OIML CERTIFICATE ISSUED UNDER SCHEME A

OIML Issuing Authority

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Applicant

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26-600 Radom
Poland

Manufacturer

Name: RADWAG Wagi Elektroniczne Witold Lewandowski
Address: 5 Toruńska Street
26-600 Radom
Poland

Identification of the certified type *(the detailed characteristics will be defined in the additional pages)*

Indicator, type PUE HX7

Designation of the module *(if applicable)*

Indicator for non-automatic weighing instruments

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 76   Edition (year): 2006

For accuracy class (if applicable): III

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 reports:

- OIML type evaluation report No. 0511-ER-0002-20 dated 29 May 2020 that includes 10 pages

- Test report No. 6052-PT-P0013-20 issued by CMI dated 29.5.2020 that includes 54 pages including annexes

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

0511-UL-N083-19

OIML Certificate History

Revision No.	Date	Description of the modification
Addition 0	8 June 2020	Issuing certificate

The OIML Issuing Authority
RNDr. Pavel Klenovský
Director General

Date: 8 June 2020

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.

General information and basic characteristics

Electronic indicator for non-automatic weighing instruments with single range or multi range, accuracy class III. PUE HX7 weighing indicator is a device intended to make industrial scales operating on the basis of load cells. The indicator is equipped with a stainless-steel housing of high IP and 7" colour display. It is operated using 22-key membrane keypad with programmable function keys. PUE HX7 indicator of standard design offers RS232, USB type A, Ethernet, I/O interfaces. Optionally the indicator can be equipped with an internal battery. The device integrates with receipt and label printers, barcode scanners and PC accessories (mouse, keyboard, USB flash drive).

Indicators PUE HX7 can be used as terminals according to point T.2.2 of OIML R76 (2006). When PUE HX7 is used as a terminal, external weighing modules are connected via a digital interface using existing communication protocols. The weighing module uses the display for showing weighing results, and the keypad for operating an arisen weighing instrument. In this case the class of the weighing instrument is defined by the connected weighing module and not limited to the class of weighing indicator, provided the weighing instrument does not use the measuring function of the indicator.

Essential parts are described in the following documentation

Description	Document/Drawing number
Indicator PUE HX7	PUE HX7 Service manual (April 2019)
Location of data plate and securing	PUE HX7 HX7-04-zatw
PUE HX7 Electrical assembly	PUE HX7 TT0076_0_01_CDR

Metrological characteristics

Type designation	PUE HX7
Accuracy Class	III
Maximum number of verification intervals (n)	6000
Max. impedance of load cell	1200 Ω
Mix. impedance of load cell	50 Ω
Maximum input signal	19,5 mV
Max. voltage per verification scale interval	3,25 μV
Mix. voltage per verification scale interval	0,4 μV
Load cell wiring	4 or 6 wires with shield
Load cell supply	5V DC
Maximum number of connected platforms	2 (standard 1)
Multi-range	YES
OIML class	III
Operating temperature	–10 °C / +40 °C
Relative humidity (not condensing)	10% / 80%
Power supply	100-240VAC 50-60Hz
Optional power supply	External 12-24VDC
Battery power supply	Internal rechargeable battery
Power consumption	25 W
Display	7" colour
Ingress protection rating	IP 68 / 69
Housing	AISI304 stainless steel
Keypad	membrane
Net weight	4.7 kg
Interfaces	RS232 – 1 and 2 optional; RS485 – 1 optional; USB – 1 standard and 1 optional; Ethernet; digital inputs/outputs 4 x IN, 4 x OUT and optional 12 x IN, 12 x OUT; analog output (current loop: 4 – 20 mA or 0 – 20 mA; voltage output: 0 – 10 V), ProfiBus (optional), ProfiNet (optional), Ethernet IP (optional).

Devices and functions
- determination of stability of equilibrium
- indication of stable equilibrium
- zero indicator
- initial zero setting $\leq 20\%$ Max
- zero tracking $\leq 4\%$ Max
- automatic zero setting
- semi-automatic zero setting
- semi-automatic tare balancing (subtractive)
- display checking
- calibration and set-up mode via switch inside of the chamber
- piece counting
- additional display

Connections

Power supply	100-240VAC 50-60Hz
RS232	M12 8P connector
USB	USB A connector
Ethernet	RJ45 connector
IN/OUT	4IN – M12 8P connector 4OUT – M12 8P connector

Optional connections

Optional power supply	external 12 - 24 VDC; or/and internal accumulator
12IN/12OUT Module	12IN/12OUT – gland
Analog outputs	Current loop: 4 - 20 mA, 0 - 20 mA, Voltage output: 0 - 10 V
Profibus Module	2 x M12 5P B-coded connector
RS485	M12 8P connector
RS232 x 2	M12 8P connector
PROFINET module	RJ45 connector
ETHERNET IP module	RJ45 connector

Data plate
The data plate shall be secured against removal by sealing or will be destroyed when removed.

Following information shall be on data plate:
- manufactures name or mark
- temperature range
- accuracy class
- other descriptions required by OIML R76 (2006)

Interface
Indicator is equipped with RS 232, Ethernet and USB A port that fulfills requirements of OIML R76 (2006) paragraph 5.3.6 and do not need to be secured.

Software
The valid software version is **181212 HX7**.
Software identification by its version number is temporarily accessible after pressing the ON/OFF key on the overlay on the system power-up.
The indicator has embedded software that is used in a fixed hardware and software environment and cannot be modified or uploaded via any interface or by other means after securing and/or verification.

Alibi memory

PUE HX7 is equipped with alibi memory (Data Storage Device) operating as a long-term memory. Weighing software which is responsible for saving weighing data in alibi memory is embedded software running without operating system which does not make possible to run other software. This software enables downloading the content of alibi memory on the external flash memory (e.g. pendrive) connected to USB for archiving. It is impossible to upload data from external devices to the alibi memory. The weighing record holds the following fields:

- measurement date
- measurement time
- weighing result - (display unit)
- weighing result - (calibration unit)
- tare value

and additional fields that are not obligatory for DSD devices (if enabled).

The standard memory allows to save up to 500 000 weighing results. After filling the whole memory space next weighing results overwrite the oldest records. Single records and the whole database are protected by checksums. Any data corruption causes that they are not displayed and/or printed. The program supervising the alibi memory operates the main display and all interfaces including painting as well. Weighings are saved in flash memory in an integrated circuit, soldered on the PCB of the indicator or terminal, which is connected to the processor executing the program for supervising alibi memory.

Securing

Components that may not be dismantled or adjusted by the user shall be secured by suitable manner on the locations indicated in drawings. Micro switch SW1 for adjusting is placed on the main board inside the housing without the possibility of direct access while the housing is closed (see Figure 1).

Tests and evaluation

Tests and evaluation were carried out according to OIML R 76 (2006). The tests and evaluation carried out are stated in the Test Evaluation Report No. 0511-ER-0002-20 and in the Test Report 6052-PT-P0013-20.

Tests carried out

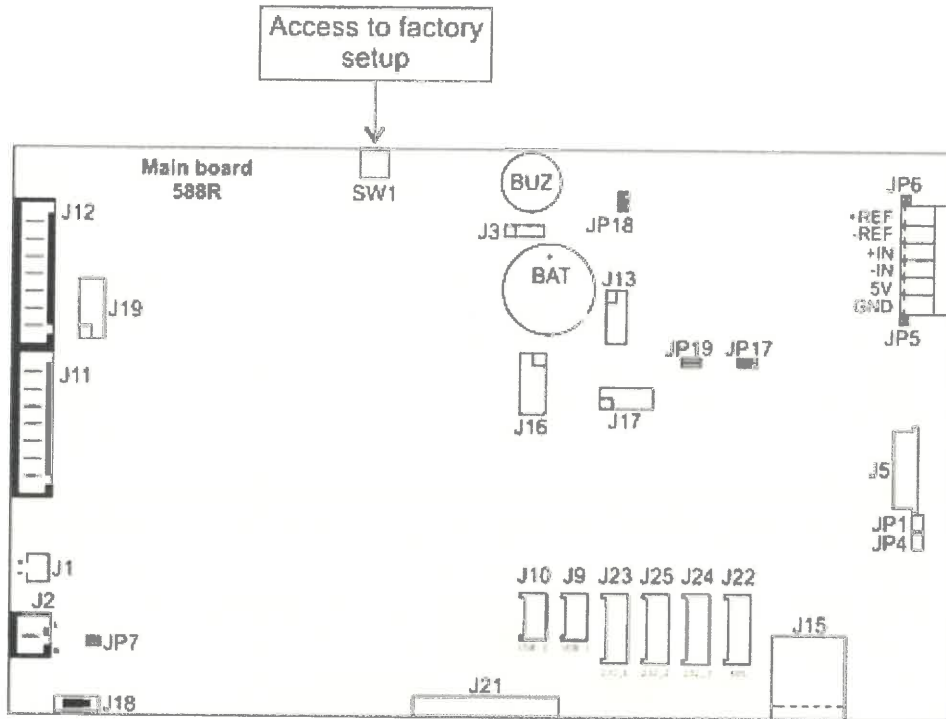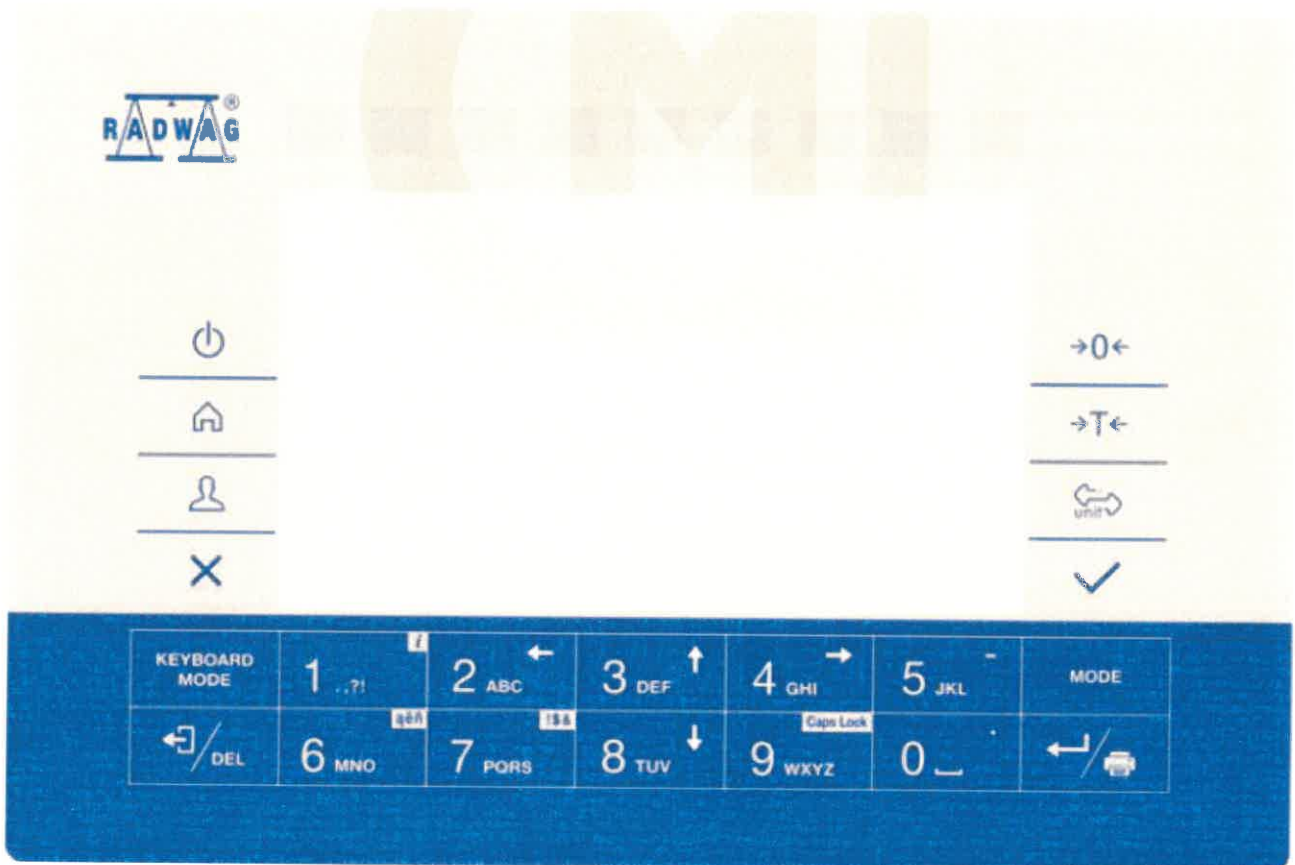| |
|---|
| Static temperature (20, 40, -10, 5 and 20 ℃) |
| Temperature effect on no load indication (20, 40, -10, 5 a 20 ℃) |
| Damp heat steady state |
| Repeatability |
| Warm-up time |
| Span stability |
| Stability of equilibrium |
| Cable length between the indicator and load cell |
| EMC tests: |
| Voltage variations |
| AC mains voltage dips and short interruptions |
| Electrical bursts |
| Surges |
| Electrostatic discharges |
| Immunity to radiated electromagnetic fields |
| Immunity to conducted radio-frequency fields |

Figure 1. Calibration switch
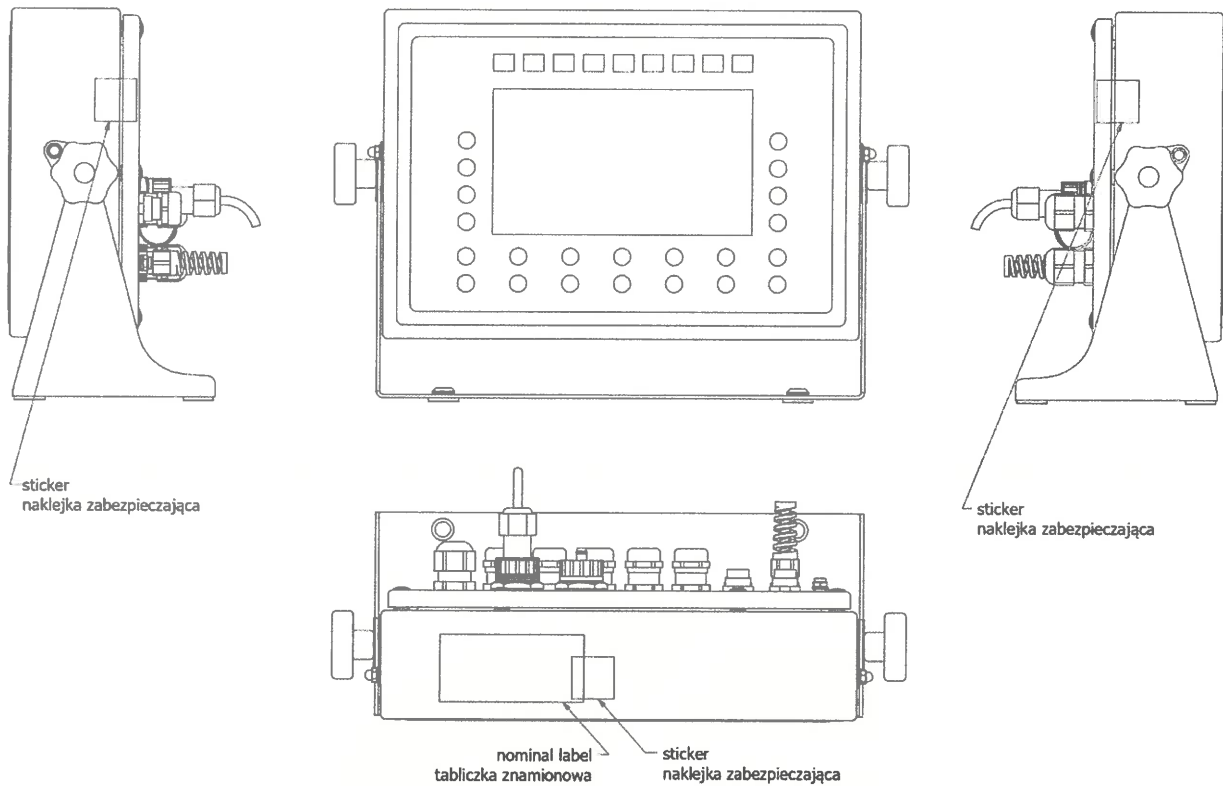

Figure 2. Front panel with display and keyboard

sticker
naklejka zabezpieczająca

sticker
naklejka zabezpieczająca

nominal label
tabliczka znamionowa

sticker
naklejka zabezpieczająca

Figure 3. Sealing of PUE HX7

sticker
naklejka zabezpieczająca

nominal label
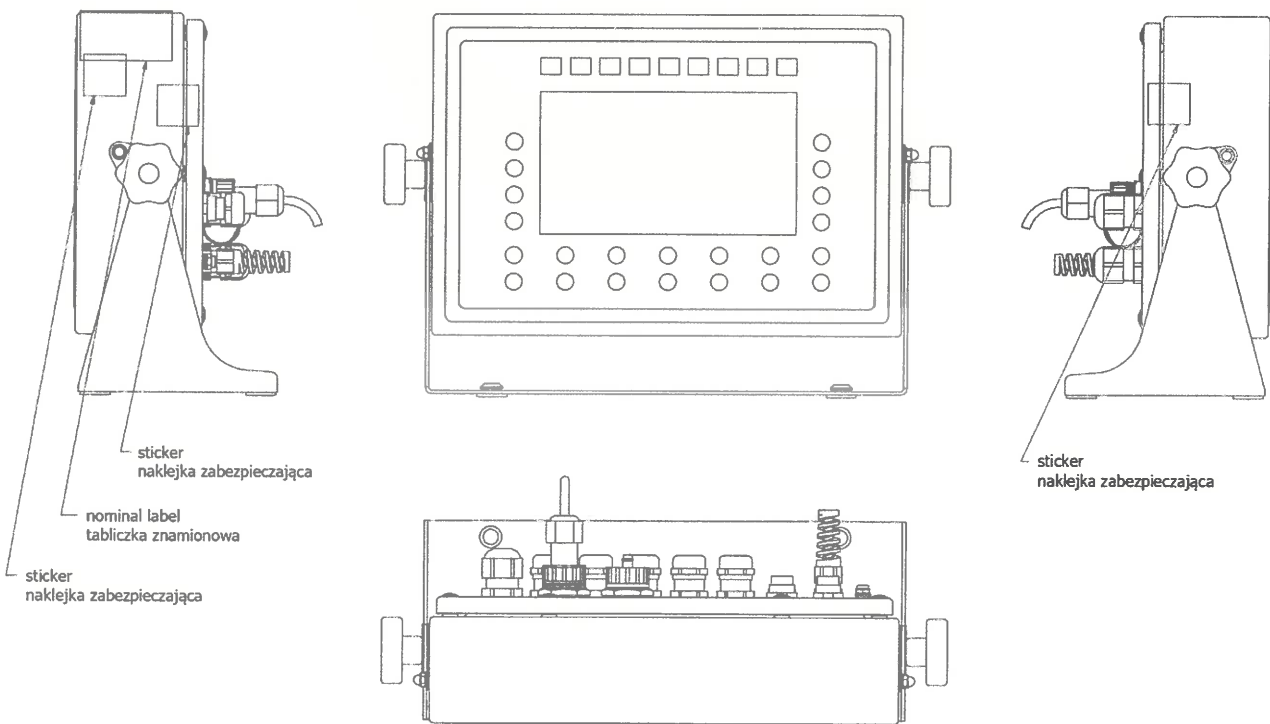tabliczka znamionowa

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naklejka zabezpieczająca

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naklejka zabezpieczająca

Figure 4. Alternative sealing of PUE HX7