

## OIML CERTIFICATE OF CONFORMITY

Issuing authority: **National Measurement Office**

Person responsible: **Paul Dixon – Product Certification Manager**

Applicant: **Avery Weigh-Tronix Ltd  
Foundry Lane  
Smethwick  
West Midlands B66 2LP  
United Kingdom**

Manufacturer: **The applicant**

Identification of the certified pattern: **Railweight TSR4000**

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organisation of Legal Metrology (OIML):

**OIML R 106 - Edition 1997(E)**  
for **accuracy class**: 0.5 (coupled wagons) or 0.2 (total train)

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

This revision replaces earlier versions of the certificate.

**Issue Date:** 26 July 2011  
**Reference No:** T1106/0017

  
**Signatory:** P R Dixon

**BIS**

Department for Business  
Innovation & Skills

Important note: Apart from the mention of the certificates reference number and the name of the OIML Member State in which the certificate was issued, partial quotation of the certificate or of the associated test report is not permitted, though they may be reproduced in full.

The conformity was established by tests described in the associated test reports TR 518 which includes 45 pages and TR 594 which includes 13 pages, and pattern evaluation checklist F20221 which includes 13 pages.

**Characteristics of the instrument:**

Accuracy class	≥ 0.5 (coupled wagon weighing)
	≥ 0.2 (total train weighing)
Maximum operating speed	≤ 10 km/h
Minimum operating speed	≥ 0.1 km/h
Maximum wagon weight	≤ 120,000 kg
Minimum wagon weight	≥ 6000 kg
Scale interval	≥ 20 kg
Maximum capacity	≤ 33,000 kg (per axle)
Minimum capacity	≥ 3,000 kg (per axle)
Transducer type	Weighline, E <sub>max</sub> = 15,000 kg
Max. no. of weighline transducers	16 (8 pairs)
Max. number and type of wagons per train	Determined at verification
Direction of weighing	Bi-directional (train pushed/pulled)
Power supply	90/230 VAC, 50 Hz 115/230 VAC, 47-63 Hz (with Advantech PCI-6873 motherboard and an Enhance 200W Micro ATX power supply unit)
Operating temperature range	- 10 °C to + 40 °C

Alternatively, any compatible load cell(s) may be used providing the following conditions are met:

- There is a respective OIML Certificate of Conformity (R60) for the load cell.
- The certificate contains the load cell types and the necessary load cell data required for the manufacturer's declaration of compatibility of modules, and any particular installation requirements. A load cell marked NH is allowed only if humidity testing to R106 has been conducted on this load cell.
- The compatibility of the load cells and indicator is established by the manufacturer by means of a compatibility of modules calculation.
- A standard load transmission device must be used.

The following technical characteristics shall then be considered:

Excitation voltage:	17.5 V DC
Minimum input impedance (per channel):	93.75 $\Omega$
Minimum input signal per scale interval:	17.5 $\mu$ V

### Certificate History

ISSUE NO.	DATE	DESCRIPTION
R106/1997-GB1-07.01	28 October 2010	Certificate first issued.
R106/1997-GB1-07.01 Revision 1	13 April 2010	Capacity increased to 16,500 kg per wheel.
R106/1997-GB1-07.01 Revision 2	24 February 2011	Alternative motherboard and power supply unit.
R106/1997-GB1-07.01 Revision 3	26 July 2011	General acceptance of load cells criteria added.