

MULTIRAIL® Train Scale


- Legal-for-trade dynamic and static weighing of rail vehicles
- Dynamic system includes static reference scale
- Monitoring of wheel/axle loads and load distributions during transit
- Installation without rail gaps and foundation

Application

MULTIRAIL is a unique static / dynamic weighing system designed for the weighing of rail vehicles with solid or liquid loads.

The precise MULTIRAIL measuring technology permits the weights of train wagons of almost any type to be acquired accurately and legal-for-trade (in accordance with OIML R106-1). Statically, highly accurate check weighings can be performed. For dynamic verification, the weighing system is used as a static reference scale.

In addition, the MULTIRAIL system is optimally suited for the monitoring of wheel, axle and wagon weights as well as for centre of gravity positions of wagons.

Equipment

Specially developed for MULTIRAIL, the concrete weighing sleeper is equipped with high-precision strain-gauge weighbeams. Designed to transmit all forces and moments, these weighbeams measure the vertical force component with a high degree of accuracy.

The MULTIRAIL weighing system can be integrated into the rail with or without a gap. Installed with continuous rails, MULTIRAIL can operate legal-for-trade at weighing speeds up to 20 km/hr. When not weighing, MULTIRAIL can be passed over at the speed admitted for the relevant track section.

Weight values and associated data are acquired and processed with the use of weighing electronics and customized PC systems.

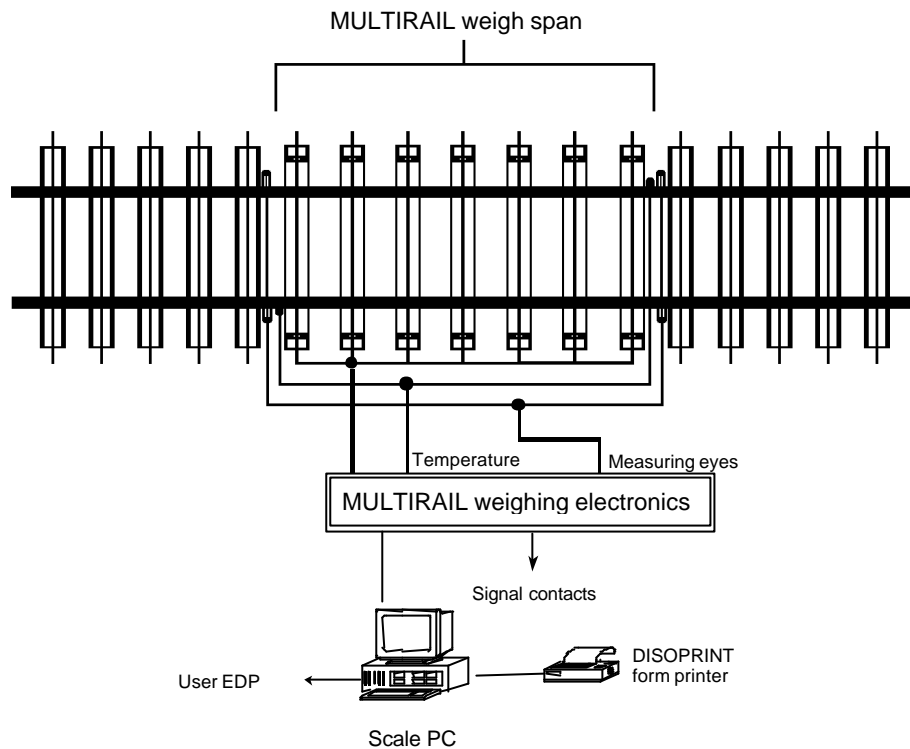
Function

MULTIRAIL offers the following basic functions:

- Acquisition and output of wagon weights (first, second, single, and tare weighing)
- Monitoring of wagon weights
- Legal-for-trade printout and storage of weigh data

Optionally, further functions are available:

- Axle load monitoring
- Wagon type identification
- Fully automatic weighing sequence
- Speed acquisition
- Wagon centre of gravity monitoring
- EDP / BDE system interfacing
- Wireless, legal-for-trade data transmission
- Hand-held terminal for wagon data acquisition



Technical Data

Weighing rail profile, track width and tie spacing	As used in existing track section
Weighing system length	Typ. approx. 5 m weigh span *) Typ. approx. 45 m measuring area *)
Weighing range	Typ. 100 – 150 t
Weighing mode	Static and dynamic
Weighing accuracy	Static: +/- 0.1 % as reference scale Dynamic (legal-for-trade): In accordance with Verification Act, Verification Ordinance and OIML R 106-1 Class 0.5, or 1, for single wagon weight Class 0.5 for total train weight
Weighing speed range	Up to 20 km/hr, higher speeds upon request
Transit speed	Unlimited
Temperature range	Scale mechanics: -30 to +70°C
Approvals	PTB-R60, PTB-R106, EBA, DB-AG
Track base stabilization	Ballast bonding technology *)
*) depending on individual application	



Measuring and Process Systems
 SCHENCK PROCESS GmbH
 D-64273 Darmstadt
 Phone: +49 (0) 61 51-32 10 28
 Fax: +49 (0) 61 51-32 11 72
 E-Mail: sales2.process@schenck.net
 www.schenck-process.net



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