

W370, W270

1 General

Note
In the following text, the term meter refers to both the cold water meter and the hot water meter.

2 General information

Caution
The meter left the factory in a faultless condition where safety and hygiene are concerned.

Caution
Calibration relevant security seals on the meter must not be damaged or removed. Otherwise, the guarantee and calibration validity of the meter will lapse.

Caution
Further technical support will be provided by the manufacturer on request.

3 Safety Instructions

Caution
The meter may only be used in building service engineering systems and only for the applications described.

Caution
The local regulations (installation etc.) must be adhered to.

Caution
The operating conditions on the nameplate must be observed during use. Failure to comply with these regulations can cause dangerous situations and voids all claims arising from liability for defects as well as liability on the basis of any expressly granted guarantees.

Caution
In no case do any welding, drilling, or soldering near the meter.

Caution
Do not lift the meter by the electronic unit.

Caution
Protect the meter against damage from shocks or vibrations at the mounting place. Do not use in the near of electrical power installations.

Caution
Only personnel trained in the installation and operation of meters in building service engineering systems, may install or remove the meter.

Caution

The meter is suitable for drinking water. Take necessary hygiene measures during installation:

- Only remove the meter from its individual packaging at the mounting place.
- Wear disposable gloves.
- Clean and sanitize the relevant tools before installing the meter.
- Protect the measuring tube and thread surfaces from dirt and contact.

Caution

Be aware of sharp edges on the thread, flange and measuring tube.

Caution

After installing the meter, check the leak-tightness of the system.

Warning

As far as disposal is concerned, the meter is a waste electronic appliance in the sense of European Directive 2012/19/EU (WEEE) and it must not be disposed of as domestic waste. The relevant national, legal regulations must be observed as the appliance must be disposed of via the channels provided for this purpose. The local and currently valid legislation must be observed.

Warning

The meter contains lithium batteries. Do not dispose of the meter and batteries as household waste. Observe local regulations and laws regarding disposal.

Warning

You can return the lithium batteries to the manufacturer for appropriate disposal following use. When shipping please observe legal regulations, in particular, those governing the labelling and packaging of hazardous goods.

Warning

Do not open the batteries. Do not bring batteries into contact with water or expose them to temperatures above 80 °C.

Warning

The meter does not have any lightning protection. Ensure lightning protection via in-house installation.

4 Scope of delivery

1. Water meter
2. Operating and Installation Instructions

3. 2 flat seals
4. Optional non-return valve

5 Accessories

Sealing bracket DN15	
Sealing bracket DN20	
Non-return valve DN15	
Non-return valve DN20	
Flat gasket DN15	
Flat gasket DN20	
Installation set water meter DN15	pb-free
Installation set water meter DN20	pb-free

6 Installation and environmental conditions

Note
The information on the meter must be observed!

Installation conditions

Pressure class	MAP 16 (up to 16 bar)
Installation position	Optional, horizontal, or vertical
Inlet and outlet section	UOD0 (not necessary)
Water temperatur Cold water meter T50	0.1...50 °C
Water temperatur Hot water meter T70	0.1...70 °C
Filter	Standard
Non-return valve	Optional

Environmental conditions

Environmental class	O (OIML R49) for outdoor installation
Mechanical class	W270 M1 (MID); W370 M1 (MID)
Electromagnetic class	W270 E1 (MID); W370 E2 (MID)
Protection class	IP68
Max. height	2000 m above NN
Operating temperature	-10 ... +65 °C (with flow)
Storage temperature	-20 ... +70 °C
UV protection	Stabilized

7 Installation

Note
During installation, adhere to the notes from chapter 2 and 3.

Note
Observe the dimensions of the meter and check whether there is sufficient space available.

Note
The meter must not be exposed to stress or forces caused by pipes or fittings. If this cannot be guaranteed permanently, improve the installation site or fix the pipes, e.g. with suitable connection brackets.

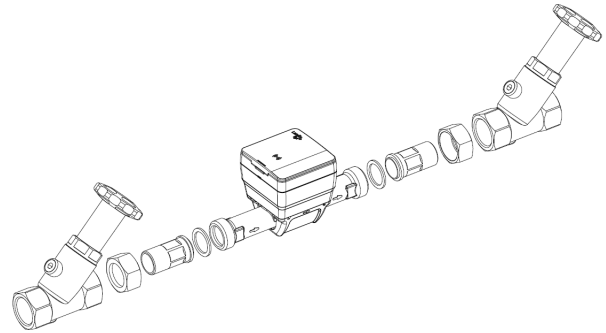


Figure 1: Example Installation

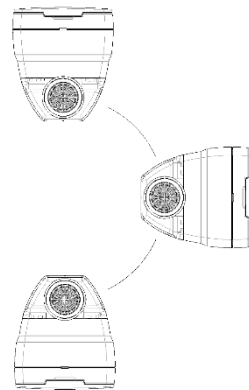


Figure 2: Recommended installation position

To install the meter, proceed as follows:

1. Close all valves before and after the mounting place.
2. If necessary, remove the old meter. Collect the excess water in a suitable container.
3. Remove the old sealings and residues of teflon tape and hemp.
4. Clean the union nuts thread and the sealing surfaces at the screw connections.
5. Install the provided sealing at the threaded connector of the meter. Check if the sealing is properly positioned and is free of damage.
6. When using a non-return valve, check its correct placement at the meter (see chapter 8).
7. Fit the meter horizontally or vertically so that the arrow on the housing and the flow direction match.
8. Tighten the screw connections. Note and use the tightening torques specified in the following table and the corresponding angle from contact of the union nut with the gasket.

Table 1:

Flat gasket	Novapress basic	
Meter thread	$\frac{3}{4}$ "	1"
Tightening torque	10 – 15 Nm	25 – 30 Nm
Angle from contact	45 – 60°	45 – 60°

9. Pay attention to the correct placement of the union nut.
10. Ensure that all connectors are tightened securely, and the meter is properly installed.
11. Open all valves before and after mounting place and vent the installation.
12. Check the installation for leakage.
13. Seal the screw connection to protect it against manipulation (see chapter 9).

8 Non-return valve

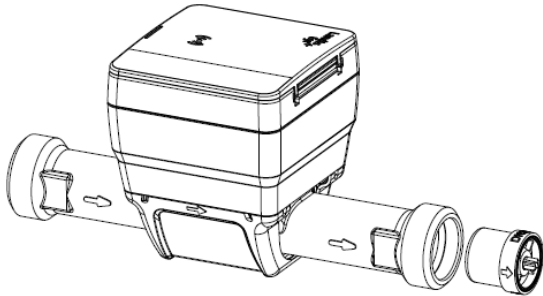


Figure 3: Installation non-return valve (available as accessory)

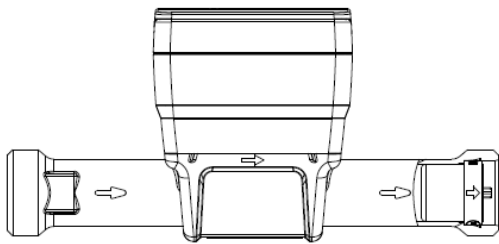


Figure 4: Example non-return valve when installed

9 Sealing

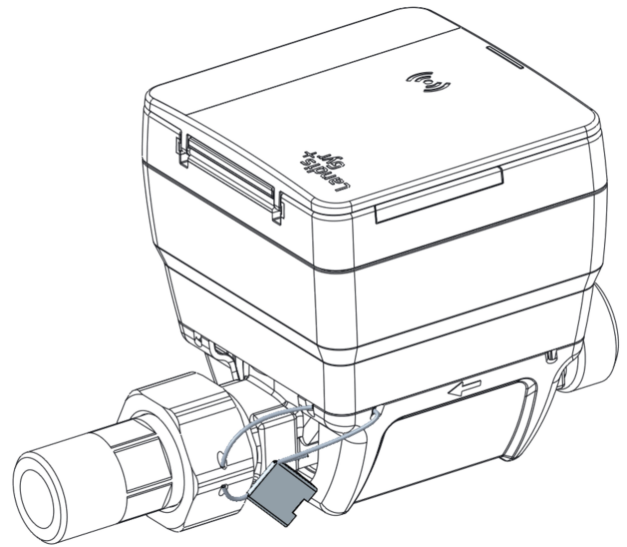


Figure 5: Example sealing with wire seal

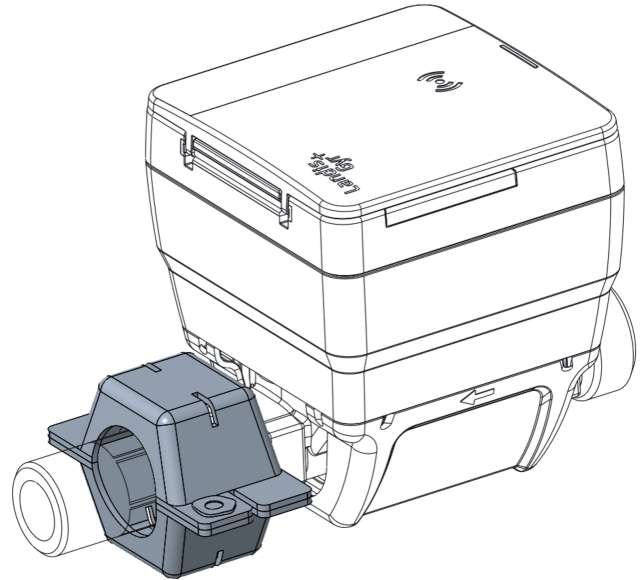


Figure 6: Example sealing with sealing clamp (available as additional element)

10 Interface and Communication

The meter is equipped with an NFC interface according to ISO/IEC 14443 standard.

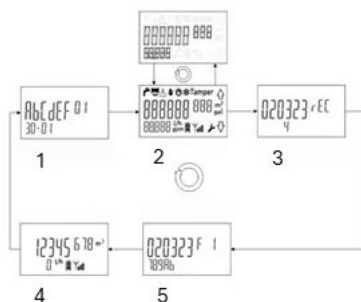


Figure 7: Overview

Number	Description
1	Hash value and firmware version
2	Segment test
3	Legally relevant logbook - recalibration
4	Volume and flow display
5	Legally relevant logbook - firmware update


11 Parameterization via UltraConnect

The meter can be read out and parameterized via the UltraConnect App. Further information can be found in the meter's Technical Description.

12 Automatic Commissioning

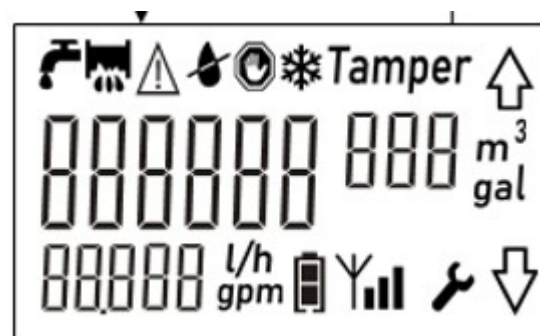
Note
The meter can be activated manually via the UltraConnect App. Further information can be provided on request.






- The meter automatically starts measuring and communication when the measuring tube is filled with water.
- The display SLEEP changes to a regular display.

- With  the display indicates the correct flow direction, and the flow display shows the current flow rate.

13 Display

Note
To prevent reading errors, the decimal places of the values displayed are superscripted.











Icon	Description
	Forward flow
	Current volume
m³ or gal	Unit for volume
	Current flow
l/h or gpm	Unit for flow
	Server connection established
	Signal quality with LoRa or NB-IoT



14 Error messages

The meter continuously runs a self-diagnosis and can thus recognize and display various error messages.

Table 2:

Error icon	Error	Cause / Solution	Reset error via UltraConnect
	Leakage	Cause: Permanent flow. Solution: Check the installation for leakage.	X
	Pipe burst	Cause: Permanent high flow. Solution: Check the installation for pipe burst.	X
	Internal error	Cause: Meter error. Solution: Contact the Service.	-

Error icon	Error	Cause / Solution	Reset error via UltraConnect
	Meter dry	Cause: No water can be detected in the pipe. Solution: Vent the installation.	-
TAMPER	Manipulation	Cause: An access without the correct certificate was detected. Solution: Check the meter for manipulation.	X
	Stagnation	Cause: No flow can be measured. Solution: Rinse the installation.	X
	Frost / Ice	Cause: Water temperature is too low. Solution: Protect the meter from frost or ice.	X
	Reverse flow	Cause: Backflow against installation direction. Solution: Check the installation direction.	-
	Battery status	Cause: Battery status for <540 days remaining.	-

Error icon	Error	Cause / Solution	Reset error via UltraConnect
		Solution: Plan to replace the meter.	
	Critical battery	Cause: Battery status for <180 days remaining. Solution: Replace the meter.	-
	Test mode active	Cause: Test mode active. Solution: Contact the Service.	-

15 Technical Data



Note

The information on the meter must be observed!

Metrology

Measuring accuracy	Class 2 (OIML R49)
Measuring range	R250 (optional: R400, R160)
Temperature class	T50 (cold water), T70 (warm water)
Measure interval	1 Hz

Power supply

Power supply type	Battery for 15 years (+2 years storage time)
Battery type	D-cell Lithium
Lithium content	5 g per battery
Number of batteries	1

Communication

Available Communication type	LoRa [®] /wM-Bus or NB-IoT
App Support	Yes (UltraConnect, Info Finder)
Maximum radiated power EIRP (dBm)	NB_B20: 23.4 NB_B8: 24.0 NB_B5: 23.4 NB_B3: 28.9

EC Declaration of Conformity

No. CE WM1 002 / 01.25



Product description: Ultrasonic water meter
WM1 (W270..., W370...)
Manufacturer: Landis+Gyr GmbH, Humboldtstraße 64, 90459
Nuremberg, Germany

Landis+Gyr GmbH takes sole responsibility for the issue of this declaration of conformity. It declares herewith that the above-named product meets the requirements of the following directives and laws:

Directive	Reference	First edition	Last revised
2011/65/EU	(RoHS)	OJ L 174	01/07/2011
2014/32/EU	(MID)	OJ L 96	29/03/2014
2014/53/EU	(RED)	OJ L 153	22/05/2014

These relevant harmonized standards and normative documents were used as a basis:

Standard	Directive	Reference	Standard	Directive	Reference
EN IEC 63000:2018	RoHS	OJ L 155 18/05/2020	EN 62311:2008	RED ⁽¹⁾	OJ C 249 - 08/07/2016
EN ISO 4064-1:2017/A11:2022	MID	-	EN 62479:2010	RED ⁽²⁾	OJ C 249 - 08/07/2016
EN ISO 4064-2:2017/A11:2022	MID	-	EN 300 220-1 V3.1.1 (2017)	RED ⁽²⁾	-
EN ISO 4064-3:2014	MID	-	EN 300 220-2 V3.1.1 (2017)	RED ⁽²⁾	OJ C 076 10/03/2017
EN ISO 4064-4:2014	MID	-	EN 300 330 V2.1.1 (2017)	RED	OJ C 076 10/03/2017
EN ISO 4064-5:2017/A11:2022	MID	-	EN 301 489-1 V2.2.3 (2019)	RED	-
WELMEC Guide No. 7.2, Issue 2023	MID	-	EN 301 489-3 V2.1.1 (2019)	RED	-
OIML R49-1, edition 2013	MID	-	EN 301 489-52 V1.2.1 (2021)	RED ⁽¹⁾	OJ L 289 10/11/2022
OIML R49-2, edition 2013	MID	-	EN 301 908-1 V15.2.1 (2023)	RED ⁽¹⁾	OJ L, 2023/2392 - 04/10/2023
EN 62368-1:2014/AC:2015	RED	OJ C 249 08/07/2016	EN 301 908-13 V13.2.1 (2022)	RED ⁽¹⁾	OJ L 289 10/11/2022

The notified body (RISE, 0402) has examined the technical design and certified that it complies with the requirements of Directive 2014/32/EU (MID) that apply to the device and has issued the following certificate: 0402-MID-C600005.

The notified body (PTB, 0102) has evaluated the quality assurance system and recognizes it in: DE-M-AQ-PTB006.

- 1) Only for product configuration with NB-IoT communication. The notified body (TÜV SÜD Danmark, 2443) has examined the technical design and certified that it complies with the requirements of Directive 2014/53/EU (RED) that apply to the device and has issued the following certificate: DK-RED003001 i01.01.
- 2) Only for product configuration with LoRa® and wM-Bus communication functionality. The LoRa® mark is a trademark of Semtech Corporation and its subsidiaries.

Nürnberg, 30.01.2025

Johannes M. Koch,
Managing Director
Name, Position

Signature

Robert Sturek,
Head of Technology
Name, Position

Signature

This declaration certifies conformity with the stated directives and standards, it does not however constitute a commitment to any specific properties!
The safety instructions included in the product documentation must be followed!

