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MeiStreamRF / MeiStreamRF Plus
MeiStream / MeiStreamPlus
with flow stabilizer (MID)

Installation Manual

1. Product description:
Bulk meter for water up to 50 °C

2. Applications
MeiStream/MeiStream Plus/MeiStreamRF/MeiStreamRF Plus 50 °C / PN 16 or 40
- Measurement of cold potable water up to 50 °C
- Measurement of clean water up to 50 °C

3. Included in the delivery
1 Water meter; 2 Gaskets; 1 Manual

Technical data
Refer to the technical data sheets LB 1010, LB 1020, LB 1060 and LB 1080 (http://www.sensus.com)

Installation instructions

5.1 Safety tips

5.1.1 No mechanical stresses may be exerted on the meter when installed in the pipeline. The pipeline flanges must align with the meter flanges and the distance between the flanges must match the meter body length. Mis-alignment stresses can cause the meter body or flanges to crack. When the pipeline is under pressure this can cause flooding.

5.1.2 The meter must not be subjected to pressures higher than the pressure rating printed on the meter. Too high pressure can cause leaks or burst the meter body.

5.2 General instructions

5.2.1 The meter must be installed by a trained and instructed worker. Thereby the recognised standards of good practice have to be respected (We refer to the instructions given in ISO 4064-5:2014).

5.2.2 After the manufacturing process all meters are disinfected. The meters must be stored in a dry, cool, dust and germs free environment. Prior installation the meter must be disinfected again. Make sure that during the installation procedure all hygienic standards and recommendations are respected.

5.3 Installation Tools

Two spanners for the corresponding size of bolts used are necessary. Hoisting devices may be required, depending on the weight of the meter and the installation conditions.

5.4 Installation instructions

5.4.1 The meter with flow stabilizer does not need any straight upstream or downstream pipe (U0D0).

5.4.2 The maximum medium temperature shall not exceed 50 °C when in operation and 70 °C at down-time.

5.4.3 The environmental temperature must be within 5 and 70 °C.

5.4.4 After the meter reading the lid shall be always closed. In open-air installations it is recommended to shadow the register.

5.4.5 The meters are classified acc. to 2014/32/EU (MID) in the mechanical environment class M2 (significant or high levels of vibration and shock) and in the electromagnetic environment class E2.

5.4.6 The pipe diameter should not be abruptly reduced or expanded directly upstream or downstream the meter. All diameter changes should be done with an angle <8° related to the pipe centre.

5.4.7 All flow regulating devices (e.g. Valves, PRV's) shall be installed downstream of the meter.

5.4.8 When selecting the installation site, consider the meter orientation (horizontal/vertical)!

5.4.9 Gaskets must not protrude into the pipeline or be mis-aligned.

5.4.10 The pipeline must be thoroughly flushed before installing the meter to prevent damage from debris.

5.4.11 The flow direction of the meter (arrow on the meter body) must correspond with the flow direction in the pipeline.

5.4.12 After installation of the meter, the pipeline must be filled with water very slowly to prevent the meter being damaged by surges. Filling the pipe too rapidly can cause air / water surges which can destroy the meter insert.

5.4.13 The installation site should be selected to prevent air bubbles collecting in the meter and the pipeline must always be completely filled with water. Installation of a meter at the highest point in a pipeline must be avoided. Eventually a suitable air release device must be installed upstream the meter.

5.4.14 The manufacturer's Q_3 value must not be exceeded for extended periods.

5.4.15 The meter should be protected from stones, sand and fibrous material with a suitable strainer or filter.

5.4.16 The meter must be protected from pressure surges.

5.4.17 During operation always an upstream pressure of 0.3 bar must be ensured.

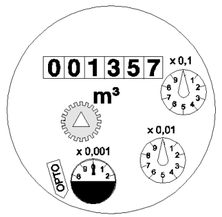
5.4.18 Exchanging the measuring insert

- Metrological units must be replaced by metrological units with an identical metrology marking. Metrological units with MID approval must be installed only in bodies with the marking "MID" on the upper flange surface.
- Before the installation of a replacement measuring insert the inside surface of the body, especially the sealing areas of the O-ring must be checked for damage. A new O-ring must be used. Prior installation of the new metrological unit the meter body must be cleaned and disinfected.
- The O-ring and the lip seal must be lubricated with grease approved for use with potable water before installation into the meter body.
- To avoid damaging the O-ring when installing a meter insert, the O-ring must first be fitted onto the cover flange and then pushed into the meter body. If the O-ring is fitted into the body first, it can be pinched when fitting the meter insert and cause leaks.
- When installing the measuring insert into the meter body make sure that the direction of the arrow on the head flange aligns with the arrow on the meter body.
- The screws fixing the measuring insert in the body shall be screwed hand tight and then tightened crosswise with an Allen key. The recommended torque is 40 Nm (M12) or 160 Nm (M16). Using the composite head flange the torque shall not exceed 20 Nm.
- With meters used for billing at least one screw of the measuring insert shall be sealed against the meter body after the exchange to avoid tampering.

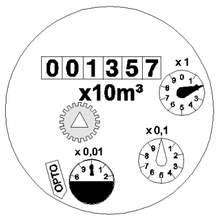
6. Reading

The black digits on the roller counter indicate whole cubic metres. Parts of a cubic metre are indicated by the red sweep hands. If there is a factor "x10" printed under the roller counter it requires the reading to be multiplied by 10 for a reading to the nearest 10 cubic meters. For a reading to the nearest cubic metre, the black sweep hand must be read. Please see display example below: The complete volume is 13,572m³.

Mechanical register display
MeiStream / MeiStream Plus



DN 40 ... 125



DN 150 ... 300

Electronic register display
MeiStreamRF / MeiStreamRF Plus

m³ IGA ECF kℓ	LCD Segments test (1 sec every minute)
000088,836 l	Testing Mode
000038,689 m³	Forward Flow
000038,689 m³	Reverse Flow
000038,689 m³	Alarm Set
11 dFE7	Firmware Version*/ Check Sum* (1 sec every minute) *variable

Electronic register display MeiStreamRF / MeiStreamRF Plus

⊕ ⊖	**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	

m³	l	IGAL	GAL	CF	kℓ
Cubic Meters	Litre	Imperial Gallons	US Gallons	Cubic Feet	Kilo Litre

7. Orientation

Type	Register *)	Pipe *)	
MeiStream **MeiStreamRF**	Upwards or 90° slanted	Horizontal	Vertical
MeiStream Plus **MeiStreamRF Plus**	Upwards	Horizontal	

*) when used for billing the marking on the type plate must be followed

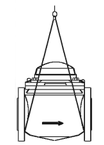
9. Maintenance and cleaning

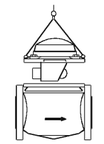
Under normal conditions the meter is maintenance free. If required the measuring insert can be removed and cleaned (when used for billing national regulations must be followed). Chemicals, sharp objects or high-pressure cleaners must not be used for cleaning. Respect section 5.2.2 of this instruction.

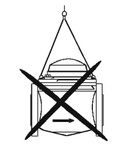
10. Disposal

This product contains a lithium Ion battery. In the interest of protecting the environment, this battery may not be disposed in household waste after its period of use. The local and national regulations for environmental protection are to be considered.

8. Transport







SENSUS
a xylem brand

Date: 23.11.2022

EU Declaration of Conformity
no. CE/ MeiStream/MeiStream Plus/0609

Herewith we,

Sensus GmbH Hannover
Meineckestraße 10
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declare under our sole responsibility for the meter types

MeiStream DN 40 ... 300 and MeiStream Plus DN 40 ... 150

conformity with the legal regulation of the Directive 2014/32/EU of the European Parliament and the Council dated 26th of February 2014, including
Annex I, Essential requirements
Annex III, MI-001, water meters

and the Directive 2014/53/EU (RED) of the European Parliament and the Council dated 16th of April 2014.

applied harmonized normative 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 2017
- DIN EN ISO 4064-2, Edition 2017
- DIN EN ISO 4064-4, Edition 2014
- DIN EN ISO 4064-5, Edition 2017
- DIN EN 14154-4, Edition 2014
- WELMEC Software guide 7.2:2015
- EN 301 489-1 V2.1. 1
- EN 301 489-3 V2.1.1
- EN 300 220-1 V3.1. 1
- EN 300 220-2 V3.1. 1
- EN 60950-1:2006+A11:2009+A1:201O+A12:2011+A2:2013
- EN 62479:2010

Additional applied rules
- EN 14268, Edition 2005

The conformity assessment procedure was accomplished under the surveillance of the notified body at PTB Id.-No. 0102.
The design examination certificates DE-09-MI001-PTB010; DE-09-MI001-PTB012 and DE-15-MI001-PTB014 were issued.
The Managing Director on behalf of the manufacturer makes this declaration.

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