrasonic sensors are appropriate for a variety of industries, including: Automation and handling, automotive, bottling and packaging, pharmaceutical, plastic and rubber, conveying, machine construction, paper and printing, and many more. Additionally, ultrasonic sensors can be used in a variety of applications, such as height and width measurement, presence verification, robot positioning, fill level monitoring, stack height detection and more.

Balluff, www.balluff.com [1]

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