

	
OIML Member State United Kingdom of Great Britain and Northern Ireland	OIML Certificate No. R76/2006-A-GB1-19.08
OIML CERTIFICATE ISSUED UNDER SCHEME A	
OIML Issuing Authority	NMO Stanton Avenue Teddington TW11 0JZ United Kingdom Person responsible: Mannie Panesar – Head of Technical Services
Applicant	Rice Lake Weighing Systems 230 W. Coleman Street Rice Lake WI 54868 USA
Manufacturer	The applicant
Identification of the certified type	920i and 820i Series <i>(the detailed characteristics are defined in the Descriptive Annex)</i>
<p>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):</p> <p>OIML R 76-1, Edition: 2006</p> <p>For accuracy class: III and IIII</p>	
<p>Issue date: 02 May 2019</p> <p>The OIML Issuing Authority</p>  <p>Grégory Glas Lead Technical Manager <i>For and on behalf of the Head of Technical Services</i></p>	

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. P02517 dated 02 May 2019 that includes 16 pages

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

No. P02517-D dated 02 May 2019

OIML Certificate History

Revision No.	Date	Description of the modification
Revision 0	02 May 2019	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

Characteristics of the instrument:

This family of desktop indicating devices, designated the 920i, is designed to be used as part of a single or dual-interval, Class III or IIII, non-automatic weighing instrument. The indicators are self-indicating and mains-powered. The indicators are not designed for direct sales to the public.

Main features:

The indicator housing is fabricated from stainless steel plate. The front panel has a backlit LCD display and a twenty-seven key keyboard, five of the twenty seven keys are programmable software keys.

The keys have the following functions:

Clear CLR -	clears key entered information.
Zero -	sets the weight display to zero (weight values $\leq 4\%$ of max capacity) and cancels any tare operation.
Gross/Net -	toggles the current weight indication to be displayed in gross or net weight values.
Tare -	used to enter pre-set tare values or semi-automatic subtractive tare weights.
Units -	toggles between weighing units.
Print -	prints the stable weight information.
UP, DOWN, LEFT, RIGHT and ENTER -	navigation keys
0-9 numeric keys	
Decimal point key	

The LCD also displays the following enunciators to indicate:

Stability
Centre zero
Gross or Net
Scale number
Weighing unit (kg, g)
Semi automatic tare
Preset tare

The LCD displays the primary weight information, the characters of the weight display shall be at least 9.5mm high.

The indicator can be fitted with a two-card expansion board, and may be fitted with any of the following optional cards:

Single or dual channel A/D card
Single or dual analogue output card
Dual channel serial expansion card
24 channel digital I/O card
Memory expansion card
Pulse input card
Bus interface card (optional modules for EtherNet/IP, DeviceNet, Profibus DP or ControlNet interface)
Ethernet interface card

Remote I/O interface card
Analogue input card

Devices:

- Semi-automatic zero setting device ($\leq 4\%$ of Max)
- Zero-tracking device ($\leq 0.5d/s$ within 4% Max)
- Semi-automatic subtractive tare balancing device
- Gross and Net Indicator
- Pre-set tare device
- Display test device
- Time and date function
- Gravity compensation
- Toggle between gross and net

Interfaces:

- Load cell connection
- RS232
- RS485
- Analogue output
- 20 mA current loop
- 24 channel digital I/O
- Pulse input interface
- Bus interface (Optional EtherNet/IP, DeviceNet, Profibus DP or ControlNet)
- Ethernet
- Analogue input
- Remote I/O interface

Technical data (indicator):

Power supply	115 VAC or 230 VAC, 50/60 Hz 10 - 60 V DC
Maximum number of scale intervals	6,000 (Class III), single or dual interval 1,000 (Class III), single or dual interval
Maximum Tare value	- Max
Maximum Preset Tare value	- Max (single interval) - Max ₁ (dual interval)
Load cell excitation voltage	± 5 VDC (10 VDC)
Minimum load cell impedance	21.875 Ω
Maximum load cell impedance	2000 Ω
Minimum input voltage per verification scale interval	1 μ V
Measuring range minimum voltage	-10 mV
Measuring range maximum voltage	70 mV
Fraction of maximum permissible error	$P_{ind} = 0.5$
Operating temperature range	-10°C to +40°C
Load cell cable	6 cores around PVC filler in centre, tinned copper braid, flexible PVC overall jacket. Maximum length = 100 m for 4-wire operation

Maximum cable length for 6-wire operation				
Load Cell Impedance ¹	Cable size			Unit of length
	0.2 mm ²	0.5 mm ²	1.0 mm ²	
22 Ω	14	33	71	Metres
44 Ω	28	66	142	Metres
87 Ω	56	133	283	Metres
350 Ω	224	535	1134	Metres

¹ calculated by dividing the single load cell impedance by the number of load cells

Software:

The software is held in firmware on the circuit board, and has the identification number V2.xx, with xx reflecting non-legally relevant changes. The software version number is displayed at power-up and by selecting Menu/Audit.

Download of software is prevented by sealing the enclosure and the access ports (if any).

Access to the legally relevant parameters is prevented by hardware or software sealing: see Section Sealing and Section Alternatives respectively.

Sealing:

The data plate will be mounted on the indicator in such a manner that it is easily accessible and clearly visible in its regular operating position. The data plate shall be impossible to remove without it being destroyed.

Screws are used to fix the back plate to the front of the indicator, two of the screws have a hole through their heads so that a wire and lead seal can be fixed between them to prevent their movement, and this prevents access to the control PCB. Another large screw is used to prevent access to the set-up/calibration button; this too has a hole through the screw head so that a wire and lead seal can be used to prevent movement.

Components that may not be dismantled or adjusted by the user will be secured by a wire and lead seal and securing mark. The securing mark may be either:

- a mark of the manufacturer and/or manufacturer's representative, or
- an official mark of a verification officer.

Alternatives:

Having the 920i Universal mount model, which has the same enclosure as the desktop model. The universal model has the same functionality as the desktop model. There are two option card slots, each slot can handle a dual channel A/D converter board. This allows four scales to be connected to this model.

Having the 920i Panel mount model, which can be fitted with a two-card expansion board and has the same functionality as the desktop model. There are four option card slots, each slot can handle a dual channel A/D converter board. This allows eight scales to be connected to this model.

Having the 920i Wall mount model, which can be fitted with one or two six-card expansion board and has the same functionality as the desktop model. There are eight option card slots, each slot can handle a dual channel A/D converter board. This allows sixteen scales to be connected to this model.

Having the 920i indicator manufactured by:

Applied Weighing International Ltd
Unit 5, Southview Park
Marsack Street
Caversham
Reading RG4 5AF
United Kingdom

S&P Waagetchnik GMBH
Auf Dem Hoehchen 3
Oberhonnefeld
DE 56587
Germany

Having the 920i Deep Enclosure model, which is exactly like the Panel mount except it will be in a stainless steel IP66 (water resistant) enclosure and will be able to sit on a desk like the universal model. The Deep Enclosure model has the same functionality as the desktop model. There are four option card slots, each slot can handle a dual channel A/D converter board. This allows eight scales to be connected to this model.

Having the indicator designated the 820i. The 820i is the same as the 920i Universal and Panel Mount indicators, with the exception that the 820i has a one-card expansion board and can only handle alphanumeric characters. There may be one or two A/D converters mounted on the CPU Board. This allows one or two scales to be connected to the 820i at one time.

Having a modified software to allow the following functions:

Software sealing

The indicator may be sealed via password + counter as an alternative to the physical sealing described above. Access to the editable legally relevant parameters must be password protected, and any change to these parameters results in the non-editable counter incrementing by one count. The counter is designated "Audit counter" and can be displayed on the instrument by selecting Menu/Audit. The counter's designation and value must be written on a tamper-evident label located on or near the rating plate.

Alibi memory

The alibi memory, when enabled, automatically records all transactions when a print-out command is sent. It records all the information required to identify the measurement (identical to the information found on the print-out), as well as a unique alibi transaction number. This information can be printed on demand.

When the memory is full the first 25% of records are automatically deleted, it is the responsibility of the user to ensure sufficient storage capacity for the intended use.

The alibi memory is automatically enabled when the OIML mode is selected (legally-relevant parameter protected as per sections Sealing or Software Sealing).

Multi-interval/Multi-range operation

The instrument may be configured to operate as multi-interval or multi-range, with a maximum of 3 partial ranges.

Truck modes

The truck modes are used to handle “weigh in/weigh out” operations. Truck ID and Preset tare are allowed under certain modes. The truck register stores the information automatically, data may be automatically deleted from the register following a print-out.

Modes 5 and 6 are not allowed to complete a transaction if the weight out is greater than the weight in (negative Net) and would result in “Illegal Weighment” being displayed.

Preset tare and recalled weights must be identified as such on the print-out.

Local/remote operation

The instrument may be configured for local/remote operation, in which case the remote indicator’s operation is limited to Zero, Tare, Gross/Net and Units keys. Other commands via hard or soft keys are only active on the local indicator. Both local and remote displays must show identical information.

Multi-scale and totalisation

The indicator may be connected to up to 4 scales (920i) or 2 scales (820i). The display and markings shall be modified accordingly.

The totalised (live) weight may also be displayed and shall be clearly identified.

The individual weights and/or total shall be clearly identified if a printout is produced.