Press Release

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Reliable Components for Modern Radio Remote Controls: Metallux Finger Joysticks in Use at Gross-Funk

Gross-Funk GmbH develops and manufactures high-quality radio remote controls for demanding applications worldwide – relying on precise finger joysticks from Metallux AG.

Founded in 1980, the family-owned company Gross-Funk, headquartered in Schopp in the Palatinate region of Germany, specializes in customized remote control systems for professional and safety-critical applications. Its solutions are used across a wide range of industries, including construction, forestry, agriculture, logistics, crane technology, and maritime applications. They are also used in robotics and as a setup remote control for autonomous applications.

One example demonstrating the reliability of Gross-Funk products is their use aboard the research vessel Polarstern of the Alfred Wegener Institute, where they contribute to the safe control of crane systems under extreme environmental conditions.

In addition to a standard product portfolio, the company focuses on customer-specific solutions – even in small quantities starting from batch size one. As a manufacturer with its own testing laboratory, Gross-Funk develops individual systems precisely tailored to each application.

The integration of additional functions plays a central role in this approach: sensors for position or tilt detection, displays for visualizing operating data, and bidirectional communication solutions are all part of the portfolio, as is the integration of external devices such as tablets for advanced control functions.

Gross-Funk also emphasizes flexibility in manufacturing. By utilizing 3D printing technology, housings can be produced faster and more individually than with conventional injection molding processes.

The radio remote controls are compact in design and engineered for harsh operating environments. Safety aspects are a top priority: redundant emergency stop systems, solutions for explosion-proof areas, and preparation for future cybersecurity requirements underline the company's high standards.
Stable radio communication is ensured, among other things, by the patented "Reflektomat." Additional technical features such as extended transmission ranges of up to 5 watts, intelligent range limitation (ranging), highly readable transflective displays, and the flexible E-Key system for easy personalization and component replacement complete the overall package.

Control Elements as a Key Component
Against this background, control elements play a central role. Especially in safety-critical applications, precision, reliability, and clear tactile feedback are essential.
For this purpose, Gross-Funk relies on finger joysticks from Metallux AG. Thanks to their compact design and modular construction, they can be flexibly integrated into a wide variety of remote controls.

The single-, two-, and three-axis Metallux models MJ-F11, MJ-F12, and MJ-F13 are used in these applications. In battery-powered remote controls, their potentiometer technology offers advantages in terms of energy efficiency while maintaining high precision.

The joysticks are ergonomically designed and engineered for continuous operation. Features such as low weight, long service life, and robust construction contribute to operational safety and user comfort. Their compact dimensions and shallow installation depth also allow space-saving integration into a variety of device architectures.

Like Gross-Funk, Metallux consistently pursues an application-oriented approach. Based on a modular system, customized solutions are developed to meet specific requirements.

Production takes place in Germany and ranges from prototypes to large-scale series manufacturing. Automated processes, cleanroom production, and comprehensive inspection and testing procedures ensure consistently high quality.

Long-Standing Partnership

The collaboration between Metallux and Gross-Funk has existed for more than 15 years. Both companies share a common understanding of quality and reliability.

“Working with Metallux is a real asset for us. The joysticks are the heart of our control systems, and we rely on their precision and durability. It is great to have a partner who takes our commitment to quality just as seriously as we do,” explains Benjamin Heil, Purchasing Manager at Gross-Funk.

When asked about the most important characteristics of a joystick, he adds:
“For us, precision, ergonomics, and robustness are the key factors. Our customers often spend the entire day operating machinery, so the controls must be intuitive and non-fatiguing. The fact that the hardware also withstands years of demanding use makes it our first choice.”

Conclusion

The collaboration between Metallux AG and Gross-Funk GmbH demonstrates how powerful solutions can be realized through the combination of application-specific system expertise and perfectly matched components. Against the backdrop of increasing demands for safety, efficiency, and ergonomics, reliable control elements are becoming ever more important. With its approach “Joysticks for Every Move,” Metallux underlines its ambition to provide suitable solutions for a wide range of applications.

More information:

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Pictures:

Metallux Finger Joystick MJ-F11

Metallux Finger Joystick MJ-F12 with different handles

Radio remote control from Gross-Funk featuring the three-axis Metallux joystick MJ-F12

Radio remote control from Gross-Funk featuring the two-axis Metallux joysticks MJ-F11 and MJ-F12.

Benjamin Heil (Gross-Funk GmbH) and Philipp Brunschön (Metallux AG)

Profile Metallux AG

Metallux AG is an internationally active, leading developer and manufacturer of sensors in thick-film technology. The extensive product portfolio ranges from pressure, linear and rotary sensors to resistors and industrial joysticks for controlling vehicles and machines. Innovative products and customised solutions - Made in Germany: this is a combination that renowned customers from the fields of vehicle construction, medical technology, energy and environmental technology, materials handling and lifting technology and mechanical engineering have relied on for 40 years.