Wabtec CORPORATION

RAILCAR TELEMATICS

RAILCAR
SENSOR

Monitor the status of railcar assets.

REAL TIME MONITORING OF RAILCAR STATUS

Today, there is no real-time visibility into the status and health of over 90% of the estimated 5.2 million railcars worldwide. Equipping these freight cars with telematics, GPS, and sensor technologies enables customers to capture the hidden information and turn it into actionable data that is transformative to the customer experience and supply chain efficiency.

Wabtec's Railcar Sensor, part of the Railcar Telematics portfolio, is a battery-powered sensor with a lifetime of 10 years that can measure movement, tilt on 3 axes, and the presence of a magnet. It is the perfect sensor to mount on hand brakes, hatches, doors, bottom gates, manlids and other objects to report their on/off or open/close status every minute.

APPLICATIONS & BENEFITS

Open Hatches and Doors: Continuously monitors the state of doors/hatches, eliminating contamination risk and increasing security.

Handbrake On: Automatically notifies of irregular condition, eliminating car wheels being dragged and the resulting damage to wheels, brake system, and rails.
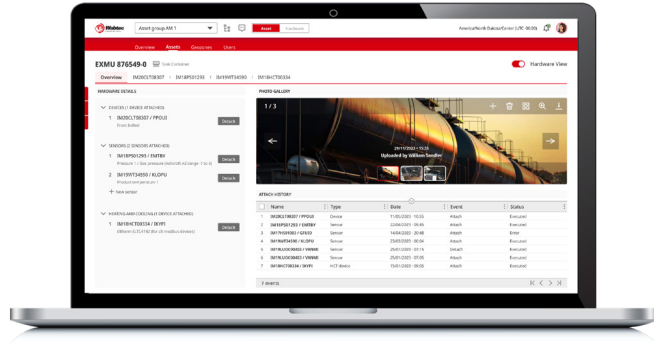
Loaded/Unloaded: Provides real time status to increase operational efficiency and asset utilization.

Bottom Gate Status: Prevents cargo loss and ensures optimal aerodynamics.

FEATURES

- **Battery life**: 10 years
- **Large Internal Memory**: Buffering of more than one month of measurements
- **Wide Operating Temperature Range**: -40°F to185°F (-40°C to 85°C)
- **IP Protection Class**: IP67, IP66K

MECHANICAL

- **Dimensions**: 5x2x1 in (126x52x29 mm)
- **Weight**: 3 oz (92 g)
- **Enclosure**: Durable glass filled nulon housing.
- **Mounting**: Riveted or bolted to a surface. Mounted with a steel heavy duty cable tie to pipes and other round surfaces.

INTERNAL SENSORS

- **Three-Axis Accelerometer**: To measure movement and detect tilt on three axes, enabling the sensor to measure if a handbrake is on/off or that hatches, bottom gates or manlids are open/close.
- **Magnetic Sensor**: To detect a close by magnet for open/close door status and similar applications where tilt measurement alone is not a solution.

CONTACT US

30 Isabella Street
Pittsburgh, PA 15212 - USA
Phone: 412.825.1000
Fax: 412.825.1019

COMMUNICATIONS

- **RF Transmitter**: multi-protocol (Bluetooth, IEEE 802.15.4) 2.4 GHz transceiver, ITSS IF2 ready.
- **Data Security**: Sensor data on the server is processed conforming to the ISO 27001 and ISO 27017 data security standards.
- **Remote Update**: The sensor firmware can be updated over-the-air.

APPROVALS

- Certification in accordance with ARR S-2045
- IECEx International Standards applied for explosion protection:
  - IEC 60079-0: 2017
  - IEC 60079-11: 2023
  - II 2 G Ex ib IIC T4 Gb
  - Ex ib IIIC T135 oC Db
  - Ta: -40°F to 140°F (-40°C to +60°C)
- ATEX Z1 T4 certification
  - Intrinsic safety explosion protection
  - II 2 G Ex ib IIC T4 Gb
  - EN IEC 60079-0: 2018
  - EN 60079-11: 2012
  - Ta: -40°F to 140°F (-40°C to +60°C)