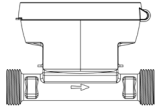




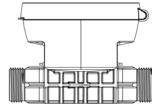
WATER METER TYPE

Ultrasonic water meters with brass body and integrated RF connectivity
Ultrimis NEO ULN
 DN15-50



CE, MID, IP68, WM-Bus, LoRaWAN

Ultrasonic water meters with composite body and integrated RF connectivity
Ultrimis NEO ULN-01
 DN15-20



CE, MID, IP68, WM-Bus, LoRaWAN



ACCESSORIES

Smartphone



Android, NFC

TestBox



Smartphone app

SPIDAP

Android, NFC



SHIPPING AND STORAGE

Protect against shocks and vibration

Store between 0°C and 25°C



SAFE OPERATING CONDITIONS



Do Not Touch Hot Surface



Do not touch damaged equipment



Do not touch damaged equipment



Risk of crushing



Do not apply extra load to equipment



Install/remove equipment only with shut-off valves closed



Risk of injury during installation, removal, or handling of the equipment



Possible leakage of cold or hot water under high pressure



Do not dispose of equipment with household waste



Prevent access to the equipment by unauthorized persons (including unsupervised children), or persons with reduced mental or physical abilities



Risk of electrolyte leakage



Risk of battery ignition



Do not operate equipment in extreme weather conditions



Do not remove, charge, recharge by other means, disassemble, throw into fire, or short-circuit the battery



BASIC INFORMATION



Max water temperature: **T30: 0,1–30°C**
T50: 0,1–50°C
T70: 0,1–70°C



Ambient temperature **5 - 55°C**



Operating pressure **16 bar***



Battery life **up to 16 years****
 Two integrated 3 V DC lithium batteries
 Lithium content – approx. 2 × 0.98 g



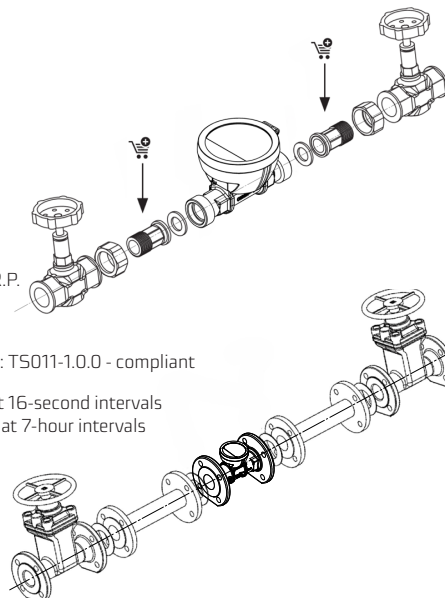
RF connectivity parameters: 868 MHz up to **25 mW** E.R.P.



Communication standard: WM-Bus, DMS-compliant
 LoRaWAN Relay specification: TS011-1.0.0 - compliant



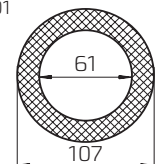
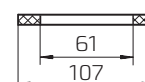
Communication standard: WM-Bus – radio frame sent at 16-second intervals
 LoRaWAN – radio frame sent at 7-hour intervals



Ultrimis NEO		***	
		[mm]	[Nm]
ULN2,5	DN15	17	29
ULN2,5-01	DN15	17	29
ULN4	DN20	20	36
ULN4-01	DN20	20	36
ULN6,3	DN25	36	47
ULN10	DN32	44	54
ULN16	DN40	50	67
ULN25	DN50	24	24

*** Wrench size required for installation. The actual installation may feature other connection fitting dimensions.

Flanged **DN50** port gasket acc. to PN-EN 1514-1:2001



* 10 bar is available on special order

** Depending on the configuration and ambient conditions

PRODUCT FEATURES

Exit from shipping mode

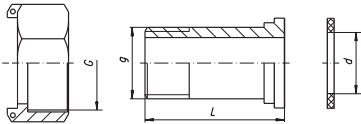
- Via NFC
- Minimum flow rate:
 - equivalent volume Q_{22} , according to the device's R class, over 1 hour.

Alarms

- Zero flow: alarm triggered after 30 seconds
- Minimum flow / low flow: alarm trigger: flow $> 0,3 \times Q_2$ for 720 min
- Water main leak (bypass flow): alarm trigger: flow $> Q_4$ for 30 s
- Low battery: lifespan < 1 year
- Tampering detected: enclosure tamper
- Back flow: over > 30 s
- Temperature threshold exceeded:
 - T50: $< 2^\circ\text{C}$ or $> 50^\circ\text{C}$
 - T70: $< 2^\circ\text{C}$ or $> 70^\circ\text{C}$

ESSENTIAL INSTALLATION COMPONENTS

Half-unions available from Apator Powogaz S.A.



	G [cal]	g [cal]	d [mm]	L [mm]	Index
Set of half-unions DN15 mm	3/4	1/2	17	37,5	0616-101-015
Set of half-unions DN20 mm	1	3/4	23	45,5	0616-101-020
Set of half-unions DN25 mm	1 1/4	1	29	46,5	0616-101-025
Set of half-unions DN32 mm	1 1/2	1 1/4	36	56	0616-101-032
Set of half-unions DN40 mm	2	1 1/2	43	66	0616-101-040
Set of half-unions DN50 mm	2 1/2	2	54	74,2	0616-101-050

CLASSIFICATION OF ENVIRONMENTAL CONDITIONS

Environmental classification – Climate and mechanical conditions: Class **B** (EN ISO 4064: 2014)

Environmental classification – mechanical conditions: Class **M1** (Directive 2014/32/UE of 26 February 2014)

Electromagnetic conditions: Class **E1 & E2** (EN ISO 4064: 2014 and Directive 2014/32/UE of 26 February 2014)

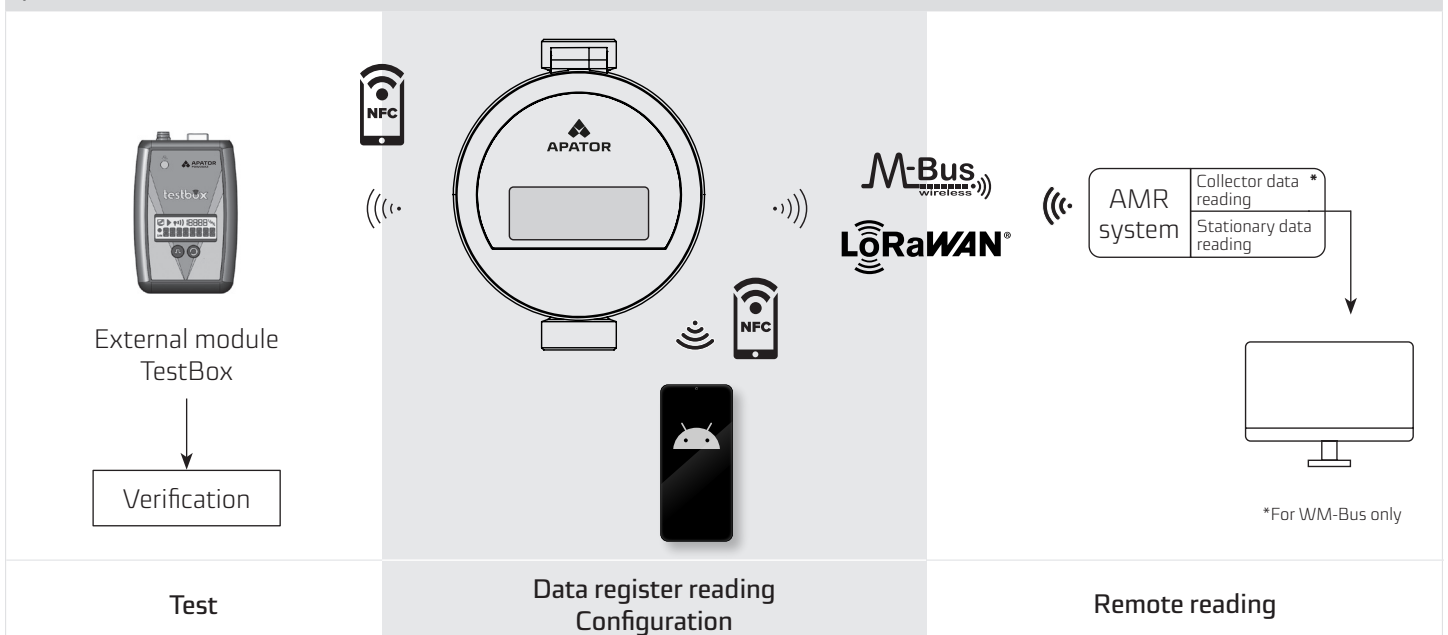
COMPATIBILITY AND INSTALLATION REQUIREMENTS

	Water meter installation positions*			Flow profile accuracy class	
	Horizontal with the counter pointing upwards	Horizontal with the counter pointing sideways	Vertical with the counter pointing sideways	CE-compliant	Per manufacture
Ultrimis UL, UL-01	H↑	H→	V	U0 D0	U5 D3

* The tolerance of the flow axis position for all meters—horizontal, vertical, and inclined—is $\pm 5^\circ$ in accordance with the PN-EN ISO 4064-2 standard.

** If there is any fitting other than standard connectors before or after the water meter (which may disturb the flow), it is recommended to extend the straight pipe sections: upstream of the meter to $U5 = 5 \times DN$, and downstream to $D3 = 3 \times DN$. In the case of fittings that strongly disturb the flow profile, these values can be increased two- to threefold.

CONNECTION EXAMPLE DIAGRAM





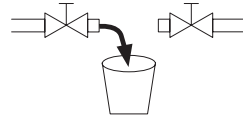
INSTALLATION AND OPERATING RECOMMENDATIONS



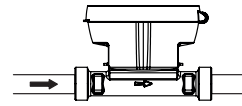
This product should be installed by a professional licensed for servicing and operation of water and sewage systems.



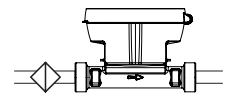
Close the upstream and downstream valves before installing/removing the product.



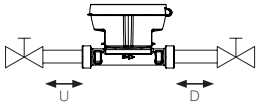
When installing or removing the water meter, place a container to collect the liquid, clean the threaded ends, and flush the system section the water meter will be installed in.



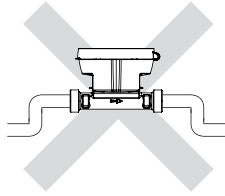
Mind the indicated direction of water flow.



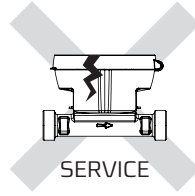
Install a separating filter upstream of the water meter.



Keep the straight line sections upstream and downstream of the water meter as shown in the table below

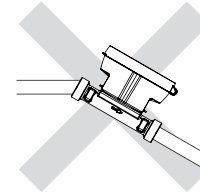


Protect from air pockets; do not install in the highest points of the system.

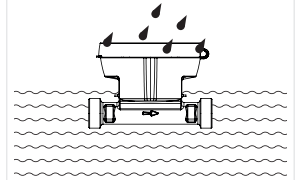


SERVICE

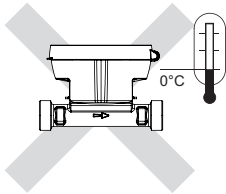
Have the water meter serviced if defective.



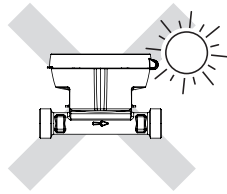
Prevent stresses from misalignment with the pipeline.



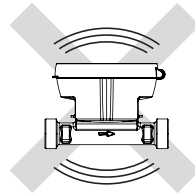
This device is suitable operation in wet or flooding conditions per IP68



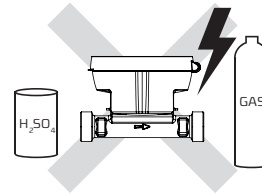
Protect from freezing.



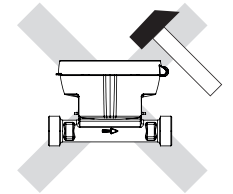
Protect from high temperature and UV light.



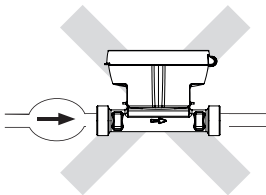
Protect from vibration.



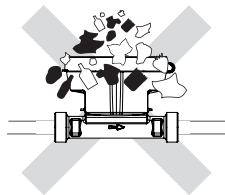
Do not use near sources of acids, gases and/or electrical systems.



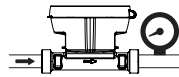
Protect from shocks.



Protect from hydraulic shocks.



Keep the installation site clean.



Minimum water meter downstream pressure
 $P_{min} \geq 0,3 \text{ bar}$



Do not dispose of the device with household waste. Bring the device to a selective waste collection point. Please recycle.

NOTE: See www.apator.com for detailed information about the operating principle and conditions.

WARNINGS:

This manual is the property of Apator Powogaz S.A., and all rights to this document are reserved. Any copying or distribution of this manual is strictly prohibited. As this manual is part of the device, it should be kept with the device to ensure access to information for both the user and qualified service personnel. It is recommended to read this manual before first using the device to ensure safe and proper operation. Apator Powogaz S.A. shall not be held liable for any personal injuries, indirect damages, or material losses resulting from improper installation or incorrect use of the device, inconsistent with its intended purpose.

PROHIBITED:

The device must be used in accordance with this manual, and any modifications, attempts at self-repair, or improper use of the device are prohibited. In case of malfunction or suspected issues with the device, contact qualified service personnel.

Apator Powogaz S.A. has the right to modify and improve the manufactured equipment without prior notice.



Apator Powogaz S.A.
Jaryszki 1c, 62-023 Żerniki
Tel. +48 61 841 81 00
www.apator.com

Sales Department: handel.powogaz@apator.com
Export: export.powogaz@apator.com
Technical support: support.powogaz@apator.com
Complaints: reklamacje.powogaz@apator.com
Office: sekretariat.powogaz@apator.com