

Application report Electronic-Key-System EKS

Playing it safe with a chip

Passwords often provide inadequate protection against improper operation. The mustard maker Löwensenf therefore uses the EKS Light electronic access control system.

Whenever Löwensenf is mentioned, it usually doesn't take long until the comment "that's the very spicy one, isn't it?" is heard. This is little wonder: like other big names in their respective fields, the Löwensenf Extra brand has become synonymous with spicy mustard. This is true even though Löwensenf has many more mustard varieties on offer – all of which are produced



On the right side of the operating unit: the modular Electronic-Key adapter of EKS Light.

at the Düsseldorf-based company. At the filling plant there, cameras closely monitor mustard-filled tubes before they are conveyed onward to a packaging unit. As part of the quality management system, the camera system checks, for example, whether "the date and time stamp is present and legible and the tube fold is OK," says Rainer Lang, technical director at Löwensenf. In order to prevent improper operation of the QM

system and the packaging unit, Löwensenf was looking for a secure access management system, which additionally had to comply with the strict hygiene regulations in the food industry. In Lang's words: "Our primary concern was to protect the system parameters." He said that the control systems offer password functions, "but passwords quickly spread to everybody."

Internal user identification

Research and a recommendation from a machine manufacturer led the technical director to the EKS Light Electronic-Key-System from Euchner. This is a read-only system with internal user identification for small, decentralized applications. It permits controlled access to individual machines, entire installations or other facilities. The user employs an Electronic-Key with RFID transponder to identify himself to the Electronic-Key adapter. With the EKS Light, a control system is not necessary for this check. Once identification is successful, the user receives the access rights stored for him. The modular version of the EKS Light is used at Löwensenf: the Electronic-Key adapter and the electronics can be mounted in separate locations. Additionally, the Electronic-Key adapter is designed for applications in hygienically sensitive areas and is therefore easy to clean. "The standard 22.5-mm-diameter mounting hole made it very easy to mount the Electronic-Key adapter in the operating unit's housing. The watertight, hygienic version with IP69K protection was very important to us," says Rainer Lang. The electronics, in turn, is compactly accommodated in the housing.

Four access levels defined

Four access levels for the QM system were stored in the electronics. Level 1 corresponds to the simple user, who may operate the machine's basic functions without a chip. Identification is required from level 2 – for technicians; settings can be changed. Level 3 is reserved for quality management, while level 4 possesses administrator rights. The machine functions available at each level are displayed on a touchscreen. Rainer Lang considers it practical that “the same chip can also be used on machines” on which three security

it is clear to him: “We will introduce EKS Light in other areas of the company.”



The modular version of the EKS Light access system from Euchner

levels apply. The chips are programmed on a Windows computer in the technical director's office. This computer runs the Electronic-Key-Manager EKM software from Euchner. For programming, the chip is simply inserted into an EKS Electronic-Key adapter connected to the laptop via a USB port. “Familiarization with programming took very little time,” says Rainer Lang with satisfaction. Thanks to these positive experiences,