

# SSM-AQUO

LoRaWAN & Wireless M-BUS

## Quick use and installation guide



SSM-AQUO is an ultrasonic water meter for residential applications.

### 1. GENERAL INFORMATION

Water temperature	from -0.1°C to + 50°C
Room temperature	from -25°C to + 55°C
Environmental class	M1/E1
Maximum working pressure	16 bar
Protection rating	IP68
Maximum radio power	25 mW E.R.P.
Accuracy class	2
Battery life	up to 13 years*

\* depending on radio transmission settings and environmental conditions

Tab. 1.1. Technical data

### 2. ENVIRONMENTAL CLASSIFICATION

- Class B, O according to ISO 4064:2017-A.2 Appendix A point A.2
- Class M1 according to European Directive 2014/32/EU
- Class E1 according to ISO 4064:2017 and European Directive 2014/32/EU

### 3. PACKAGE CONTENTS

- Meter
- Raccords kit (if ordered)

### 4. SAFETY INFORMATION

- Consult this document before operating.
- Installation must only be carried out by qualified and authorised personnel.

### 5. TRANSPORT AND STORAGE

- Protect against vibrations and falls during transport;
- Storage temperature between -25°C and +55°C;
- Once the meter has been removed, do not handle it by the lid;
- Avoid impacts, bumps and drops when installing the meter.

### 6. INSTALLATION PRE-REQUISITES

Check the correct alignment of upstream and downstream pipes.



Fig. 1.1. correct alignment



Fig. 1.2. misalignment

Check the distance between couplings to avoid mechanical stress.  $U+D < 5 \text{ mm}$



Fig. 1.3. distance between the meter and the joints

SSM-AQUO is class U0D0 (does not require a straight section of pipe before and after the meter).

UG0109ENG

### 7. COMPONENTS REQUIRED FOR INSTALLATION

- Gaskets
- Compression fittings

**!** Always use new seals.

**!** Gaskets and fittings are not standard equipment (see par. 3. PACKAGE CONTENTS)

### 8. INSTALLATION GUIDE

**!** The SSM-AQUO meter can be installed in any position.

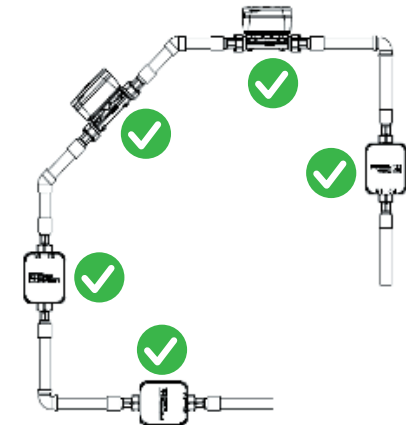


Fig. 1.4. possible installation positions

Remove any packaging or protection from the meter

Install new gaskets in the pipe connections

Position the meter respecting the direction of flow

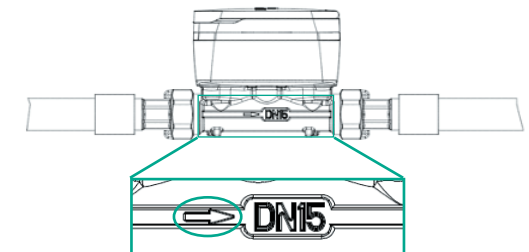


Fig. 1.5. flow limitation

Fasten the nuts according to the tightening torques indicated in the table

Open the upstream valve to allow water to flow into the meter

Open the downstream valve to allow air to escape from the pipeline

Close the downstream valve

Check that there are no leaks from the fittings

Reopen the downstream valve

## 9. TIGHTENING TORQUES

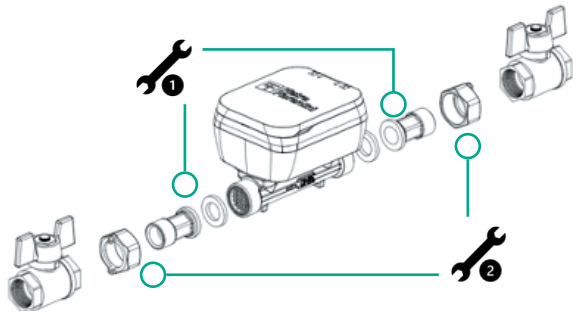









Fig. 1.6. meter joints




DN			
15	17	29	30 Nm
20	23	36	35 Nm
25	30	46	35 Nm
32	36	53	40 Nm
40	44	66	45 Nm

Tab. 1.2. tightening torques

## 10. METER DISPLAY

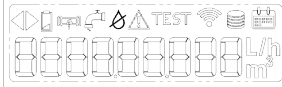







The display cyclically shows information as described below.

	Functional display verification (1/2)
	Functional display verification (2/2)
	Accumulated volume (1/1)
	Firmware version and signature (1/4)

	Firmware version and signature (2/4)
	Firmware version and signature (3/4)
	Firmware version and signature (4/4)

Tab. 1.3. display information

## 11. METER DISPLAY ERRORS

	No water in the meter or partially empty pipe
	Leak detected, continuous flow
	Broken pipe, sudden passage at high flow rate
	Meter installed in the wrong direction
	Reverse flow detection
	Flow detection above maximum flow rate
	Attempted fraud
	Low battery

Tab. 1.4. display errors

## 12. AUTOMATIC METER READING

The meter is pre-configured to allow consumption transmission via radio frequency. Radio transmissions are automatically activated after the 5-litre volume totaliser has been reached or according to the settings agreed upon in the order.

## 13. DISPOSAL



This product contains a lithium battery and electronic circuitry. Do not dispose of with household waste, follow your municipality's instructions for the disposal of WEEE.

**! Disposal must only be carried out by qualified and authorised personnel**

## 14. EU DECLARATION OF CONFORMITY

Pietro Fiorentini S.p.A. declares under its sole responsibility that the SSM-AQUO series meters to which this declaration refers are IN ACCORDANCE with the European directives listed below:

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 concerning the making available on the market of pressure equipment (recast)

Directive 2014/53/EU of the European Parliament and of the council of 16 April 2014 on the harmonisation of the laws of the Member States concerning the making available on the market of radio equipment and that supersede directive 1999/5/EC

Type B certificate: IT-028-21-MI001-2213, issued on 9 March 2022 by Pa.L.Mer. Soc. Cons.a.r.l., Italy, (Notified Body Number 2213)