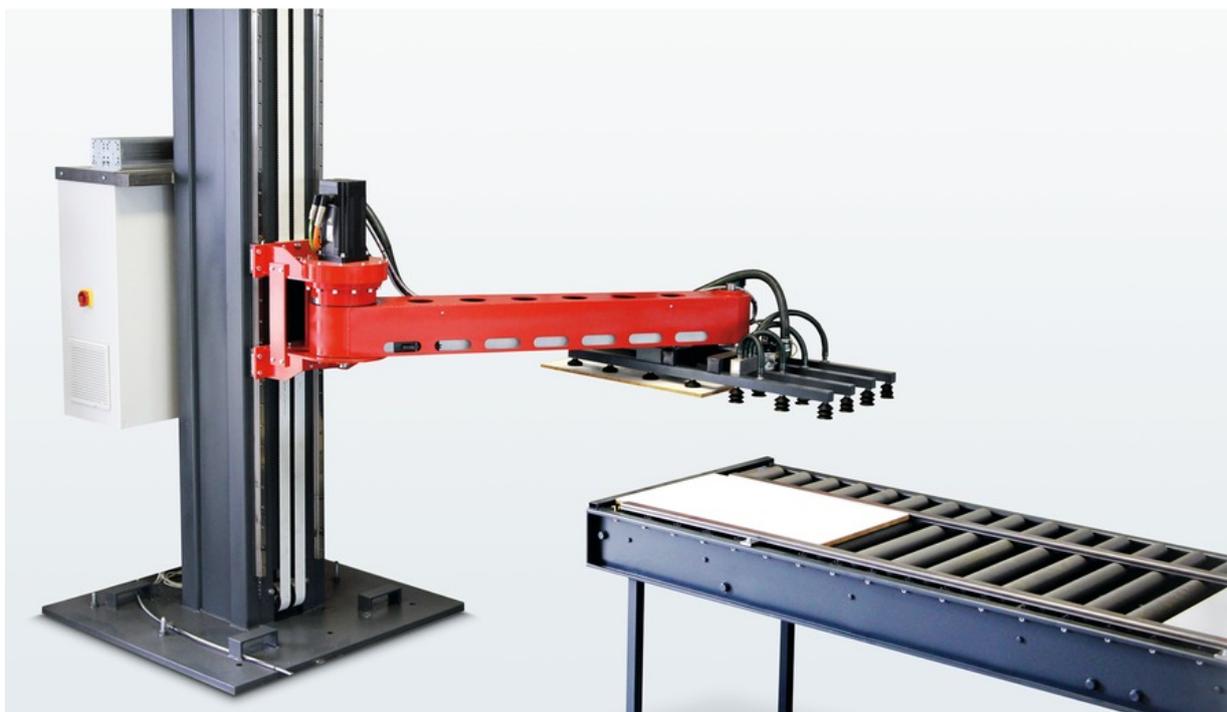


Safe palletizing with a configurable safety relay module



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Overview

The family-run company huw Roboter-Systeme Komplettlösungen GmbH has been developing, configuring, and producing robots which are used in various industries since 1984. The company's own systems manufacturing specializes in user-oriented systems for palletizing, depalletizing, commissioning, and loading machines.

In addition, special solutions resulting from specific application requirements form part of huw's core expertise. The Blomberg-based company's customer base now includes many well-known names.



Robot system manufacturer huw

Application

Safety technology was a particular area of focus during the design phase of the new ESS 15/250 single-column palletizer. This is because functional safety is crucial in machine building and systems manufacturing, as it prevents operating personnel from being exposed to hazards as well as preventing damage to the machine. For this reason the concept – in terms of simplicity, flexibility, and quality – must deliver not only the standard function of the robot, but also safety technology, and all at a low cost.

As the palletizers are used in different environments, the safety technology should be able to adapt quickly to changing requirements. If conventional safety relays are used, their type and number depends considerably on the palletizer's environment as well as the protective measures employed in the end user's application, such as light grids, safety doors or emergency stop. Depending on the requirements, various safety relay modules must be installed and wired accordingly in the overall application.



ESS 15/250 single-column palletizer

A high degree of adaptability and compliance with quality requirements, while simultaneously reducing costs, is only possible if the robot system design is implemented flexibly and can be structured the same way for each customer. This is not possible with conventional safety relays, which is why huw's developers looked to another safety solution for the ESS 15/250 single-column palletizer that would allow them to achieve the stated objectives.

Solution

With this in mind, the team at huw opted for the PSR-TRISAFE-S from Phoenix Contact. The safety relay module, which is configured via software, can be individually adapted to the relevant ambient conditions.

The PSR-TRISAFE-S has proved itself to be a practical solution, especially in small to medium-sized machines and systems, because the safety module is as easy to handle as a relay, but offers the flexibility of a safe controller. It is a cost-effective option for applications with as few as three to four conventional safety relays installed to evaluate the safety equipment.

huw's developers have made the most of the advantages gained from the high flexibility of the PSR-TRISAFE-S safety modules. The ESS 15/250 single-column palletizer is already being delivered to end users with preconfigured safety logic. Thanks to the high level of application expertise of huw's employees, the output configuration of the safety logic could be selected to cover all common customer requirements.

The intelligent integration of the 20 safe inputs and four safe outputs of the safety relay module in the safety logic simplifies additional startup, as the user only needs to connect the sensors, such as emergency stop button or safety doors, to the PSR-TRISAFE-S. Additional configuration is usually no longer required. In this way, the Blomberg-based robot system manufacturer provides its customers with a complete solution that does not require any further programming or configuration by the customer.

If any changes need to be made to the safety logic due to special end use requirements or system extension, these changes can also be implemented easily later on using the SAFECNF configuration software, which is available free of charge. Complicated rewiring can therefore be eliminated. The experience of the huw team shows that the PSR-TRISAFE-S is the best solution for the ESS 15/250 single-column palletizer when it comes to monitoring the connected safety systems.



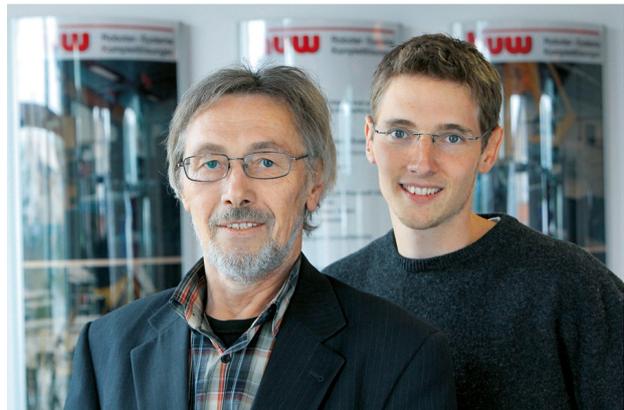
PSR-TRISAFE safety module in use at huw

Summary

Robot system manufacturer huw was looking for a safety solution to integrate its new ESS 15/250 single-column palletizers quickly and easily into the end user's overall application.

The PSR-TRISAFE-S configurable safety modules from Phoenix Contact satisfy the high requirements here with respect to handling, flexibility, safety, and costs.

“For us, the PSR-TRISAFE-S configurable safety module from Phoenix Contact represents the ideal solution,” concludes company director Hans-Ulrich Wienke together with his son, Michael Wienke, who is responsible for Industrial Engineering.



Company director Hans-Ulrich Wienke and Michael Wienke