

Issued by NMI Certin B.V.

In accordance with WELMEC 8.8 Issue 2, EN 45501:2015, WELMEC 2.1 Issue 4, 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.

Brand : RICE LAKE  
Type : 480-2A, 480 Plus-2A,  
482-2A, 482 Plus-2A

Further properties are described in the annexes:  
- Description TC8322 revision 4;  
- Documentation folder TC8322-3.

An overview of performed tests is given in the annex:  
- Description TC8322 revision 4.

Remarks This revision replaces the earlier versions, except for its documentation folder.

Issuing Authority **NMI Certin B.V.**  
19 October 2018



C. Oosterman  
Head Certification Board

**NMI Certin B.V.**  
Hugo de Grootplein 1  
3314 EG Dordrecht  
The Netherlands  
T +31 78 6332332  
certin@nmi.nl  
www.nmi.nl

This document is issued under the provision that no liability is accepted and that the producer shall indemnify third-party liability.

Reproduction of the complete document only is permitted



# Description

Number **TC8322** revision 4  
Project number 2233642  
Page 1 of 4

## 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 system must be covered by an EC type-approval certificate or an EU-type examination certificate.

### 1.1 Essential parts

Number	Pages	Description	Remarks
8322/0-01	2	Backplane assembly	-
8322/0-02	4	CPU board	Including parts list
8322/3-01	5	CPU board with new parts	Including parts list
8322/0-03	3	A/D board	Including parts list
8322/2-01	3	A/D board with new diodes	Including parts list
8322/3-02	3	A/D board with new parts	Including parts list

EMI protection measures:

- The indicator is built into a metal case;
- The A/D board is shielded with a metal cover.

## 1.2 Essential characteristics

Configuration	Analog load cells	
Accuracy class	III	III
Maximum number of scale intervals	10000	1000
Weighing range	Single interval	
Load cell excitation voltage	5 V DC	
Load cell power supply	-	
Minimum input voltage per verification scale interval	0,5 $\mu$ V	
Minimum load cell resistance	35 $\Omega$	
Maximum load cell resistance	1140 $\Omega$	
Fraction of the maximum permissible error	0,5	
Load cell connection	6-wire (remote sensing)	
Maximum value of the cable length per cross wire section between the indicator and the junction box or load cells	No special cable length In case a 4-wire connection is used the load cells are connected directly without junction box	
Temperature range	-10 $^{\circ}$ C / +40 $^{\circ}$ C	
Power supply voltage	115 – 240 V AC 50/60 Hz, or 5 V DC through rechargeable battery pack	
Software identification	Version number:	
	Legally relevant L1.00.01 or L2.00.00 or L2.00.01 or L2.00.02	
	Non-legally relevant F1.xx.xx (x=0...9)	

### Software:

- The identification number will be displayed at start-up;
- The indicator has embedded software.



# Description

Number **TC8322** revision 4  
Project number 2233642  
Page 3 of 4

List of legally relevant functions:

- Determination stability of equilibrium;
- Zero indicating;
- Semi-automatic zero-setting;
- Initial zero-setting;
- Zero-tracking;
- Semi-automatic subtractive tare weighing;
- Preset tare;
- Adjustment / set-up mode via a switch on the A/D board;
- Acting upon significant faults;
- Checking the display;
- Weight unit selection (t, kg, g).

### 1.3 Essential shapes

The indicator is built according to drawings:

Number	Pages	Description	Remarks
8322/0-04	2	IQ480 without service	-

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 TC8322;
- Producers name or mark.

Inside the cabinet is an adjustment lock, located on the A/D board.

### 1.4 Conditional parts

Number	Pages	Description	Remarks
8322/0-05	3	Power supply	Including parts list

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

- RS232;
- RS485;
- 20 mA current loop;
- Ethernet/USB board;
- Analog output module;
- Relay board.

## 1.5 Non-essential parts

Display;  
 Keyboard;  
 Battery;  
 Charger board for battery.

## 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
8322/0-06	1	Service configuration definitions	-

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

## 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 WELMEC 2, 2015 clause 10 at the time of putting into use.

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

This instrument must be installed in a situation where the risk of a significant influence of surges is not expected.

## 4 Reports

An overview of performed tests is given in the reports:

- No. NMI-12200025-01 dated 13 December 2012 that includes 48 pages;
- No. NMI-15200135-01 dated 30 April 2015 that includes 24 pages;
- No. NMI-15200313-01 dated 15 June 2015 that includes 17 pages;
- No. NMI-16200430-01 dated 7 July 2017 that includes 19 pages.

A report can be a test report, an evaluation report, a type evaluation report and/or a pattern evaluation report.