perma KNOW-HOW

Data security of perma BLUETOOTH lubrication systems

PHYSICAL BARRIER

- Bluetooth connection is only possible within a short range of the lubrication system (approx. 30 m)
- Unconfigured lubrication systems feature an even lower transmission power, shortening the connection range to approx. 1 m

DIFFERENT INFORMATION LEVELS

1st level: Basic information only (i.e. discharge period setting, fill level, LC size, drive status); Information is also visible on the LCD display of the drive

2nd level: Exchange of encrypted drive data from the lubrication system via Bluetooth connection

3rd level: PIN protected change of settings only

ONBOARDING PROCESS

- Lubrication systems are operated with class 3 (range < 1 m) during initial configuration
- PIN (stored in µ-controller) is mandatory for initial configuration
- After initial configuration, the lubrication system displays defined data at specified intervals
- Configuration can only be changed with PIN

PENETRATION TEST

perma bluetooth lubrication systems passed a penetration test run by RedTeam Pentesting GmbH
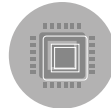
HARDWARE

Micro controller is separated from Bluetooth communication module

Micro controller

- Contains the lubrication system program
- Incorporates configuration
- Saves relevant data
- Connects to Bluetooth communication module via serial interface
- Can be password protected

Communication module

- Contains predefined settings
- Uses peripheral terminal I/O server connection (SPP-like)
- Establishes the Bluetooth connection
- Uses LE Secure Connection with 128bit AES encryption

SOFTWARE

- Disables OTA mode for Bluetooth module
- Grants encrypted communication protocol
- Enables PIN-protected change of settings via Bluetooth
- Places timeout for Bluetooth connection
- Allows basic functionality of lubrication system without Bluetooth communication

The Expert in Lubrication Solutions

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