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MANY DOORS – SAFELY CLOSED

A company in France has installed electromechanical slimline-design, high-coding solenoid interlocks to secure twenty guard doors on a packaging production machine. They can be combined with different actuators for different attachment situations.



The fledgling company Ublo, based near Nantes and employing a team of ten, specialises in machines for the production of packaging from plastic films. 'I founded this start-up in 2018 with the aim of producing packaging production machines, particularly for the food-processing industry, that would enable both cost savings and improved flexibility thanks to our innovative concepts,' explains Stylianos Eleftheriou, founder and CEO of Ublo. 'We have a wealth of blow-moulding expertise that can be used to give this packaging different, special shapes. Building on this core business, we also develop downstream machines, such as filling systems.'

Ublo produces special machines and metre-long production lines, some with 20 or even

as many as 25 guard doors. 'The different zones with autonomous units are a challenge for machine safety and require multiple safety circuits,' explains Stylianos Eleftheriou. With 20 doors, the safety system must be as cost-effective as possible, but importantly, also needs to lock the doors securely and work flawlessly. Other criteria were ease of installation and reliable operation, even in the challenging conditions of industrial environments. Ublo thus decided to opt for the AZM150 solenoid interlock, which also allows the user to detect which door is open on the expansive system. 'In addition to this detection function, quality and reliability are also important requirements for the product. Only this way can it have the positive image that we aim for for Ublo's machines,' explains Eleftheriou. The AZM150 solenoid interlock can meet these requirements with ease.

Slimline design and high coding

The AZM150 is characterised by a slimline design as well as a holding force of 1500 N. It can be combined with three different actuators for different attachment situations – a straight actuator for sliding doors, an angled actuator for large revolving doors and

a moveable actuator for smaller revolving doors. A positive of the interlock is the rotating actuator head which can be locked with ease by simple placement on the cover, rather than being bolted into place.

The rotating actuator head with its two insertion slots enables various installation positions and actuating options and makes the interlock particularly versatile in use. The AZM150 is electromechanical in design and can be combined with a high safety standard: the interlock is supplied with a low coding level as standard, or optionally with a high coding level. Benefits for the user: In accordance with ISO 14119, high coding requires fewer additional measures to guard against locking devices being bypassed, such as placing them out of reach or in a concealed location. Schmersal offers electromechanical safety switches and solenoid interlocks with high coding.



Fig. 2: Loys Millescamp and Stylianos Eleftheriou, Managing Director of the French company Ublo



Fig. 1: Machine for the production of food packaging developed by a French start-up company

Thanks to its space-saving design, the AZM150 is ideal for smaller machines as well as for packaging and tooling machines. The solenoid interlock is available in both operating current and quiescent current versions. Interlocks that operate according to the latter principle are preferred where there is a need to protect people from hazardous after-run movements.



Fig. 3: Schmersal now offers the slimline AZM150 solenoid interlock, with optional DHS-150 door handle system.

Interlocks that operate according to the operating current principle are ideal for process protection, as they allow access to the hazardous area in the event of a fault, e.g. a power failure.

Ergonomic door handle system with useful accessories

With the new, practical and ergonomic DHS-150 door handle system, the AZM150 interlock is even more user-friendly as there is no longer a need for a separate door handle. The system is suitable for machine enclosures or machine fencing as well as for all standard aluminium profiles with a width of 40 mm. The robust door bolt is particularly useful on heavy swing doors and for use in harsh environments. One benefit of this accessory is that the actuator is pre-positioned by the bolt in the DHS system, thus ensuring its optimal insertion into the device. This gives the system stability against lateral forces. In the event of lateral forces on interlocks that cannot be overcome, the safety door will not be opened – thus causing delays in the production process. In this regard, the DHS-150 door handle system, in conjunction with the AZM150 solenoid interlock, contributes to improved system availability. In addition, the DHS-150 is equipped with an integrated locking device (LOTO).

This locking tag function protects operating personnel from mistakenly being locked inside larger, walk-in systems and machines while they are performing servicing and repair work. The locking device ensures that the door of the protective device cannot be closed and unintentional machine start-up is prevented.

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