

Follow-up report on Motek 2016 in Stuttgart

Mayser uses non-contact robot monitoring

High speeds and reliable protection in Cobot processes

Lindenberg/Ulm, 2016-10-19 – Mayser goes one step further in terms of the protection for collaborating, cooperating and coexisting systems: as well as pressure-sensitive protection, they now also use non-contact monitoring for Cobot workplaces. Mayser, as an expert for safety in automation processes, presented at Motek 2016 a corresponding study on capacitive partial protection for robot arms and environment monitoring using safe ultrasound.

“This development represents an evolution in the Cobot sector for Mayser”, said Sales Manager Wolfgang Schick. “First of all, no force is required to trigger the protective sensor. This virtually eliminates the risk of humans working directly with the robots being injured”. This is possible thanks to the capacitive collision protection.

Non-contact detection of humans

The sensor in the collision protection detects people or conductive objects. A capacitive field that changes as approached is evaluated and the robot is thus slowed down or stopped before a collision can occur. The range of the field can be individually adjusted depending on whether a slight touch or non-contact collaboration between humans and robots is desired in the application. There is no danger of injury even if contact occurs. The aim is therefore to achieve certification as per ISO 13849-1 category 3 PL d for this protective system.

More efficiency due to higher speeds and cycle times

It is not just the employees that provide greater acceptance for this new development. "In the new system, the workflow is no longer halted if there is contact between robots and humans. The sensor detects if the human has left the danger zone," said Wolfgang Schick. As the non-touch protection works as per the principle pre-travel distance instead of overtravel distance, this means higher speeds can be reached and therefore better cycle times achieved.

Additional protection with secure ultrasound

Humans, and objects, can be protected by ultrasonic sensors with very small ultrasonic transducers that are unconnected to the electronic system. Unaffected by dirt, ambient noise, air flow or moisture, they reliably detect people and objects, regardless of shape, transparency and colour. They are therefore suitable for tool and environment protection. An innovation in the field of ultrasonics will be available from the beginning of 2017 too: the functionally reliable ultrasonic safety system. This dual-channel ultrasonic safety system is failsafe and also complies with ISO 13849-1:2015 category 3 PL d.

Safe system components for every application

Mayser ensures safe cobot working environments using both non-touch sensors and pressure-sensitive surface sensors, safety edges and safety bumpers. Thanks to its system-component approach, Mayser always offers the right products and solution for the specific application and working environment.

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About Mayser

Mayser is an international Company Group currently operating at five locations in Europe and the USA. The company develops and produces innovative, high-quality products, systems and solutions in the areas of 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. Today Mayser has 800 employees and an excellent reputation in safety and foam technology in many industries, including automotive, mechanical engineering or local public transport.

Image material:

Image 1



Study on the safety of human-robot collaboration (Cobot): Mayser uses non-contact robot monitoring with installed sensors.

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Image 2



Mayser, as a system supplier, has the products and applications required for every automation application.