

## **Industry 4.0:**

### **Worldwide innovation: Newly developed ultrasonic sensor makes logistics safe and efficient**

**Mayser presents a new ultrasonic sensor system for a variety of personnel safety applications and automation for logistics**

*Lindenberg/Ulm 6th February 2017 – from 14th to 16th of March Mayser will present itself at the LogiMAT 2017 in Stuttgart as an expert in the safety of objects and personnel in the logistics industry. The company develops comprehensive solution approaches for fast and efficient, but nevertheless safe automation. That includes in particular functionally safe Ultrasonic safety. It protects personnel, for example during the work with forklift trucks or driverless transport systems (FTS).*

The ultrasonic sensor system provides non-touch detection of both humans as well as objects and is unaffected by dirt, extraneous noise, air flows and moisture. In comparison to other solutions, the Mayser ultrasonic concept has a decisive advantage: Two very small ultrasonic transducers can be connected to each electronic system as sensors. These can be positioned flexibly and geometrically independent of the electronic system and as a result can be mounted locally, directly at the danger area.

#### **Automated monitoring of storage spaces**

The transducers can, for example, be installed in the forks of a forklift truck and detect the surroundings unaffected by the load. They create an elliptical sound field that also detects very small objects. Consequently, with the help of the ultrasonic industrial sensor USi, storage spaces in a high-bay warehouse can be checked without the driver having to look into the rack.

## **Safety with obstructed field of vision, thanks to freely positioned transducers**

In combination with *Ultrasonic safety*, the possibility of positioning the transducers directly in the forks provides new areas of application for personnel safety. With a loaded fork the detection field is not obstructed, and the ultrasonic sensor system reliably detects whether there is an object or a human in the danger area. The field not only recognises if someone is standing in front or beside the fork, the employee can even be detected during lowering, and the forks are stopped in time. With autonomous driving forklift trucks, the goods no longer need to be pulled, but can be pushed without danger. The ultrasonic sensor can also be used for monitoring the rear area or as heel protection on lift trucks. A teach-in function also enables the system to learn the complete measuring environment as a standard environment. The system thus only responds to deviations from the target state.

## **Personnel safety thanks to the worldwide innovation *Ultrasonic safety***

In order to achieve functionally more reliable safety of personnel, *Ultrasonic safety* was developed in addition to the ultrasonic industrial sensor USi. It features a dual channel design and is the only ultrasonic sensor in the world that is certified according to ISO 13849-1:2015 category 3 PL d for personnel safety. Up to two transducers can be connected to *Ultrasonic safety*, which each create a protective and a warning field. Both fields can be adapted individually to the application. With a maximum range of the protective field of 200 cm, *Ultrasonic safety* enables higher travel speeds of automated processes, as it reduces the speed in time, before a dangerous collision with personnel occurs. As a result, it is possible for humans to work safely next to automated tools or vehicles.

## **Inexpensive collision protection systems for FTS vehicles**

Press release  
Pressebogen  
Pers informatie  
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Mayser not only offers non-touch sensors, but also tactile system components for other logistics applications. Consequently, driverless transport systems (FTS) can be equipped with safety bumpers. Thanks to short overtravel distances, these provide inexpensive collision protection. For the protection of the side flanks, safety bumpers or even safety edges can also be used, which have proven successful for the high demands on protection devices in public transport or other industrial applications.

*Characters: 4.079*

#### **About Mayser**

Mayser is an international Company Group currently operating at five locations in Europe and the USA. The company develops and produces high-quality products, systems and solutions in the areas safety technology, foam technology and moulding as well as headwear. The origin of the company goes all the way back to the year 1800, where everything started with the hat. With an average annual increase in turnover of 16 % between 2014 and 2016, today Mayser has an excellent reputation in safety and foam technology in many industries, including automotive, mechanical engineering or local public transport.