



**System for monitoring of detachable screw connections**

**Detecting relative rotational movements of screw nuts**

**Loosening of screw nuts is detected and registered**

**Contactless on-site diagnosis with remote monitoring**

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*50 Jahre*



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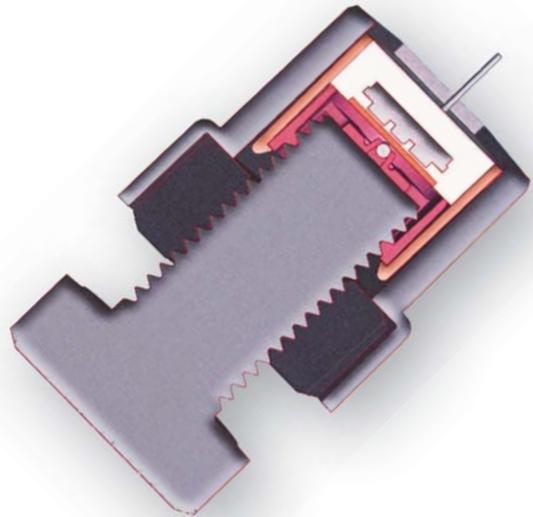
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# ScrewGuard

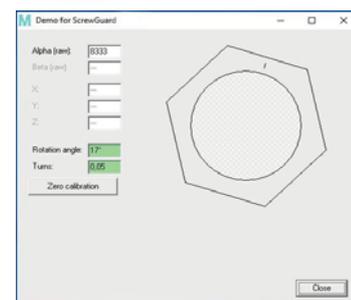
## Description:

In mechanical and plant engineering, bolts, screws and nuts are used. A firm and permanent fit of these fasteners is essential for operational safety reasons. Monitoring such facilities is often problematic and also leads to costly downtime.

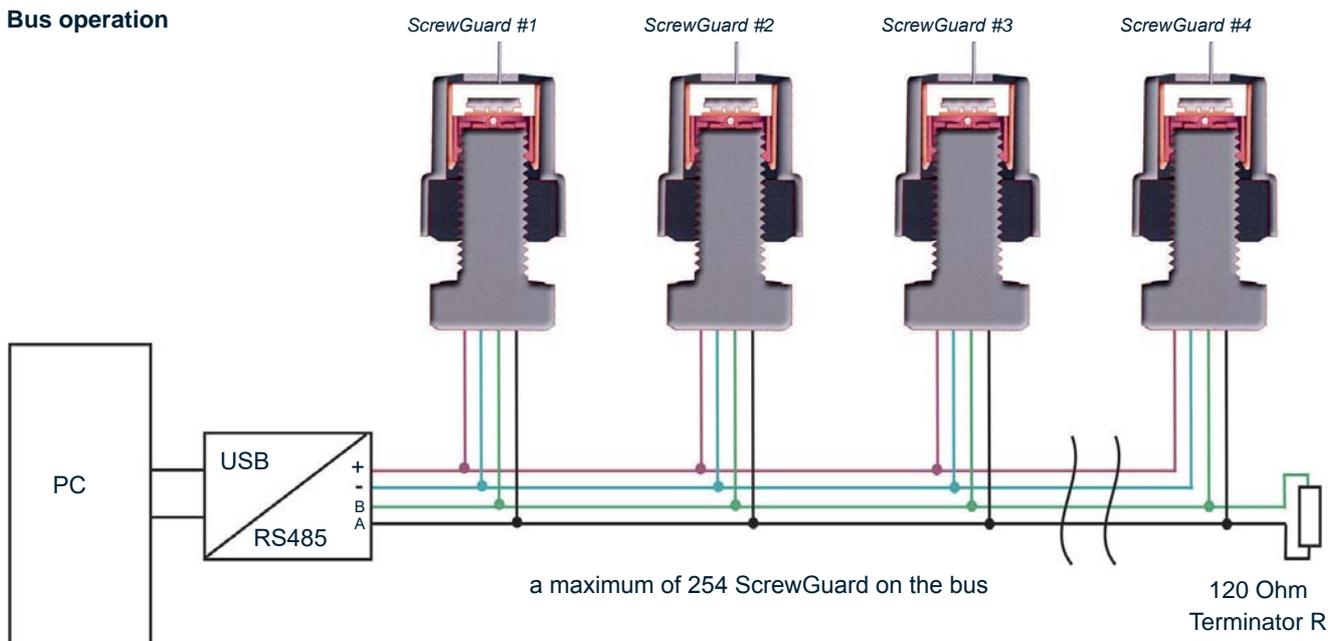
The task of the ScrewGuard is to monitor and display impermissible twists or even loosening. The status message is continuously sent to an evaluation system, which is coupled to a message unit. The requirements for a screwing in the category A hazard class, high risk assessment „Danger to life, body and environment“ and category B, medium risk assessment „malfunction/plant standstill“ of VDI 2862-1 and -2 can thus continuously be checked without any influence.



ScrewGuard for screwsize M30



## Bus operation





#### Function:

- exact angle measurement of the screw or nut (left / right rotation with 1° accuracy)
- The measurement of the angle of rotation is carried out wear-free via magnetic fields.
- large angle of rotation changes are reported via a bus system (alarm)
- operating display with green LED to check the operational readiness
- Error display with red LED makes it easier for the mechanic service person to find loose screws.

#### Construction:

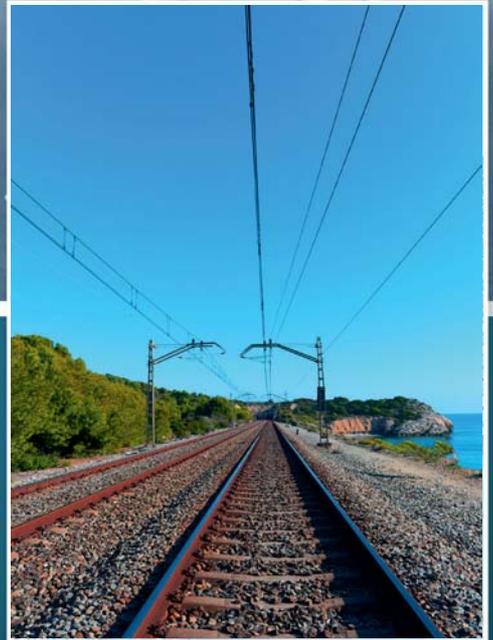
- A plastic cap with a permanent magnet is fixed on the end of the screw.
- another plastic cap is placed over the screw nut, it contains the electronics
- adaptable to different screw diameters and threads
- no interference with the screw connection, the measurement is done externally, can be retrofitted
- No on-site calibration is required during installation, just a printed serial number and the location where the screw is located.
- Up to 254 ScrewGuard can be connected to a maintenance center via a 4-core cable network.

#### Log in and monitoring the connected ScrewGuards in the maintenance center

- The serial number noted by the installer and the screw location are entered in a PC program.
- The connected ScrewGuard is automatically logged in and displayed on the screen.
- A zero calibration is carried out (the current rotation angle is considered as the set position).
- the alarm configuration can be programmed remotely (from which angle the alarm is activated, etc.)



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