

5L next –  
next generation of  
freight wagons.

SAVVY® LoadCell-Ex - on-board  
weighing of rail freight car.

SAVVY® TELEMATIC SYSTEMS AG

# SAVVY® LoadCell-Ex.

## On-board weighing of rail freight car.



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### 5L next – next generation of freight wagons.

Market changes, such as the fast-paced innovation on the roads or rising customer demands, are posing major challenges for European rail freight companies. But opportunities opened up by new technology offer great potential for developing the efficiency of freight services.

Innovative freight wagons are key to being able to take full advantage of the Internet of Things (IoT) and automation. As part of the 5L initiative, SBB Cargo, Hupac, VTG and the Federal Office for the Environment (FOEN) as well as many suppliers are developing the next generation of freight wagons.

The next generation is being completely redesigned. The chassis, for example, is considerably lighter than that of a conventional standard flat wagon. The middle segment is not welded but riveted and bolted – just like the light-weight production methods from the lorry sector. SBB Cargo's extensive modernisation steps offer major benefits for customers, wagon keepers, railway undertakings and infrastructure. Find out more at [www.sbbcargo.com/innovation](http://www.sbbcargo.com/innovation)

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**SAVVY® LoadCell-Ex is a weighing sensor with which the payload of a freight car can be determined on-board. Applications such as exact weighing, overload detection or wagon availability after unloading are possible - even in hazardous areas.**

The measuring principle of the LoadCell-Ex is based on strain measurement. When the wagon is loaded, the load generates a strain in the supporting structure of the bogie. This strain is detected by the sensor and transmitted with the SAVVY® SenseGateway-ExR via an ITSS IF2 standard radio interface (2.4GHz) to the telematics on the wagon. The CargoTrac-ExR-M1 telematics transmits the data via the LTE CAT M1 mobile network to the web-based SAVVY® Synergy Enterprise Portal. In the portal, the data is clearly prepared or can be queried via interfaces thanks to ITSS IF 1 conformity. The LoadCell-Ex is mounted via a simple clamp directly on the Y25 bogie or similar. No welding, drilling or gluing is necessary, so the time required is minimal.

SAVVY® LoadCell-Ex, SenseGateway-ExR and CargoTrac-ExR-M1 meet the European ATEX Directive 2014/34/EU and the international IECEx requirements. The devices may be used together in Zone 1 and 2 hazardous areas for gases up to Group IIC T4 (e.g. hydrogen), and in Zone 21 and 22 for Group IIIC dusts.

### Company.

SAVVY® is a leader in innovative telematics, sensor and software solutions that make an important contribution to digitisation in the chemical and logistics sectors. SAVVY® combines high-tech telematics system solutions for use on rail freight cars, (tank) containers, IBCs and in vehicles or machines with highly developed telematics technology and a process-oriented state-of-the-art portal (SAVVY® Synergy Enterprise). SAVVY® is part of the SDAX-listed INDUS Holding AG Group ([www.indus.de](http://www.indus.de)) and thus offers its customers unique financial stability as investment protection and absolute neutrality in data management

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