

“Industrie 4.0 would be inconceivable without functional machine safety”

Schmersal Group showcases advanced safety technology at Automation Expo 2018 in Mumbai

The Schmersal Group provides customers around the globe with components, systems and solutions for machine safety and occupational health and safety. The company, with headquarters based in Germany, is one of the world's market leaders in this ambitious field. Schmersal has a manufacturing facility in Ranjangaon near Pune and is the only company producing safety switches directly in India. At Automation Expo 2018 in Mumbai the Schmersal Group will showcase advanced, Industrie 4.0 compliant safety technology. Ramji Singh, Vice President Sales & Marketing at Schmersal India, provides glimpses of evolving trends, innovations and market developments in the machine safety segment.

Q. The Schmersal Group is attending the Automation Expo 2018 in Mumbai. What are your expectations regarding the fair and what kind of products and novelties will you present?

This exhibition is Asia's leading Automation trade fair with a focus on Industrie 4.0 and state-of-the-art technologies in automation. For Schmersal, as a leading international systems and solutions provider for machine safety, Asia is a very important region. The Asian market for machine safety components has seen two-figure growth in recent years. Companies in

this region are becoming increasingly aware of the importance of safety in industrial working environments, as safety reduces the potential for accidents, ensures shorter downtimes and thus improves productivity. We regard the Automation Expo as a good opportunity to present our advanced safety solutions that help our customers to keep pace with the rising trend of automation and the digital transformation process in the industry.

For example, an essential aspect of this process and Industry 4.0 are automated production methods powered by robots that can complete

tasks autonomously and efficiently. We will see an increasing number of collaborative robots i.e. robots that cooperate directly with humans without a separating fence. For these collaborative robots Schmersal has developed already some years ago a special safety controller. However, the majority of robot workstations will still need separating protective devices. Schmersal offers a comprehensive range of products to safeguard these kind of robot workstations, such as optoelectronic protective devices, safety mats, RFID based interlocks etc. In the robotics pavilion at Automation Expo

we will also showcase an integrated safety solution with our sales partner Satech Safety Technology, which is one of the European market leaders for modular safety systems for industrial automation. Satech's safety fences are an optimal tool to safeguard robot workstations – and even more so when combined with Schmersal's safety sensors and solenoid interlocks. The product ranges of our companies complement one another perfectly, meaning that we can offer complete solutions from a single source to our customers.

Q. Which general trends and challenges do you see in industry and especially in the machine safety segment?

Industrie 4.0 – i.e. the increasing digitalization of all processes in production, the widespread use and analysis of data, intelligent networks etc. – will continue to be the dominating trend in the global industry. However, Industrie 4.0 would be inconceivable without functional machine safety. Also, the digital transformation poses new challenges for experts in safety technology. We need to develop innovative safety technology that

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supports our customers in introducing digital production processes.

For example, one of the key objectives of Industry 4.0 is improved efficiency, which can be achieved, inter alia, through predictive maintenance. This requires the components used in the machines to be able to generate data and information. Based on the machine and production data, evaluated on an ongoing basis, predictions can be derived on the status of the system. These are used to plan service intervals, to avoid or minimize production downtime and to maximize production turnover. A prerequisite for this is that safety switches can also pass on diagnostic information. This is already happening, for example with Schmersal's RFID-based safety sensors which allow high levels of tolerance to door offset. If the offset limits are reached, the sensors issue an electronic warning signal before the machine shuts down, thus providing information which can be used for predictive maintenance. Another example are the modular safety controllers in the PSC product range from Schmersal which enable the configuring of flexible, customized safety systems on a software basis. An added advantage of the PSC range is the option of forwarding additional non-safe diagnostic signals via a standard bus system to another automation controller or the IT environment. This means, for example, signals can be evaluated which are relevant to the avoidance of downtimes and increasing plant availability. Also, Schmersal recently presented a new "Safety to Cloud" Solution, i.e. this solution enables the communication from the sensor right up to the cloud. These are all examples about how Schmersal is developing pioneering safety technologies to support our customers in the introduction of Industrie 4.0 compliant production systems. Our safety technology does not only protect the employees from

injuries, but is also a tool for our customers to increase production efficiency.

Q. How do you perceive India as a market for machine safety and which developments have you seen in recent years?

In India, there has been a significant rise in the demand for safety solutions – for two reasons: Firstly, awareness around their benefits has increased. Earlier there was a lot of scepticism around safety solutions due to the preconception that safety hampers productivity.

The opposite is the case: Well-planned safety solutions contribute to productivity because they prevent lost time accidents which cause production loss and economic damage. Secondly, international standards and global safety norms have propelled Indian companies to augment their safety initiatives. Therefore, Schmersal welcomes the decision of the BIS, the Bureau of Indian Standards, to adopt the ISO Standards. Not only because it will contribute to economic growth in India by facilitating immensely the import and export of machines to and from India. More important is, that employees in India will benefit from improved safety standards. And, last not least, our customers, too, will benefit from the introduction of the ISO standards. They should welcome this development even more because all Schmersal products already comply with the ISO standards, that means: When our customers buy our products, they can be sure that these components are 100 % compliant to the new Indian norms – at no extra cost involved. Also, when Schmersal designs more complex safety solutions for specific applications, our customers can be sure that these solutions are compliant to the new norms. In addition, we will support our customers with our expertise, mainly provided by our safety

services division, the tec.nicum

Q. What kind of services does your tec.nicum division provide?

Many companies, and in particular small and medium-sized enterprises, have constraints in terms of having expertise, skilled resources and labour capacity with regard to the complex issue of machine safety. So we offer them either selective support or the full service package. The tec.nicum service portfolio is based on four segments: Sharing of knowledge/ seminars; consultancy services; technical planning and implementation. Customers can order just one single module of the tec.nicum portfolio – or the complete package from consulting to the implementation of a customized safety solution. Our tec.nicum division has a team of engineers, trained from Germany for functional safety expertise and possess a profound understanding of complex legal and technical questions including the ISO standards. An additional benefit for the customer is, that the tec.nicum is an independent body, that offers neutral consultancy and proposes the optimal safety solution regardless of the producer of the safety equipment.

The tec.nicum conducts a risk assessment, especially to evaluate the present safety levels of old machines that may create hazardous situations. We also offer complete, easy-to-operate safety solutions. To ensure optimal use of safety devices, we interact with employees who directly use the devices and train them. We also have a demonstration room at our factory in Ranjangaon near Pune, where customers can physically see the solution in use and experience the ease-of-using the device, its diagnostic capabilities and other useful features in person. ■

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