



The brightest button for flexibility and efficiency

The latest RMQ compact solution range is the answer to customers' demands for cost-efficient and flexible control and signalling devices.

Location:

Tauberbischofsheim, Germany

Challenge:

To enhance an illuminated pushbutton to control tool jackscrews thereby increasing efficiency.

Solution:

Illuminated pushbutton in the RMQ compact solution range.

Results:

The compact illuminated pushbutton with integrated cable and M12 connector offers a high degree of flexibility and can be directly fitted in machinery. As such, it meets all the demands of the modern market both for machine and plant building and for end customers.

"The illuminated pushbutton is exactly what we imagined. It not only meets our requirements for greater time and cost efficiency and is space-saving, but also meets the desire for increased flexibility for our end customers."

Rainer Kurz

Background

Products made of wood can be found everywhere: from construction materials to furniture to the humble pencil. Life without this natural material is inconceivable. However, for a tree to transform into the end product, it has to pass through many work stages and processes.

Michael Weinig AG (Weinig) from Tauberbischofsheim in Germany manufactures solid wood processing machinery and equipment that is intended to make these processes simple and efficient. The 100+ year old company has developed into a world leader. With production sites in Germany, Austria, Luxembourg, the USA and China; it goes to market worldwide. Weinig is represented by 25 subsidiaries and branch offices in Europe, America, Asia and Australia

and offers a product range that covers the whole process chain in solid wood processing. This ranges from cutting, scanning, gluing and jointing technology to planning and profiling. All of these processes can be used in a variety of applications from window and door production as well as furniture and single-part production.

In order to develop machinery and plants that are always state-of-the-art, efficient and highly reliable, Weinig pays great attention to the daily needs of its customers and integrates them into its development work. At the same time, the company relies on innovative development work in cooperation with its suppliers.

Challenge

That support was required with the four-side moulder for lateral working of timber



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beams and mouldings. It is capable of processing up to 600 m of wood per minute. Feed rollers transport the wood through the machine where it is processed with special tools, such as planes, into the required size. Attaching and clamping the tools is handled by jackscrew rapid tensioning system controlled with easy control relays from Eaton to enable a rapid change of tools. With an illuminated pushbutton, the user can operate these jackscrews and lock or unlock them electronically.

Weinig already uses Eaton illuminated pushbuttons for this, as they can be installed directly in the machine room. In order to reach the higher protection class of IP54 for protection against dust, the switch used to be fitted in a separate casing. The complex prewiring was time-consuming and took up a lot of space – especially because of the casing.

To make this application more efficient, Eaton developed a cost-efficient and flexible solution, the new RMQ compact range. "Eaton is a longstanding supplier of ours for operating elements to automation systems. But we can't just rely on existing solutions, and also look to the individual implementation of new requirements," said Rainer Kurz, who is in charge of the electrical fitting of machinery in the profiles product area at Weing AG. Eaton proved its deep understanding with a new solution that met the engineering needs at Weing but also met the demands of today's market.

Solution

With the RMQ compact solution product series, direct installation in any position is now possible. Eaton met these requirements by equipping the pushbutton with a preconfigured cable and M12 connector. This means it is possible to choose any position because there is no time-consuming prewiring and it

can be connected directly. Plus, the M12 connector rules out wiring errors. Additionally, the pushbutton can be integrated in Eaton's intelligent wiring system, SmartWire-DT.

The cable for the pushbutton is sealed on the rear offering protection to IP65 (over and above the expected IP54) rating. On the front panel, it offers protection to class IP67/IP69K. This means that the illuminated pushbutton is completely sealed against dust penetration, a major factor in wood processing - as well as against water penetration during high pressure cleaning. Thus, the devices are operating safely and reliably even when directly integrated into the machine.

Results

The illuminated pushbutton that operates the jackscrews used to tension the planer no longer requires prewiring. This saves time and effort, while taking up far less space thanks to its compact design. In addition, the end user can at last decide where he wants the integrated pushbutton to be fitted, so it is possible for Weing to respond to the individual wishes of its customers. "The illuminated pushbutton is exactly what we imagined. It not only meets our requirements for greater time and cost efficiency and is space-saving, but also meets the desire for increased flexibility. Eaton has once again convinced us of its skill and intelligence here," confirmed Kurz.

The pushbutton is not just a customer-oriented solution but will also feature in Eaton's permanent RMQ compact solution portfolio. This range also includes a number of other compact and efficient solutions in the field of the RMQ Titan control and signalling device range, which is used in machine and plant building. This is because, above all, the solutions offer: the brightest button with the greatest flexibility and efficiency.



The four-side moulder for lateral working of timber beams and mouldings is capable of processing up to 600 m of wood per minute



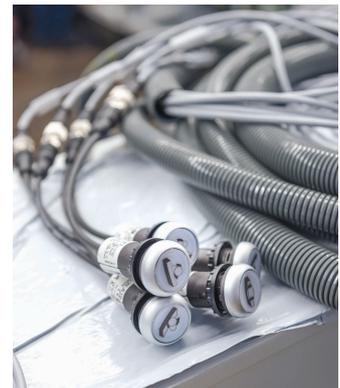
Feed rollers transport the wood through the machine, where it is processed with special tools (such as planers) into the required form



The end user can decide on the positions of the illuminated pushbuttons that are used to operate the jackscrews



With protection class IP67/IP69K on the front panel and the sealed cable and protection class IP65 on the rear, the illuminated pushbutton is fully protected against dust



The ready-made illuminated pushbuttons meet requirements for greater time and cost efficiency, space-saving, and increased flexibility

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