

Uniform design with flexible functionality



New generation of the Allen-Bradley Guardmaster safety relays from Rockwell Automation

A uniform design for different case widths, modular design, service-friendly connections and its innovative coding options make the CH20M ideal electronics housings for the new generation of Allen-Bradley® Guardmaster safety relays from Rockwell Automation®.

To reliably monitor safety equipment, Rockwell Automation has designed a new generation of Allen-Bradley Guardmaster safety relays with six basic configurations covering the most important safety applications in factory automation. Rockwell Automation has responded to the increasing demands on safety systems in factory automation. Maximum safety for the machine operators is associated with the high availability and productivity of the machines. Allen-Bradley Guardmaster safety relays guarantee flexibility and simultaneously offer safety with four innovative concepts: Monitoring two safety devices with just one module means that the safety system can be compact; the use of universal input technology means more input types can be recognised; a rotary switch element means you can select between configurable functions; the relays can be connected together using a single wire, while still maintaining PL e/SIL 3. To combine all of these functions in a compact design, Rockwell Automation needed an efficient electronics housing solution which they found in Weidmüller's modular CH20M system.

Simple to integrate thanks to the uniform design

"It was important for us that we had a uniform design even with different housing widths. Similar operation significantly simplifies integration," explained Thomas Helpenstein, product manager at Rockwell Automation, about his decision for CH20M. "Thanks to the largest

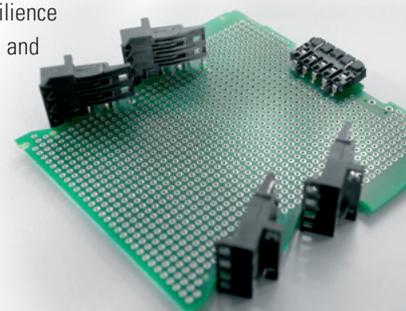
possible use of space on the PCB we were able to accommodate the functions of our relays optimally and keep the modules very narrow. Compared to conventional solutions we offer the end user the possibility to evaluate two safety sensors in one module and therefore free up 50 % more room on the DIN rail, increase energy efficiency in the electrical cabinet and produce savings in the storage costs."

A further decisive argument for the CH20M system for Rockwell Automation was the simple to wire cable connectors which clearly group the connections for supply and the inputs/outputs. "Thanks to the 'Wire Ready' technology, all the terminals were fully open when delivered so that the wiring effort is kept very low. The standard integrated 'Wire Guard' mechanism prevents wires being dangerously inserted below the clamping area and prevents hidden contact errors," explained Heinz Scharlibbe, product manager at Weidmüller, when describing the advantages of the connection components. "Safety across the range is provided by the two-sided touch safety on the male and female headers as well as the integrated, captive coding. Thanks to the integrated, colour coded release lever with grip tab and screwdriver pocket, the female plugs are completely intuitive and save time. The connection port system is an integrated part of the housing system and

ensures high resilience against vibration and shock."

Ongoing support during the development phase

The advantages of the CH20M electronics housing system could be utilised fully in the design of the Rockwell Automation modules. Helpful support during the design process was provided by the documentation, approvals and PCB templates for the circuit board layout which Weidmüller provided to Rockwell Automation. The solution was rounded off by a further strength, the customer-specific colours of the housing colour.



PCB connection system and bus contact block can be included in the module in a single SMT manufacturing process



The CH20M product line covers all common standard pitches from the 6.1 mm slice versions through 22.5 mm up to 67.5 mm large volume housings