

BOLTwatch®

BOLTwatch® is the reliable monitoring system for highly stressed screw connections and an inexpensive alternative instead of measuring the preload force and monitoring a joint connection.

BOLTwatch consists of a robust sensor that is placed on the head of a screw connection and fixed with M6 grub screws.

The head of the screw connection is positively received in the BOLTwatch sensor.

The underside of the sensor faces the screw-on surface and contacts the screw-on surface with two spring-loaded probe tips and an inductive sensor.

The probe tips operate 2 redundant microswitches, so that three devices that work independently of one another reliably monitor the joint.

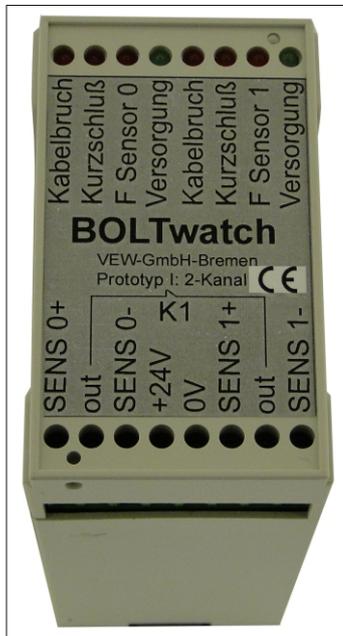
If the screw connection tears off the shaft or the head is torn off, the air gap between the sensor and the screw-on surface increases, because a disc spring placed under the screw head opens the air gap with great force.

The probe tips lift off the screw-on surface and the inductive sensor responds. The function of the monitoring devices is ordered and signaling is independent of one another.

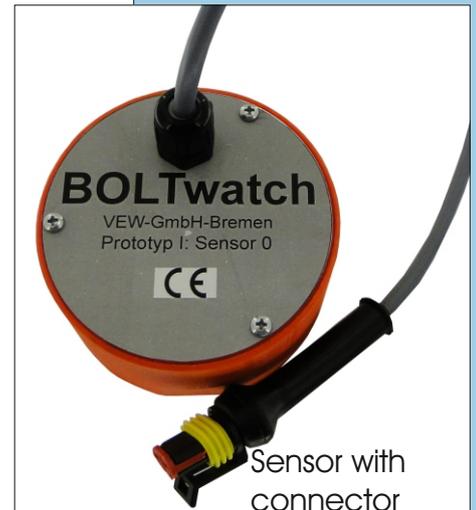
The sensor on the screw head is connected to the BOLTwatch control unit via a separable, waterproof plug connection and a 2-pin cable.

The control unit is designed for 2 or 4 sensor connections.

The sensor is supplied with an impressed current from the control unit, which is monitored for line breaks and short circuits.



Both these malfunctions and the response of the sensors to the open joint lead to selective signaling on the control unit, as well as to the dropout of a signal relay, so that a normally open contact opens. The working contacts of various control devices can be connected in series in a current loop so that the response of a sensor leads to a central message in a higher-level system.



Sensor with connector



Technical data

Sensor housing	: Plastic, depending on the wrench size. At M24 Ø 80mm
Connector	: Amphenol Superseal 2pol.
Max. cable length	: 50m, 2pol. 0,5...0,75Ø
Control unit	: 2 channels, opt. 4 channels DIN rail mounting, width 50mm
Supply	: nom. 24V DC, range 18...36V
Measuring circuits/supply:	galvanically separated, relay contact 1pol. opener
LED indicators	: green: U _b OK; red: Line break short circuit, sensor triggered;
Optional other versions, depending on the installation conditions and wrench size	



DIE ENTWICKLER

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