

Issued by NMI Certin B.V.

In accordance with WELMEC 8.8 2017, EN 45501:2015, OIML R 76-1 (2006)

Producer Rice Lake Weighing Systems  
230 West Coleman Street  
Rice Lake, WI 54868  
United States of America

Measuring instrument An **Indicator**, tested as a part of a weighing instrument.

Type : 680-2x; 680-2x-E;  
682-2x; 682-2x-E  
(x = A or D, for AC/DC respectively DC/DC power supply)

Further properties are described in the annexes:

- Description TC11562 revision 5;
- Documentation folder TC11562-4.

An overview of performed tests is given in the annex:

- Description TC11562 revision 5.

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Remark This revision replaces the earlier versions, including its documentation folder.

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## 1 General information about the indicator

All properties of the indicator, whether mentioned or not, shall not be in conflict with the standard mentioned in the certificate.

This certificate is the positive result of the applied voluntary, modular approach, for a component of a measuring instrument, as described in WELMEC 8.8. The complete measuring instrument must be covered by relevant metrological certification that is valid in the country where the instrument is put into use.

### 1.1 Essential parts

Number	Pages	Description	Remarks
11562/4-01	3	Main board 680	Including parts list
11562/4-02	3	Main board 682	Including parts list
11562/5-01	6	Alternative Main board 680	Including parts list
11562/5-02	6	Alternative Main board 682	Including parts list

EMI protection measures:

- All cables shield connected to ground;
- The indicator is built in a metal enclosure.

### 1.2 Essential characteristics

Model	680	682
Configuration	Analog load cells	
Accuracy class	OIML R 76 $\textcircled{\text{III}}$ or $\textcircled{\text{III}}$	
Weighing range(s)	Single interval	Single interval Multi-interval Multiple range
Maximum number of scale intervals	$n \leq 10000$	
Maximum number of weighing ranges	1	3
Load cell excitation voltage	10 V DC	
Minimum signal input voltage	$U_{\min} = 0 \text{ mV}$	

Minimum input voltage per verification scale interval	1 $\mu$ V	
Minimum load cell resistance	43 $\Omega$	
Maximum load cell resistance	1050 $\Omega$	
Fraction of the maximum permissible error	0,5	
Load cell connection	6-wire with sense technology, may be configured as 4-wire	
Maximum value of the cable length per cross wire section between the indicator and the junction box or load cells	1320,4 m/mm <sup>2</sup> In case a 4-wire connection is used the load cells are connected directly without junction box	
Temperature range	-10 °C / +40 °C	
Power supply voltage	100– 240 V AC 50/60 Hz or 9 – 36 V DC	
Software identification (Version number)	1.xx.xx (xx= 00.. 99)	2.xx.xx (xx= 00.. 99)

#### Software:

- The identification number of the legally relevant software will be displayed after pressing the following keys:
  - 'MENU', 'TARE', 'TARE'.
- The indicator has embedded software.

#### List of legally relevant functions for all types of weighing instruments:

- Determination stability of equilibrium;
- Zero indicating;
- Semi-automatic zero-setting;
- Initial zero-setting;
- Zero-tracking;
- Semi-automatic subtractive tare weighing;
- Preset tare;
- Gravity compensation;
- Adjustment / set-up mode via a push button on the main board;
- The adjustment mode is secured by hardware sealing or with an event counter that will be incremented each time any parameter changes or adjustment is made and saved;
- Checking the display;
- Set points;
- Linearity compensation: the linearity can be compensated to a maximum of six points (including zero and span)
- Memory storage.

#### List of legally relevant parameters for all types of weighing instruments:

- Regulatory mode must be set to OIML.

### 1.3 Essential shapes

Number	Pages	Description	Remarks
11562/2-01	1	Appearance of the 680-2A and 680-2A-E	-
11562/4-03	1	Appearance of the 682-2A and 682-2A-E	-

The descriptive markings plate is secured against removal by sealing or will be destroyed when removed and contains at least the following information:

- This certificate number TC11562;
- The event counter value (only applicable when electronic sealing is applied);
- Producers name or mark.

### 1.4 Conditional parts

Number	Pages	Description	Remarks
11562/4-04	4	Power supply specifications sheet	AC/DC and DC/DC versions

The indicator may be equipped with one or more of the following protective interfaces that have not to be secured:

- USB (host);
- Wifi;
- Bluetooth;
- RS232;
- Ethernet;
- RS485;
- Digital I/O;
- Analog output.

### 1.5 Non-essential parts

Display;  
 Keyboard.

## 2 Seals

To secure components that may not be dismantled or adjusted by the user, the indicator has to be secured in a suitable manner on the locations indicated in the drawings:

Number	Pages	Description	Remarks
11562/0-04	1	Sealing	-

When electronic sealing is applied the adjustment mode is sealed with a calibration event counter and a configuration event counter that contains a number that will be incremented each time any legally relevant parameter changes or adjustment is made and saved.

The calibration event counter value can be displayed by pressing the key sequence:

- Press 'MENU', 'GROSS NET', 'PRINT', 'TARE'.

The configuration event counter value can be displayed by pressing the key sequence:

- Press 'MENU', 'GROSS NET', 'PRINT', 'PRINT', 'TARE'.

The connecting cable of the load cell or the junction box is provided with possibility to seal.

Inside the cabinet is an adjustment push button connected to the main board.

### 3 Conditions for conformity assessment

The compatibility of load cells and indicator is established by the manufacturer by means of the compatibility of modules form, contained in EN 45501:2015 clause F.4, at the time of putting into use.

The inscriptions contain the value of the event counter at the time of conformity assessment (only applicable when electronic sealing is applied).

Other parties may use this Evaluation Certificate only with the written permission of the producer.

### 4 Reports

An overview of performed tests is given in the evaluation report ER11562 revision 5.