

# Compact, Robust, and Safe: the Rotary Encoder ESC17 mini SAFETY

Leinfelden-Echterdingen, 14 November 2023 - When it comes to limited space, demanding safety requirements and reliability, the rotary encoder ESC17 mini SAFETY from EBE sensors + motion makes the most of its advantages.

The products of the ESC17 mini series consist of remarkably compact encoders that are based on the proven HALL principle. Now this product family has got a new member. The ESC17 mini SAFETY raises the input safety to a new level by means of redundancy. The magnetic detection of the rotary movement and button signals makes the ESC17 mini SAFETY almost wear-free and extremely reliable. With 16 locking positions, the ball-spring latch used offers pleasant haptic feedback. This technology has been proven in numerous products, such as the ESC17 mini, its relatives of the ESC17 series, and its electromechanic predecessors, such as the SC17 and BG17. The latching mechanisms of the ESC17 mini family are designed for several 100,000 rotations and scanning movements, and their feel can be adapted to customer requests. The protection from ESD discharges acc. IEC 61000-4-2 in installed condition is granted, and the rotary encoder has passed respective tests with excellence. The ESC17 mini remains unimpressed in case of EMC disturbances, e.g. acc. DIN EN 12895, and ensures constant operation without any negative influence. Thanks to the two independent HALL sensors, the rotary and tactile signal is detected in a redundant way. In case of an error, a separate signal is emitted via a dedicated PIN. This ensures reliable and safe operation at any time.

# **Robust and Compact**

With its dimensions of 17 x 19 mm (L x W) and an installation height of 11 mm below the front plate, the rotary encoder is significantly more compact than comparable products on the market. Its high robustness makes it particularly suitable for use in compact, mobile devices, such as defibrillators or handheld terminals for machine tools, robots, and cobots. Thanks to its water and dust proofness against the front plate, it is also suitable for use under extreme ambient conditions, e.g. in operating units of CNC machines that work with lubricants and coolants, municipal vehicles, in forestry and agriculture as well as in construction machines and their handheld terminals. In a nutshell: wherever reliable redundant signal input and detection with error recognition is essential as soon as people might enter the working range of the machine.

# **Adaptations for Special Requirements**

Thanks to a smart modular system, EBE sensors + motion offers a variety of adaptations for its rotary encoders. In this way, individual solutions for different applications can be realized. The development always concentrates on designing the best possible product for the respective operators, with a focus on quality and long service life in order to provide end users with long-lasting benefits from the customized solutions.



Picture file: ESC17\_SAFETY\_Handbediengeraet\_Industrie

Picture text: The ESC17 mini SAFETY proves itself especially in devices where

safe operation even under difficult ambient conditions is indispensable.

Picture source: adobestock.com/gen\_A



EBE sensors + motion offers the extremely handy and robust rotary encoder ESC17 mini SAFETY for small spatial conditions and special requirements to safety.

Picture source: EBE Elektro-Bau-Elemente GmbH

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# **Short Profile**

The company EBE Elektro-Bau-Elemente GmbH (brand name: EBE sensors + motion) based in Leinfelden-Echterdingen near Stuttgart develops and manufactures OEM-products in the fields of sensor technology, components for HMI-interfaces as well as actuator and mechatronics technology. The focus lies on capacitive and inductive sensors based on the technologies developed in-house and mechatronic solutions for industry, appliances, medicine and mobility. The sensor program also includes level sensors, pressure sensors, position sensors and capacitive buttons. Furthermore, EBE develops and manufactures customer-specific solenoids and robust rotary switches, buttons and encoders and adapts them to the customer requirements. The company sees itself as a competence center for the development and production of sensor systems and drive technology.

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