Slovenský metrologický ústav
Karloveská 63, 841 04 Bratislava,
Slovenská republika

SNAS
Reg. No. 101/P-035

CERTIFIKAT EÚ SKÚSKY TYPU

EU – type examination certificate

Číslo dokumentu: **SK 26-MI001-SMU088** **Revízia 0**
Document number: *Revision 0*

V súlade s: prílohou č. 2, Modul B nariadenia vlády Slovenskej republiky č. 145/2016 Z. z. o sprístupňovaní meradiel na trhu v znení nariadenia vlády SR č. 328/2019 Z. z., ktorým sa preberá smernica Európskeho parlamentu a Rady 2014/32/EU o harmonizácii právnych predpisov členských štátov týkajúcich sa sprístupnenia meradiel na trhu
In accordance with: *Annex II, Module B to Government Ordinance of the Slovak Republic No. 145/2016 Coll. Relating to the making available on the market of measuring instruments as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll., which implemented the Directive 2014/32/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments*

Žiadateľ/Výrobca: **Apator Powogaz S. A.**
Issued to (Manufacturer): Jaryszki 1C, 62-023 Żerniki, Poland

Druh meradla: **Vodomer (MI-001)**
Type of instrument: *Water meter (MI-001*

Označenie typu: **Ultrimis Pro (ULP)**
Type designation:

Základné požiadavky: príloha č. 1 a príloha č. 3 Vodomery (MI-001) k nariadeniu vlády SR č. 145/2016 Z. z. v znení nariadenia vlády SR č. 328/2019 Z. z.
Essential requirements: *Annex No. I and Annex No. III Water meters (MI-001) to Government Ordinance of the Slovak Republic No. 145/2016 Coll. as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll.*

Platnosť do: **11. jún 2036**
Valid until: *June 11, 2036*

Notifikovaná osoba: **Slovenský metrologický ústav 1781**
Notified body: *Slovak Institute of Metrology 1781*

Dátum vydania: **11. jún 2026**
Date of issue: *June 11, 2026*

Základné charakteristiky, popis meradla a podmienky schválenia sú uvedené v prílohe, ktorá je súčasťou tohto certifikátu. Certifikát vrátane prílohy má spolu 13 strán.
Essential characteristics, instrument description and approval conditions are set out in the appendix hereto, which forms the part of the certificate. The certificate including the appendix contains 13 pages.

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Viliam Mazúr
zástupca notifikovanej osoby
representative of notified body

Poznámka: Tento certifikát EÚ skúšky typu môže byť rozmnožovaný len celý a nezmenený. Bez podpisu a odtlačku pečiatky je neplatný.
Note: *This EU-type examination certificate shall not be reproduced except in full. Certificates without signature and stamp are not valid.*

Issue of the Certificate	Date	Modifications
SK 26-MI001-SMU088, Revision 0	June 11, 2026	Initial certificate

1 Instructions and standards used within assessment

1.1 Generally binding instructions

Meter type was examined in terms of request for given type provisions Government Ordinance of the Slovak Republic No. 145/2016 Coll. relating to the making available on the market of measuring instruments as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll., which implemented the Directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments as later amended (next Government Ordinance).

Requirements are set out in Annex No. 1 and Annex No. 3 Water Meters (MI-001) to Government Ordinance of SR No. 145/2016 Coll. as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll.

1.2 Technical specification used:

OIML R 49-1:2024	Water meters intended for the metering of cold potable water and hot water. Part 1: Metrological and technical requirements
OIML R 49-2:2024	Water meters intended for the metering of cold potable water and hot water. Part 2: Test methods
OIML R 49-3:2024	Water meters intended for the metering of cold potable water and hot water. Part 3: Test report format
EN ISO 4064-1:2025	Water meters for cold potable water and hot water. Part 1: Metrological and technical requirements
EN ISO 4064-2:2025	Water meters for cold potable water and hot water. Part 2: Test methods
EN ISO 4064-3:2025	Water meters for cold potable water and hot water. Part 3: Test report format
EN ISO 4064-4:2025	Water meters for cold potable water and hot water. Part 4: Non-metrological requirements not covered in ISO 4064-1
EN ISO 4064-5:2025	Water meters for cold potable water and hot water. Part 5: Installation requirements
WELMEC Guide 7.2:2025	Software Guide

2 Type marking

Ultrasonic water meter – Ultrimis Pro (ULP)

Meter is made in following subgroups:

Type of meter	Temperature class	Classes	Nominal Diameter
Ultrimis Pro (ULP)	T30, T50	M1 or M2 [1] B or O [2] E1 or E2 [1]	DN80, DN100

[1] according to Government Ordinance of the Slovak Republic, Annex No. 1

[2] according to EN ISO 4064-1:2025 and OIML R 49-2:2024

3 Description of measuring instrument

Meter name: Ultrimis Pro

Type marking: ULP

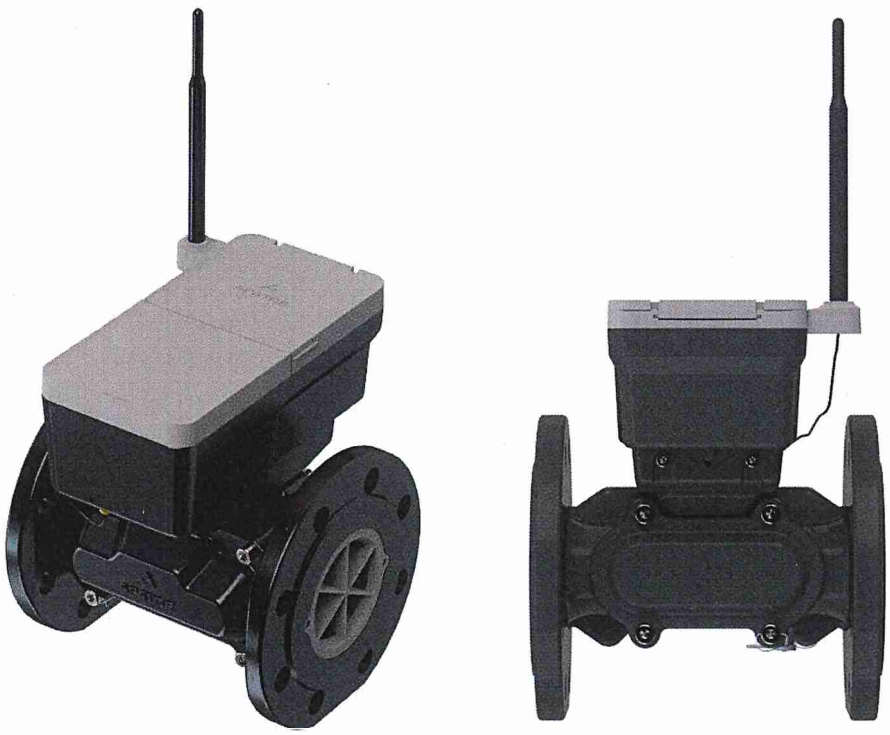
Description of operating principle instrument design:

The ultrasonic water meters type Ultrimis Pro (ULP) are designed to measure, memorise and display the volume at metering conditions of water passing through the measurement transducer.

The water meter type Ultrimis Pro (ULP) is an ultrasonic water meter with an electronic indicating device. The water meter consists of an iron cast body with flange, one pair of compact ultrasonic transducers and the electronic indicating device. The electronic indicating device shows on LCD display volume, current flow and other necessary information. The water meter has two indication modes: normal resolution mode and high-resolution mode (which is used during the calibration process). The water meter displays the volume resolution of 0,00001 m^3 on the digital display in the high-resolution mode.

The family of water meters includes DN80 and DN100 with a dynamic range from 400 up to 1000. The meter may or may not measure reverse flow depending on factory set-up.

The water meter can operate in any position without consequences on accuracy. Pipes must always be filled with water when the device is counting. The adjustment and reading/setting of metrological data is done electronically using NFC communication protocol. The access to the metrological parameters is secured by multileveled passwords combination. Communication with meter is possible using ISM radio bands and used frequency is marked on the register. There is a possibility of one or two-way communication based on wM-Bus and/or LoRaWAN protocols.



Picture No. 1 Ultrasonic water meter Ultrimis Pro (ULP)

3.1 Description of subgroups

Marking: ULP-DNXX-LYYY / ULP-DNXX-LYYY

DN: DN80, DN100

where XX – nominal diameter;
YYY – body length.

3.2 Flow sensor

The main elements of the measuring organ are:

- cast iron body with flanged connection,
- rectifier at inlet and outlet,
- pair of compact ultrasonic transducers accompanied by three reflective mirrors.

The set of above elements is forming the measuring device, in which the rectifier is profiling the water flow to a stream, flowing through the sound path. The sound path, between the ultrasonic transducers is profiled by the reflective mirrors, which multiplies its length, and covers the whole flow profile.

The meter is designed to be symmetrical and may be installed in either direction; however, it may or may not measure reverse flow, depending on the factory configuration. There are no moving parts.

3.3 Indicating device (calculator)

The main elements of calculator are:

- aluminium housing with two chambers;
- the part with indicating device (display) is covered by glass cover;
- locking ring, which seals the meter;
- mainboard (PCBA) with LCD display, one or more integrated batteries (depending on factory configuration);
- integrated tamper switch;
- built-in radio module;
- NFC antenna;
- front plate;
- desiccant;
- external antenna connector.

The electronic device operates the ultrasonic transducers, calculate the flow and integrates the water volume. The calculator display shows the total volume, current flow and other necessary information.

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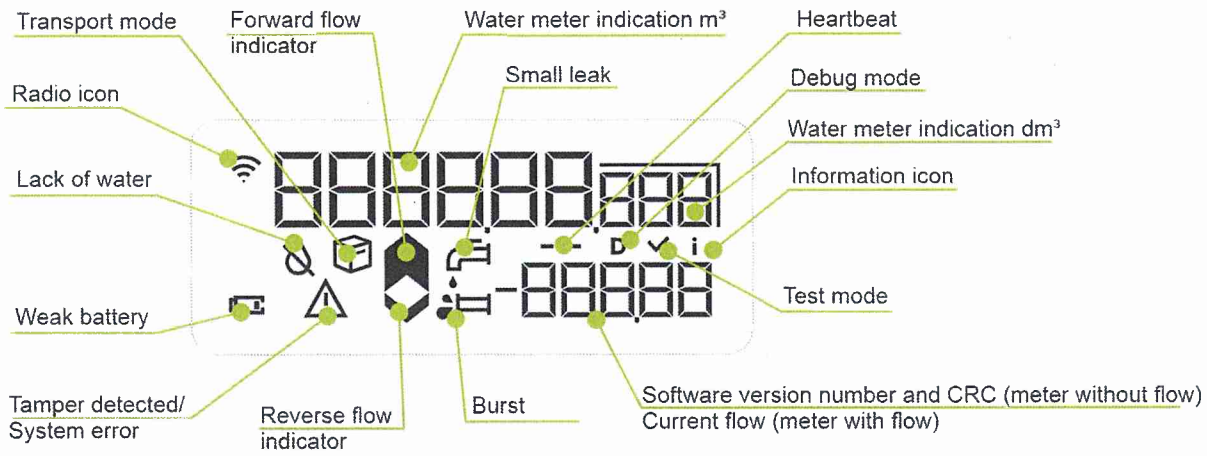

Picture No. 2 LCD Screen

3.4 Principle of operation

The ultrasonic water meter uses two transducers that can operate as both transmitter and receiver of ultrasound. The ultrasound is transmitted between the transducers via profiled sound path through the water. The transit time between the transducers is measured in both up- and downstream directions.

If there is no fluid motion, the transit time in both directions is the same.

If there is fluid motion, it will cause a difference in transit times in both directions, which is proportional to the water flow. The flow rate can be integrated as the indicated volume of the water.

3.5 Technical documentation

A number of drawings of technical documentations is listed in the following list:

No.	Drawing number	Title
1	5221-000000	Water meter Ultrimis Pro DN80 L225
2	5221-010000	Water meter main module DN80 L225
3	5221-020000	Metering chamber plate cover set
4	5221-000104	Sealing ring
5	5221-030000	Communication chamber plate cover set.
6	5221-040000	Antenna holder set
7	5221-050000	Plastic lid set
8	5221-000010	Mirrors side cover DN80/DN100
9	5221-000003	Body DN80 L225
10	5221-000103	Flow rectifier
11	5221-010115	Mirror set
12	5221-000117	Pressure sensor hole plug
13	5221-011002	Communication chamber plate

No.	Drawing number	Title
14	5221-011005	Indicating device housing gasket
15	5300-210001	Glass cover
16	5230-000000	Water meter Ultrimis Pro DN100 L250
17	5230-010000	Water meter main module DN100 L250
18	5221-040000	Antenna holder set
19	5221-010105	Ultrasonic transducer set
20	5221-050000	Plastic lid set
21	5221-000116	Locking plate
22	5230-010003	Measuring organ DN100 L250
23	5221-010103	Sensors PCBA support
24	5230-000003	Body DN100 L250
25	5221-010003	Measuring organ DN80 L225
26	5221-100000	Indicating device housing set.
27	5221-011200	Electronics housing set (1)
28	5221-000113	Sensors PCBA
29	5221-000102	Intermediate bracket DN80
30	5221-000114	Electronic module ULPTA1
31	5230-000011	Ultrasonic transducers side cover DN100
32	5230-000127	Ultrasonic transducers side cover gasket DN100
33	5230-000102	Intermediate bracket DN100
34	5221-011100	Electronics housing set (2)
35	5221-000011	Ultrasonic transducers side cover DN80
36	5221-000127	Ultrasonic transducers side cover gasket DN80
37	5221-000126	Mirrors side cover gasket DN80/DN100
38	5221-011000	Electronics housing
39	5221-011003	Electronics bracket bottom
40	5221-011004	Electronics bracket top
41	5221-210300	Dial with NFC antenna set
42	5221-011001	Metering chamber plate
43	5221-010112	Intermediate PCBA set.
44	5221-000123	Snap-on ferrite core
45	5230-000103	Flow rectifier
46	5221-001001	Dial description
47	5221-001010	Description plate

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A number of drawings, schemes and technical documentations used during the conformity assessment is saved in document No. NO-670/25.

4 Basic technical characteristics

Type marking		**ULP-DN80**	**ULP-DN100**
Nominal diameter	mm	80	100
Indicating range	m^3	999 999	
Resolution of reading	m^3	0,001	
Maximum admissible pressure	-	MAP16, MAP10	
Working pressure range	bar	from 0,3 to 16 (from 0,3 to 10 for MAP10)	
Pressure loss class	-	Δp10 / Δp16	
Temperature class	-	T30, T50	
Flow profile sensitivity class	-	U0, D0	
Position	-	no limitation	
Climatic environments	-	Indoors, outdoors, from -10°C to 70°C	
Information specified by the manufacturer			
Electromagnetic class		E1 or E2	
Environmental class		B or O	
Mechanical class		M1 or M2	
EUT testing requirements (OIML R 49-2:2013, 8.1.8)			
Category		Ultrasonic water meters	
Case		B	

4.1 Additional technical characteristics

Weight [kg]	14,5 – 18
Environmental protection (IP Code)	IP68
Power source	Lithium battery, 3 VDC (1 or more integrated batteries), battery lifetime is described on the front plate
Battery lifetime	minimum 10 years
Outputs	NFC communication Radio communication ISM band @ 868MHz (wM-Bus, LoRaWAN)
Display	LCD, 9 digits
Resolution of the device for rapid testing	0,00001 m^3
Software	Type P, Risk class C, Extension S (Welmec Guide 7.2:2025)
Software version and checksum	03.02; DBA716AA

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5 Basic metrological characteristics

The maximum permissible error (accuracy class):

± 5 % ($Q_1 \leq Q < Q_2$)

± 2 % ($Q_2 \leq Q \leq Q_4$) for water temperature (from 0,1 to 30) °C

± 3 % ($Q_2 \leq Q \leq Q_4$) for water temperature greater than 30 °C

Nominal diameter DN	**unit**	**80**								
Overload flow rate Q_4	[m^3/h]	50			78,75			125		
Permanent flow rate Q_3	[m^3/h]	**40**			**63**			**100**		
Transitional flow rate Q_2	[m^3/h]	0,064	0,080	0,160	0,1008	0,1260	0,2520	0,160	0,200	0,400
Minimum flow rate Q_1	[m^3/h]	0,040	0,050	0,100	0,0630	0,0788	0,1575	0,100	0,125	0,250
Measuring range Q_3/Q_1	-	1000	800	400	1000	800	400	1000	800	400
Pressure loss class	-	Δp10						Δp16		
Ratio Q_2/Q_1	-	1,6								

Nominal diameter DN	**unit**	**100**								
Overload flow rate Q_4	[m^3/h]	78,75			125			200		
Permanent flow rate Q_3	[m^3/h]	**63**			**100**			**160**		
Transitional flow rate Q_2	[m^3/h]	0,1008	0,1260	0,2520	0,160	0,200	0,400	0,256	0,320	0,640
Minimum flow rate Q_1	[m^3/h]	0,0630	0,0788	0,1575	0,100	0,125	0,250	0,160	0,200	0,400
Measuring range Q_3/Q_1	-	1000	800	400	1000	800	400	1000	800	400
Pressure loss class (3)	-	Δp10						Δp16		
Ratio Q_2/Q_1	-	1,6								

6 Results of conformity assessment

The results of tests, assessments and evaluations given in the evaluation report No. NO-670/26/B/ER dated June 11, 2026 give sufficient evidence, that the technical design of the measuring instrument – ultrasonic water meter type Ultrimis Pro (ULP) is in compliance with the technical requirements of the Slovak Republic Governmental Ordinance No. 145/2016 Coll. relating to the making available on the market of measuring instruments as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll. Annex No. 1 and Annex No. 3 Water Meters (MI-001) and with the requirements determined in EN ISO 4064-1:2025, respectively OIML R 49-1:2024, which are relevant for this type of meter.

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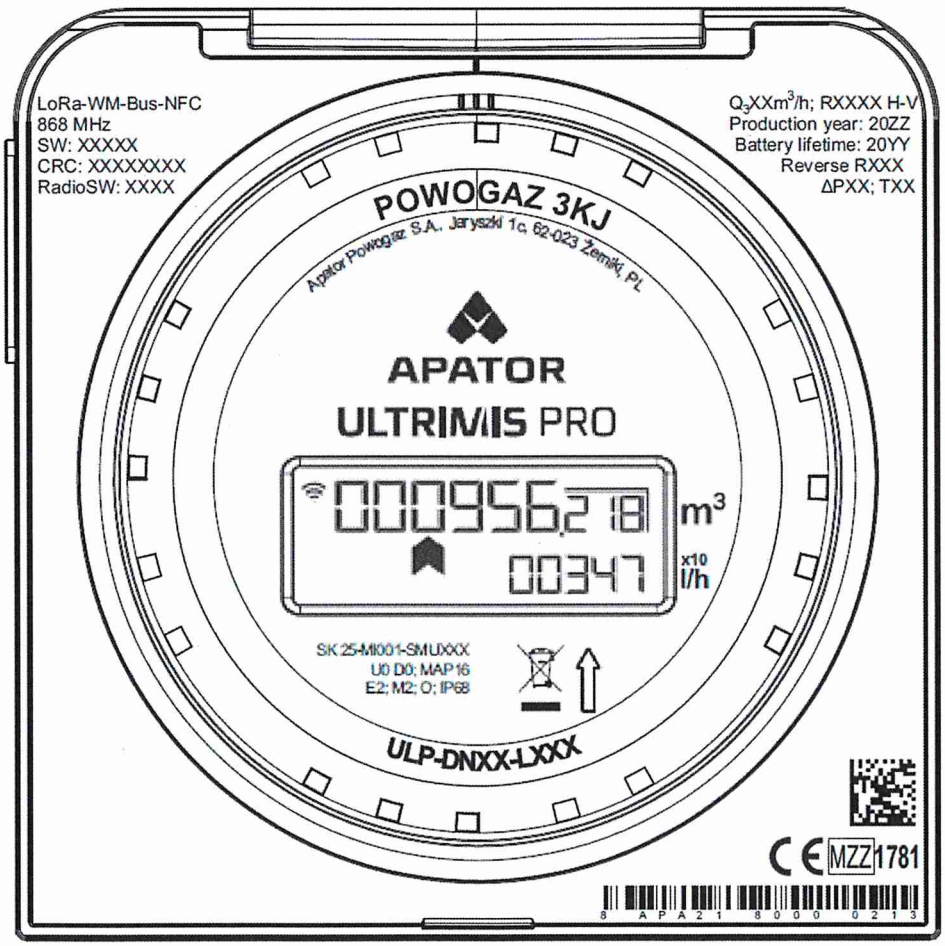
7 Data placed on the measuring instrument

On the shroud, the dial of the indicating device (shown on Picture No. 3) or on an identification plate of every water meter or in the product documentation minimum the following data should be marked:

a) manufacturer's name, registered trade name or registered trademark
b) postal address of manufacturer at which they can be contacted
c) type of the ultrasonic water meter
d) measuring unit (m^3)
e) numerical value of Q_3 in m^3/h (Q_3 x,x) and ratio Q_3/Q_1 (Rxxx)
f) year of production
g) production serial number
h) number of EU-type examination certificate and conformity mark
i) the highest admissible pressure if it differs from 1 MPa (MAP xx)
j) flow direction
k) the letter V or H, if the meter can only be operated in the vertical or horizontal position
l) the temperature class where it differs from T30
m) class of pressure loss if it differs from Δp63 (Δp XX)
n) environmental classification
o) the installation sensitivity class where it differs from U0/D0 (Ux Dx)
p) electromagnetic environmental class
q) for a non-replaceable battery: the latest date by which the meter shall be replaced
r) software version, checksum



Picture No. 3 Front plate and LCD display

8 Conditions of conformity assessment of measuring instruments produced with type approval

Ultrasonic water meter put onto the market in line with the procedure of conformity assessment according to the Annex No. 2 (Module D or F) of the Governmental ordinance should be in compliance with the technical description by section 3 of this annex and at test should be in compliance with the requirements determined in OIML R 49-1:2024 and EN ISO 4064-1:2025.

Metrological test is performed by testing equipment which should be in compliance with the requirements determined in EN ISO 4064-2:2025 and water at temperature 20°C ± 10°C at the following flowrates:

a) Minimum flowrate $Q_1 \leq Q \leq 1{,}1Q_1$
b) Transitional flowrate $Q_2 \leq Q \leq 1{,}1Q_2$
c) Permanent flowrate $0{,}9Q_3 \leq Q \leq Q_3$

A metrological test may only be performed by a producer, or a notified body respectively in line with the conformity assessment procedure according to the Annex No. 2 (Module D or F) of the Governmental ordinance respectively.

9 Measures asked for providing measuring instrument integrity

9.1 Identification

Ultrasonic water meter should be in compliance with the description provided in section 3 of this annex and should be in compliance with the marking specified in section 7 of this annex. The number given to the EU-type examination certificate is put at each piece of the measuring instrument. Emplacement of the conformity mark is determined by § 15 of the Governmental ordinance.

9.2 Sealing of the measuring instrument

The Ultrimis Pro meters are sealed by specially designed locking ring (1) and locking screws (2) which prevents meter against fraud (Picture No. 4). The locking parts can be removed only with mechanical manipulation with visible signs of a tamper or destroying these parts. The locking ring is marked with safeguarding mark (POWOGAZ 3 KJ).

Water meter is equipped also with electronic seal mechanism - tamper detection - that shows any attempt of tamper on the LCD display and it is not possible to remove from the memory.

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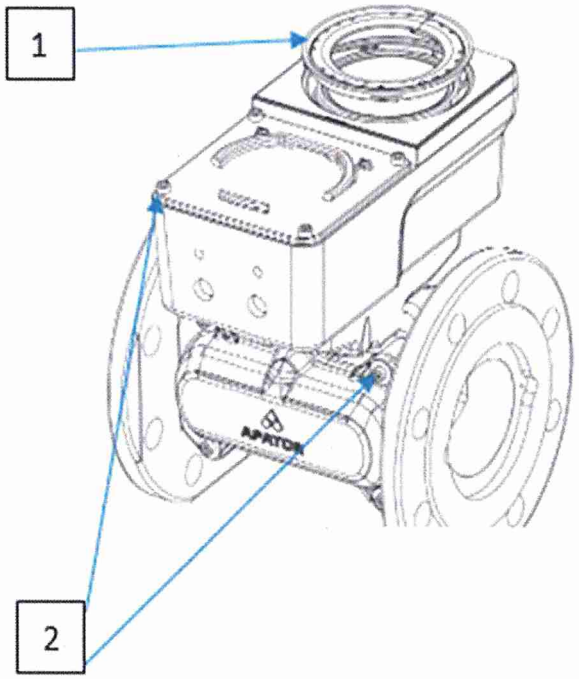

Picture No. 4 Ensuring the integrity of the instrument

9.3 Software security

The meter is physically sealed and cannot be accessed electronically without breaking the physical seal and triggering an electronic alarm. The chip is locked, so it is not possible to read out the software or alter a part of the software. There is no software update interface available. The adjustment and reading of metrological data are realized electronically using NFC communication protocol. The access to the metrological parameters is secured by multileveled passwords combination.

All legally relevant software is protected with a CRC-32. The CRC is recalculated and compared to the original every 24 hours. The CRC is shown in the display when there is no flow in the meter. The legally non-relevant Software is protected with CRC-32 as well. If an intentional or unintentional change happens in the legally relevant software, the meter will stop all measurements and show an error sign. If an intentional or unintentional change happens in the legally non-relevant software, then it will shut down. The legally relevant software will continue unhindered.

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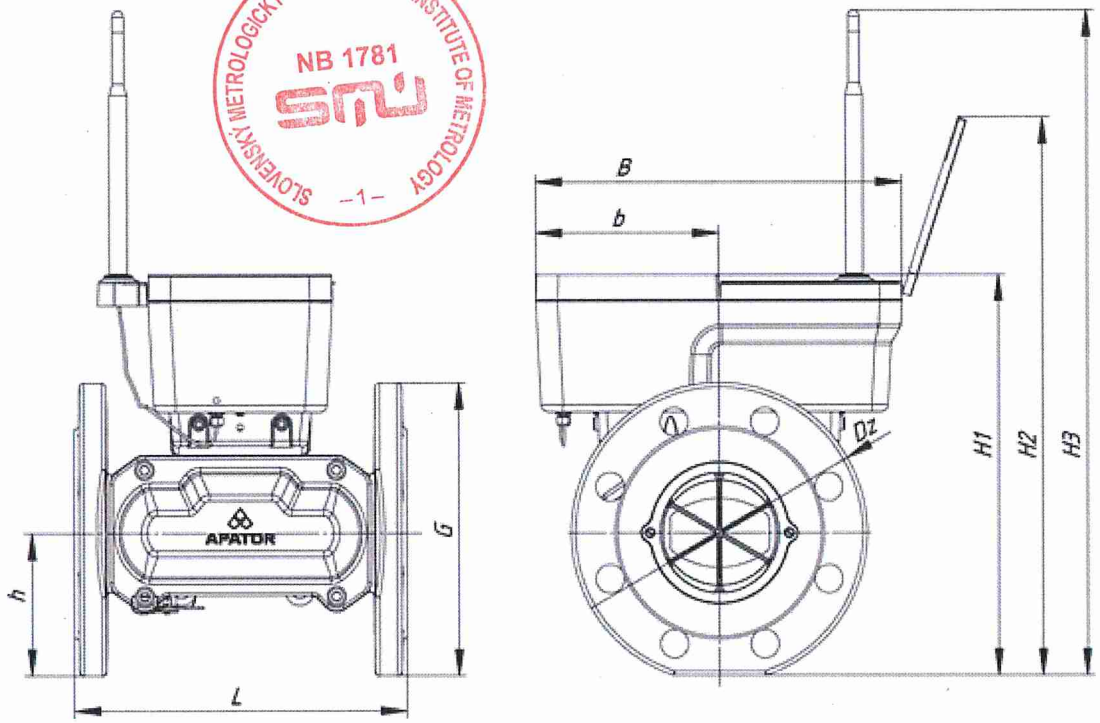
10 Requirements for installation, especially conditions of usage

10.1 Installation data

Nominal diameter	80	100
Total length L [mm]	200/ 225/ 300/ 350	250/ 300/ 360
Distance axel h [mm]	95	105
Width B [mm]	248	248
Width from axle b [mm]	124	124
Total height H1 [mm]	267	277
Opened lid height H2 [mm]	371	381
General height H3 [mm]	437,5	447,5
Flange* diameter Dz [mm]	200	220
Flange height from undercut G [mm]	195	215
Weight [kg]	14,5 – 16,5	16 – 18



Picture No. 5 Installation dimensions

10.2 Installation requirements

The ultrasonic water meter should be introduced into the operation by a qualified for such activity worker with a certificate. Water meter is possible to put into use after a construction in line with this annex and in line with a manufacturer`s instruction "Instruction of installation and conditions of use of water meters". A measuring instrument should be installed in direction of water flow arrow marked on the meter body.

10.3 Conditions of use

The measuring instrument should be used within the recommendations of manufacturer: "Instruction of installation and conditions of use of water meters".

Assessment done by: Maryna Tokarieva

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