



Xport® Star Vario Long Range Lubrication System

Data security of Xport Long Range lubrication systems



Different Information Levels

1st level:

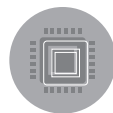
Basic information only (e.g. discharge period setting, fill level, LC size, drive status); information is also visible on the LCD display of the drive

2nd level:

Exchange of encrypted drive data from the lubrication system via LoRa® radio protocol

3rd level:

Settings can only be changed during an active LoRa® session



Hardware

Micro controller is separated from LoRa® communication module

Micro controller

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

Communication module

- Contains predefined settings
- Connects to the LoRa® network and exchanges data within the network
- Uses 128-bit AES end-to-end encryption



Software

- Triggers communication via LoRa®
- Allows basic functionality of lubrication system without LoRa® communication



Onboarding Process

- A unique AppKey for each device (stored in the microcontroller) is required for the device to register with the server
- The AppKey generates session keys which are needed for further communication between the drive and the server



Penetration Test

perma Long Range lubrication systems passed a penetration test run by RedTeam Pentesting GmbH

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