

Installation instructions for volumetric water meters

ENGLISH

This manual is valid for the following meters: 620 family, 640 family

Supplied Material:

- Each package contains:
 - Water meter
 - Optional connection kits if ordered

General Instructions:

Please read this guide prior to installing the water meter. The water meter is hermetically sealed and therefore no servicing of the meter will be required. The water meter is designed for use with potable water for residential activities. The meters must be stored in a dry, cool place, free of contamination. Please make sure that during installation all hygienic standards and recommendations are respected.

NOTE:

These installation instructions apply for volumetric water meters

- Volumetric meters with electronic register can be installed in all positions (see picture 12)
- Volumetric meters with mechanical register can be installed in all positions, except with a top down register (see picture 12) (due to the risk of damaging the gears in the register)

Permissible Operating Conditions

- Cold water meter: from 0.1°C up to 50 °C
- Pressure stage: MAP16
- Mechanical environment: M1

(MID) fixed installation with minimum vibration¹⁾

- Electromagnetic environmental class: E2 (MID) residential¹⁾
- Climatic environment: from 5 °C up to 70 °C
- Meters have to be installed in a stress free condition

Please also note the directions in accordance with:

- ISO 4064-5:2017 (installation requirements)
- DIN 1988-200 (TRWI-planning and implementation, components, ...)

Meters must be installed grounded and tension free, without any mechanical stress on water pipes. For this we recommend installing meters using a metal meter bracket with length compensation fittings (thread dimension acc. EN ISO 228-1:200 Class B). In cases where the installation site is not prepared with these brackets, we recommend the permanent use of a potential compensator ("grounding kit"). This will prevent serious accidents during installation and operation due to hazardous leakage currents. The accessory grounding kit is also available for purchase from Sensus.

The meter does not need any straight upstream or downstream pipe (U0D0).

STEP 1:

Before uninstalling the old meter first close outlet valve at output, then close inlet valve!

Thoroughly flush pipe to prevent contamination of the new meter with

dirt, sediments and/or particulates. The infiltration of dirt, sediments and/or particles into the meter may damage it and prevent it from operating correctly.

1/1A Use new sealing washers

2 Install the meter in the correct flow direction

STEP 2:

Connect meter on one side with the unions

3/3A Use your hands to fasten the unions! Then use key

STEP 3:

Finalizing meter connection

4 Prevent rotation of the meter while tightening unions

5 Repeat process for the remaining connection as described in pictures 1-2-3-4. Then tighten the unions with a wrench. The torque should be min. 20 Nm and max. 30 Nm.

6 Turn register in proper position for optimum readout

STEP 4:

First filling

7 Inlet side: slowly open the inlet valve

8/8A Check for leaks

9 Outlet side: slowly open the outlet valve



Improper first filling may lead to water hammer or piston overspeeding which can damage the meter and prevent it from operating correctly.

Note:

10 When using a non return valve please use the appropriate gaskets depending on the shape of the connection pipe.

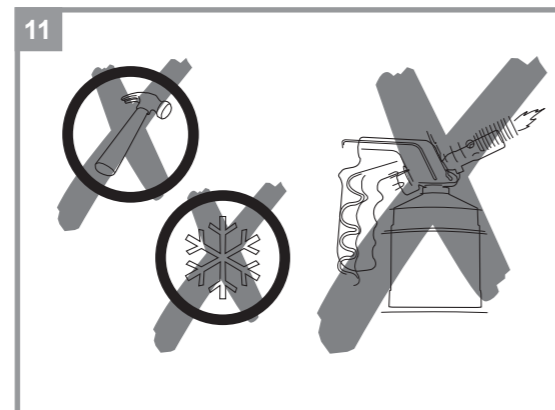
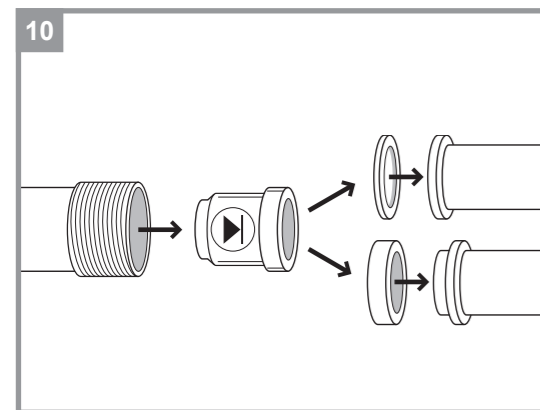
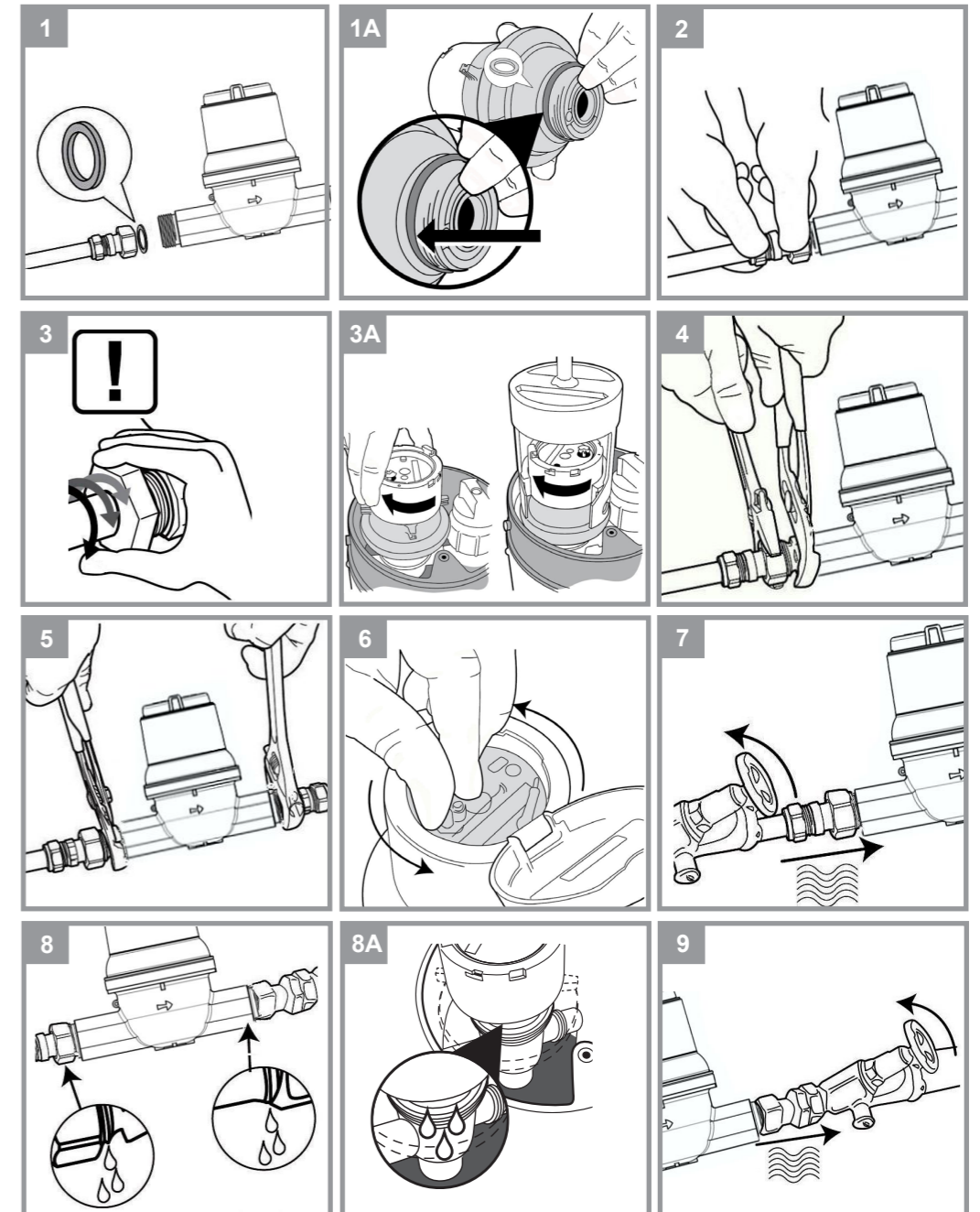
11 Water meters are calibrated measuring instruments. Exposing them to hard shock or not protecting them against freezing can cause irreparable damage. Exposure to excessive heat can damage the meter.

12 Orientation of the display

STEP 5¹⁾:

All electronic register settings and functions will be automatically and correctly activated once the first volume of water goes through the meter or with an activation radio command. Check Segment test and the mode of the display

1) additional information for 640-C/M/MC



12										
640 family	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
620 family	✓	✓	✓	✗	✓	✓	✓	✗	✓	✗

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LCD Icon Explanation (information for 640-C/M/MC - 868 MHz / 25 mW; 433 MHz / 10 mW)

	Flow Direction	LC Display
	Forward Flow	+ with flashing circle
	Reverse Flow	- with flashing circle
	No Flow	Neither +, nor - circle
	Transmission icon Flashing mode by activated radio (1 sec on/ 1 sec off)	
	Low Battery Types	Description
	Low Battery	Low battery alarm will be triggered 15 months before the calculated end of life. (steady display – not blinking)
	Very Low Battery	Low battery alarm will be triggered 6 months before the calculated end of life (flashing display)
	The "Bell" icon is flashing when the register is in a testing mode	
	When an alarm is triggered the alarm icon will be visible on the LCD	
	Unit	
m ³	Cubic Meters	
l	Litre	
IGAL	Imperial Gallons	
GAL	US Gallons	
CF	Cubic Feet	
kl	Kilo Litre	

LCD Information (information for 640-C/M/MC)

LCD Segments test (1 sec every minute)	Firmware Version	Testing Mode	Forward Flow	Reverse Flow	Alarm Set

a xylem brand

Date: 01 June 2017

EU Declaration of Conformity
No. CE/620, 630, 640/ 0617

Herewith we,

Sensus GmbH Ludwigshafen
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declare under our sole responsibility, that the water meter type **612-M/SR, 620-C/M/MC, 630-C/M/MC and 640-C/M/MC**, to which this declaration relates, is in conformity with the legal regulation of the Directive 2014/32/EU of the European Parliament and the Council on measuring instruments of the 26th of February 2014, including

Annex I, Essential requirements
Annex III, water meters (MI-001)

applied normative, harmonized documents

- OIML-R 49-1, Edition 2013
- OIML-R 49-2, Edition 2013
- OIML-R-49-3, Edition 2013
- DIN EN ISO 4064-1, Edition 2014
- DIN EN ISO 4064-2, Edition 2014
- DIN EN ISO 4064-4, Edition 2014
- DIN EN ISO 4064-5, Edition 2014
- DIN EN 14154-4, Edition 2014
- WELMEC Software guide 7.2:2015

furthermore in compliance with Directive 2014/53/EU (RED) for **640, -C/M/MC**

applied normative, harmonized documents

- EN 301 489-1 V2.1.1 (2017-02)
- EN 301 489-3 V2.1.1 (2017-06)
- EN 300 220-1 V3.1.1 (2017-02)
- EN 300 220-2 V3.1.1 (2017-02)
- EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
- EN 62479:2010

The conformity assessment procedure was carried out under the supervision of the notified body PTB identification number 0102. The type-examination certificates DE-07-MI001-PTB002, DE-07-MI001-PTB004, DE-09-MI001-PTB004, DE-12-MI001-PTB004 and the design-examination certificate DE-15-MI001-PTB019 were issued.
This declaration is made on behalf of the manufacturer by the Director Metrology.

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