NMO	OIML Certification System
OIML Member State United Kingdom of Great Britain and Northern Ireland	**OIML Certificate No.** **R134/2006-B-GB1-18.01**

OIML CERTIFICATE ISSUED UNDER SCHEME B

OIML Issuing Authority	**NMO** **Stanton Avenue** **Teddington** **TW11 0JZ** **United Kingdom**
Person responsible:	**Mannie Panesar – Head of Technical Services**
Applicant	**Intercomp Company** **3839 County Rd 116** **Medina MN 55340** **United States**
Manufacturer	**The applicant**
Identification of the certified type	**LS-WIM** *(the detailed characteristics are defined in the Descriptive Annex)*

This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 134, Edition: 2006

For accuracy class: 2 E

The OIML Issuing Authority

Issue date: 22 August 2018

G Stones
Technical Manager
For and on behalf of the Head of Technical Services

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

No. P02153 dated 22 August 2018 that includes 12 pages

The technical documentation relating to the identified type is contained in documentation file:

No. P02153-D dated: 22 August 2018

OIML Certificate History

Revision No.	Date	Description of the modification
0	22 August 2018	OIML Certificate first issued.

No revisions have been issued.

Important note:
Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.

DESCRIPTIVE ANNEX

Introduction

The Intercomp LS-WIM system is an instrument used for dynamic axle weighing of road vehicles in motion. The weighing system shall be permanently installed according to manufacturer's guidelines in a controlled weighing area, and shall adhere to the installation requirements of OIML R134:2006(E).

An interlock prevents weights being stored or transmitted if the maximum operating speed is exceeded.

The instrument may be used for the determination of gross vehicle weight or single axle loads, or both.

The system comprises a weighing platform housing four load cells connected to either the Intercomp LS20 digital indicating device, or the Intercomp WIM4 weighing module connected to a PC running the WIM software.

Characteristics of the instrument:

Accuracy class for total vehicle mass	2
Accuracy class for single axle loads	E
Maximum capacity	≤ 20,000 kg
Scale interval (d)	≥ 20 kg
Minimum capacity	10 d
Number of scale intervals	≤ 1,000
Maximum speed	8 km/hr
Direction of travel	Single
Operating temperature range	-20 / + 60 ^{0}C
Power supply	100 - 240 V A.C (50 / 60 Hz)

Indicator types:

The LS20 indicator has the following features:
- ABS plastic enclosure
- LCD display
- Function keys
- Ports for interfaces

The WIM4 weighing module has the following features:
- ABS plastic enclosure
- Ports for interfaces

Technical characteristics of the indicators:

Maximum number of scale intervals	10,000
Load cell excitation voltage	3.3 V
Minimum load cell impedance	29 Ω
Maximum load cell impedance	1,100 Ω
Minimum input voltage per verification scale interval	1 μV
Measuring range minimum voltage	0 mV
Measuring range maximum voltage	20 mV
Fraction of maximum permissible error	0.5
Operating temperature range	-20 / +60 ^{0}C
Load cell connection	6 wire
Load cell cable length (junction box to indicator)	Up to 100 meters

Note: Load cell cable length defined by manufacturer. Load cell cable must be installed in such a way that it is not succeptible to power surges i.e. lightning protection is considered.

Interfaces:

The instrument may have the following interface types:

- USB (LS20 only)
- Ethernet (WIM4 only)
- RS232 output
- Induction loop input
- Relay output

Load cell:

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

- There is a respective OIML Certificate of Conformity (R60) issued 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 R134 has been conducted on this load cell.
- The compatibility of the load cells and indicator is established by the manufacturer by means of the compatibility of modules calculation at the time of verification.
- The load cell transmission conforms to a standard type.

Software:

LS20:
All software is embedded and held on the LS20 indicator. Software changes are impossible without gaining access to the internal PCB. Software identification is shown at boot-up and for verification purposes must be as follows:

LS20 CPU Version: 3.xx

Where any 'x' may be any numerical value 0-9 and denotes non-legally relevant changes.

Legally relevant parameters can only be changed by first placing a jumper directly on the internal PCB.

The LS20 is capable of storing measurement data for future processing.

WIM4:
The WIM4 weighing module filters and digitises the signal from the load cells. This software is embedded and held on the WIM4 weighing module. Software changes are impossible without gaining access to the internal PCB. Software identification is shown on the WIM software "splash" screen and for verification purposes must be as follows:

WIM4 CPU Version: 3.xx

Where any 'x' may be any numerical value 0-9 and denotes non-legally relevant changes.

Legally relevant parameters can only be changed by first placing a jumper directly on the internal PCB.

The WIM4 must be connected via ethernet to a PC which has the following minimum hardware requirements, running WIM software. The PC running WIM software handles the control and indication of measurement results, and is capable of storing measurement data for future processing.

Minimum hardware requirements:

Operating system	Windows 7, 8, 10
RAM	1 GB
Processor	Intel Pentium 4 or equivilant
Hard disk capacity	100 MB
Screen resolution	1366 x 768
Communication ports	1 x Ethernet

WIM software:
The WIM software handles the display of legally relevant indications and control functions. An MD5 checksum is calculated over the entire software executable. The software identification is shown on the "splash" screen and is as follows for verification purposes:

Software Version: 1.0.0.0
Checksum: 16B83EF0F9AB1531EA3F324C89405A

SPP API Version: 1.15.0.0
Checksum: A7609D6B3276DBC62370241EE3D4B120

Any changes to legally relevant parameters on the WIM software are recorded in the "Change Log". The "Change Log" is displayed by selecting the "Review" tab at the top of the home screen.

Sealing:

Access to the electronics and jumper protecting the legally relevant parameters of the indicators is prevented by securing the enclosure with a physical seal bearing a securing mark.

Load cells are secured to the indicator with a physical seal bearing a securing mark.

Alternatives:

There are currently no authorised alternatives.