



Franz Kaminski Waggonbau GmbH

We will take you further.

Specifics:

- easy to assemble and easy to use
- ATEX accreditation
- IR device for data import and export
- display with kilometer reading and date of the last IS 2
- vehicle log
- long battery durability
- high level of data security
- easy to handle software tool
- temperature measurement

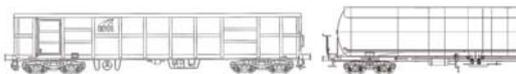


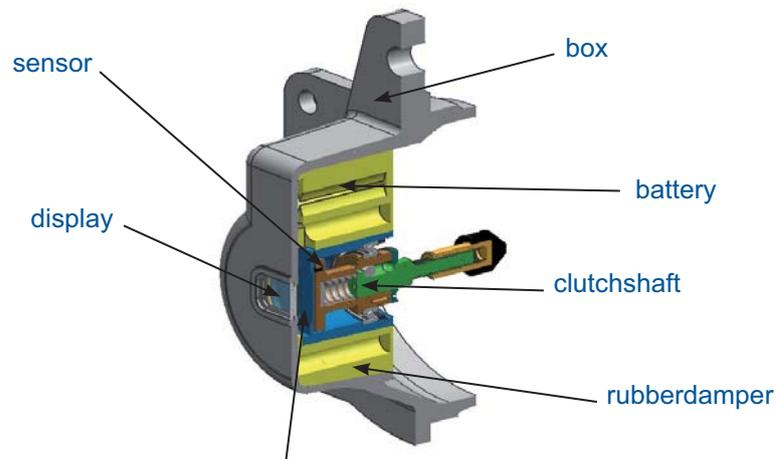
The LLZ V2

The multifunctional device
for the supervision of
freight and tank cars



The Franz Kaminski Waggonbau GmbH has developed a electromechanic kilometer counter, which could be assembled instead of the standard axle box cover. In comparison with a mechanic kilometer counter, it offers a lot more functionalities, which adds a big value for the user of the LLZ V2.





Function principle:

A clutch shaft is pressed on the center hole of the wheelset by a spring. This forms a force fit connection between the LLZ and the wheelset. With every rotation there is generated a pulse. From this pulses the electronic calculates the exact kilometric performance.

Functions of the LLZ V2:

- **maintenance informations:** Recording of the accumulated travelled kilometers and the dates of the last maintenances. With that informations the maintenance schedule could be optimized.
- **additional informations:** The LLZ records the maximum temperature of the roller-bearing axle box and it also records the maximum speed of the railway car.
- **vehicle log:** Recording of the kilometers travelled. In the vehicle log, the dates are connected with the driven kilometers. So the kilometers where exactly documented for each single day.
- **electronic passport:** Data storage, with individual informations about the railway car. This informations could include the keeper, dangerous good informations and other informations, that are defined in the TAF TSI requirements.

Unique features of the LLZ V2:

- Readout could be done alternatively manually with a display or automatically with a computer and an infrared device.
- The durability of the battery is about 6 years. In this period, there is no battery exchange necessary.
- The LLZ is certified for use in the ATEX Zone 1.

Outlook to the version LLZ V3:

Currently we develop a version of the LLZ that has an stand-alone electric power supply by the use of an generator. This version could use an GPS module to identify its position and transfer it to an server. Additi-onally it can detect hot boxes and derailings.

Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages