




SAFE AND UP CLOSE TO THE ACTION

Schleuniger AG uses the HGW 1033-32 wireless operating panel from SIGMATEK in a Safety-oriented application. When a manufacturer of cable fabrication machines chooses a wireless solution for a new design, that is worth a closer look.

Even Michael Zbinden can't keep from smiling when asked about this curiosity. "At first glance, it may be really surprising", says the Team Leader for software development at Schleuniger AG in the Swiss region of Thun, whose expertise lies in the innovative and economic fabrication of cables. "Because with us, the user is the central focus", he continues, "we place a very high value on the usability and ergonomics of our systems."

And exactly this customer promise required a different approach to the development of the new platform; a processing machine for high-voltage cables for electromobility. The modular construction enables the user to quickly adapt the machine for new tasks via

Shortcut 

Task: Flexible operating devices for processing machines for diverse, safe cable production.

Solution: Mobile operating panel with safety-relevant application from Sigmatek.

Benefits: High flexibility, more freedom of movement and operating comfort with maximum safety and productivity gains.

exchanging individual production elements. Units that are no longer needed are simply removed and replaced with different modules.



The wireless Safety panel allows the machine setter to work very close to the machine and still be safe.

Flexible with Wireless HMI

Since the machine, developed from the ground up, processes pure as well as prefabricated cables, its length varies depending on the production depth. "As a result, it quickly became clear that another mobile operating device was needed in addition to the main device installed," says Michael Zbinden. The operator can have this with him at all times during production to read current data or while changing tools, enter the required parameters any

time at the respective site. "Both tasks require close proximity to the action, since the machine setter must acknowledge individual process steps with a key press", explains the software team leader.

This confirmation would of course also be possible with a cable-connected panel, so why use a wireless one? Since depending on the production level, >>

HGW 1033 Wireless Operating Panel



The wireless technology of the HGW 1033 not only eliminates long HMI cables as trip hazard, but is also future-proof via OPC-UA communication. Guided magnetic mounting points allow easy removal or mounting onto the BWH 001 base station, which serves as a gateway with docking and charging function. As soon as the operator mounts the HGW 1033 onto the base station, the charging process starts automatically. The wireless operating time is up to two hours. The high-resolution 10.1-inch multi-touch display screen (800 x 1200 pixels) makes operation intuitive, while the three encoders drastically simplifies the setup of machines, robots and systems. In the TÜV-certified 1033-32 model, an active illuminating emergency stop confirmation switch and key switch in the gripper unit ensure the required safety of the machine operator in an industrial environment. To ensure the quality of the wireless transmission directly in the machine environment and with Safety functions, signals are sent on two frequencies (2.4 and 5 GHz) over separate antennas.



the machine can be extremely long, it would need an appropriately long cable. However, says Michael Zbinden, this is a dangerous tripping hazard and when it gets caught somewhere, can be damaged. But using short cable would require the installation of multiple connector sockets, which for those responsible, was not a real alternative. "Each reconnection would have activated the emergency stop and required a machine reset", explains the expert: "With the wireless version, all these problems are easily solved. The mobile WLAN panel from Sigmatek provides the operator with a high degree of flexibility and more freedom of movement. In combination with the three rotary encoders and the integrated safety functions, this is an optimal addition to our system."

Safety Level up to SIL 3/PL e

For safety applications cable-connected solutions are actually the first choice, particularly for the cable-break detection. Nevertheless, the Safety concept of Sigmatek's HGW panels convinced Schleuniger AG right away. This builds an exclusive point-to-point connection via the Black Channel Principle, whereby a safety protocol between the safety application and communications layer is integrated. This not only ensures targeted safety level up to SIL 3/PL e, but it also detects transmission errors and corrects them or triggers an error reaction. However, integrating the HGW 1033 required some creativity. For safety reasons, the device has a Linux-based operating >>

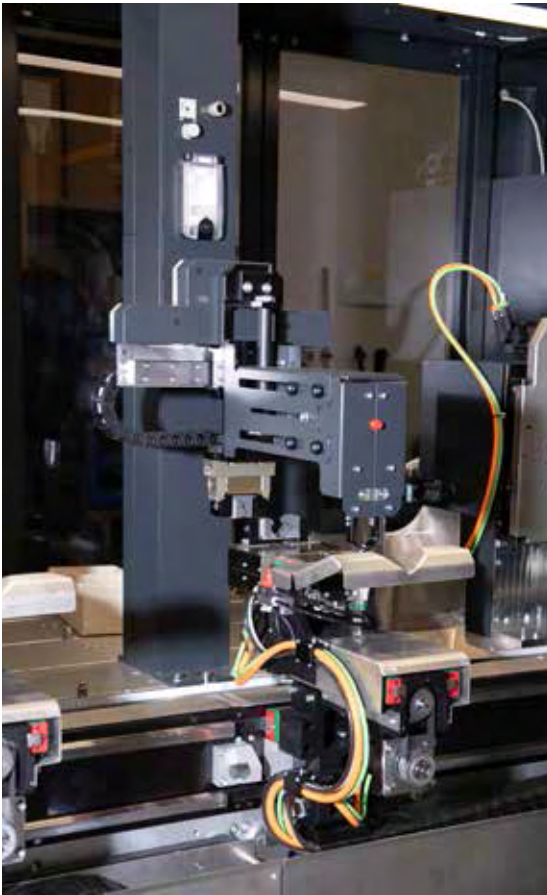
left When the operator mounts the **HGW 1033** onto the base station, the charging process starts automatically.

right The **processing options** of the high voltage cables are extremely diverse.



With the wireless panel from Sigmatek, we have solved all problems

**Michael Zbinden, Team Leader
Software Development Schleuniger AG**



The tools can be easily exchanged and the cable fabrication machine very simply adapted for new requirements.

system. The Schleuniger AG user interface however, operates in a Windows-based environment. "For our application, we simply connected the main computer with the mobile panel over a VNC", Michael Zbinden explains and highlights the advantage thereof: "This allows us to fully operate the user interface on both devices." Schleuniger's customers benefit from the new technology: "We can thus provide more operating comfort, expanded options and higher productivity. This added value is particularly appreciated."

www.sigmatek-automation.com

Users



Schleuniger AG is a technology company and supplier in the cable manufacturing and testing industry headquartered in Thun. The customers of the Schleuniger Group are mainly suppliers to the automotive, entertainment, information and communications industries.

www.schleuniger.com