

MeiTwin / MeiTwinRF with flow stabilizer (MID)

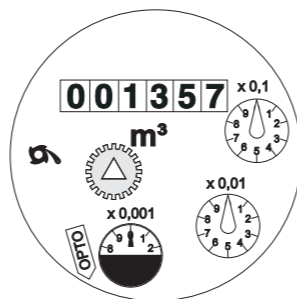
Installation Manual

- Product description:**
Bulk meter for water up to 50 °C
- Applications**
Measurement of cold potable water up to 30 °C for billing applications
Measurement of clean water up to 50 °C
The normal flow rate should differentiate from the changeover flow rates. Frequent crossing of the changeover flow rates can shorten the service life. During operation a minimum upstream pressure of 0.5 bar must exist. With a lower pressure the safe switching of the valve is not ensured.
- Included in the delivery**
1 Water meter; 2 Gaskets; 1 Manual
- Technical data**
Refer to the technical data sheets MeiTwin and MeiTwinRF (<http://www.sensus.com>)
- Installation instructions**
 - Safety tips**
 - 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. Misalignment stresses can cause the meter body or flanges to crack. When the pipeline is under pressure this can cause flooding.
 - 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.
 - General instructions**
 - The MeiTwin may only 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).
 - 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.
 - 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.
 - Installation instructions**
 - The MeiTwin acc. to its approval does not need any straight upstream or downstream pipe (U0D0).
 - The maximum medium temperature shall not exceed 50 °C when in operation and 70 °C at down-time.
 - The environmental temperature must be within 5 and 70 °C.
 - After the meter reading the lid shall be always closed. In open-air installations it is recommended to shadow the register.
 - 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.
 - 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.
 - All flow regulating devices (e.g. Valves, PRV's) shall be installed downstream of the meter.
 - When selecting the installation site, consider the meter orientation (horizontal/vertical)!
 - Gaskets must not protrude into the pipeline or be mis-aligned.
 - The pipeline must be thoroughly flushed before installing the meter to prevent damage from debris.
 - The flow direction of the meter (arrow on the meter body) must correspond with the flow direction in the pipeline.
 - After installation of the meter, the pipeline must be filled with water very slowly to prevent the meter being damaged by surges. In particular with the use of a piston type by-pass meter a moderate rotation speed of the sweep hands (<2/s) has to be maintained. Too fast evacuation will damage the by-pass meter.
 - 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.
 - The manufacturer's Q₃ value should not be exceeded during normal operation.
 - The meter should be protected from stones, sand and fibrous material with a suitable strainer or filter.
 - The meter must be protected from pressure surges.
 - During operation always an upstream pressure of 0.5 bar must be ensured.
 - Exchanging the metrological unit
 - 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 metrological unit the inside surface of the body, especially the sealing areas of the O-ring must be checked for damage. The drain screw on the bottom must be removed and the body drained. Thereafter the screw can be used again. A new gasket for the drain screw and O-ring for the measuring insert must be used (included in the delivery).
 - The detection of damages on the body or drain screw demands its replacement.
 - The body must be cleaned, debris must be removed.
 - 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 metrological unit, 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 metrological unit 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 metrological unit in the body shall be screwed hand tight and then tightened crosswise with an Allen key. The recommended torque is max. 160 Nm (M16).
With meters used for billing at least one screw of the metrological unit shall be sealed against the meter body after the exchange to avoid tampering.

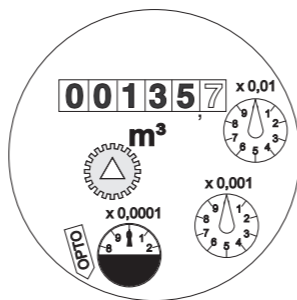
6. Reading

When reading a compound meter always both indexes (main and by-pass meter) must be read. The consumption is always the total of both meters.
The black digits on the roller counter indicate full cubic metres. Parts of a cubic metre are indicated by red rollers and/or red sweep hands.

Mechanical register display MeiTwin



Main meter DN 50 - 100



By-Pass meter

Electronic register display MeiTwinRF

	LCD Segments test (1 sec every minute)
	Testing Mode
	Forward Flow
	Reverse Flow
	Alarm Set
	Firmware Version*/ Check Sum* (1 sec every minute) *variable

Electronic register display MeiTwinRF

Icon	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

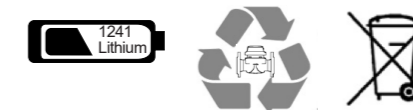
Type	Register	Pipe	
MeiTwin with By-Pass meter 612MTW, 612MTW-HRI and 612MTW-ER56/66		Horizontal	Vertical
		Upwards or sideways	

9. Maintenance and cleaning

Under normal conditions the meter is maintenance free. If required the measuring insert can be removed from the body and be cleaned. Chemicals, sharp objects or high-pressure cleaners must not be used for cleaning.

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.



Date: 23.11.2022

EU Declaration of Conformity

no. CE/ MeiTwin/2147

Herewith we, **Sensus GmbH Hannover**
Meineckestraße 10
D-30880 Laatzen
Germany

declare under our sole responsibility for the compound meter type
MeiTwin DN 50 ... 100

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 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
- 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+A1:2010+A12:2011+A2:2013
- EN 62479:2010

Additional applied rules

- EN 14268, Edition 2005

The design examination certificate DE-21-MI001-PTB006 was issued.
The conformity assessment procedure was accomplished under the surveillance of the notified body at PTB Id.-No. 0102.
This declaration is made on behalf of the manufacturer by the Managing Director.

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8. Transport

