Test Certificate

Number **TC7419** revision 3
Project number 3640504

Issued by	NMi Certin B.V.
In accordance with	WELMEC 8.8 2017, EN 45501:2015, OIML R 76-1 (2006)
Producer	Rinstrum Pty Ltd. 41 Success Street Acacia Ridge, QLD 4110 Australia
Measuring instrument	An **Indicator**, tested as a part of a weighing instrument. Type : X3xx Further properties are described in the annexes: - Description TC7419 revision 3; - Documentation folder TC7419-2. An overview of performed tests is given in the annex: - Description TC7419 revision 3.
Remarks	This revision replaces the earlier versions, except for its documentation folder.

Issuing Authority

NMi Certin B.V.
27 January 2023

Certification Board

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Description

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, an EC-type examination certificate, an EU-type examination certificate, or an approval that is valid in the country where the indicator is taken into service.

1.1 Essential parts

Number	Pages	Description	Remarks
7419/0-01	2	Main board layout	-
7419/0-02	3	Parts list 1	-
7419/2-01	2	Parts list 2	With microcontroller H8/36079
7419/2-02	1	X320 with AC power supply	-

1.2 Essential characteristics

Configuration	Analog load cells	
Accuracy class	(III)	(IIII)
Weighing ranges	Single interval Multiple range	
Maximum number of scale intervals (single interval)	$n \leq 4000$	$n \leq 1000$
Maximum number of scale intervals (multiple range) (per weighing range)	$n \leq 4000$	$n \leq 1000$
Maximum number of weighing ranges	2	
Load cell excitation voltage	5 V DC	
Minimum signal input voltage	U_{min} = 0 mV	
Minimum input voltage per verification scale interval	0,8 µV	
Minimum load cell resistance	87 Ω	
Maximum load cell resistance	3500 Ω	
Fraction of the maximum permissible error	0,5	

Load cell interface	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	No special cable length In case sense technology is not used the load cells are connected directly without junction box or extension cable
Temperature range	-10 °C / +40 °C
Power supply voltage	12 - 24 V DC supplied by an AC/DC adapter or a direct power source (The AC/DC adapter can be placed inside the cabinet. See drawing "X320 with AC power supply", drawing number 7419/2-02) or 12V DC supplied by 10 AA batteries.

Software:
- The software is built up out of an identification and a version number. The version number has the format y.xx, where "y" represents the legally relevant part of the software and where "xx" represents the non-legally relevant software part;
- The identification number will be displayed at start-up;
- The software is identified as follows:

Software identification	Software version	Remarks
K304	1.xx 2.xx 3.xx	Single interval
K306	3.xx	Single interval / Multiple range
K37x	4.xx	Single interval / Multiple range

List of legally relevant functions:
- Determination stability of equilibrium;
- Zero indicator;
- Semi-automatic zero-setting;
- Automatic zero-setting;
- Initial zero-setting;
- Zero-tracking;
- Semi-automatic subtractive tare balancing;
- Automatic subtractive tare balancing;
- Preset tare;
- Indication of unstable equilibrium;
- The adjustment mode is secured with a password, this software seal uses an event counter that contains a number that will be incremented each time any parameter changes or adjustment change is made and saved. This number is displayed at start-up and on entering adjustment mode;
- Acting upon significant faults;

- Checking the display;
- Count mode;
- Hold function;
- Totalization;
- Semi-automatic switching between gross and netto indication;
- Gravity compensation (Software identifications K306, K37x and software versions 3.xx, 4.xx).

1.3 Essential shapes

Number	Pages	Description	Remarks
7419/0-03	1	Exploded view	-

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 TC7419;
- The event counter value;
- Producer's name or mark.

1.4 Conditional parts

The interface section is located on the main board.

The indicator may be equipped with one or more of the following protective interfaces that have not to be secured:
- RS232C;
- RIN-LINK.

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
7419/0-04	1	Sealing	-

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

The event counter value can be displayed whenever the instrument is powered up, or setup mode is entered/exited, and it matches the counter value mentioned in the inscriptions.

Inside the cabinet is a adjustment button, located on 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.

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

4 Reports

An overview of performed tests is given in the evaluation report ER7419 revision 3.