



Installation and Operating Instructions

Unico2coder MP 3/4", MTK3coder MP 1", MTK3coder MP 1 1/2", MTW3coder MP 1", MTW3coder MP 1 1/2"

1. Field of application

Model		Unico2	MTK3			MTW3	
Nominal pipe size		3/4"	1"	1 1/2"	1"	1 1/2"	
Connection on meter (thread)	NPSM	1"	1 1/4"	2"	1 1/4"	2"	
Max. flow rate	gpm	22	55	88	55	88	
Max. continuous flow rate	gpm	11	44	70	44	70	
Min. flow rate	gpm	0.50	0.75	1.50	0.75	1.50	
Max. working temp.	°F	194	122	122	194	194	
Max. working pressure	psi	230					
Ambient temp.	°F	+41 to +131					
Interface		GWFcoder®					

Water meters are suited for the measurement of low to middle flowrates. These instructions contain all important information for the installation and operation of the above mentioned water meters. Installation, connection and maintenance must only be carried out by expert technicians who, first of all, have read and understood the operating instructions.

2. Sizing of the water meter

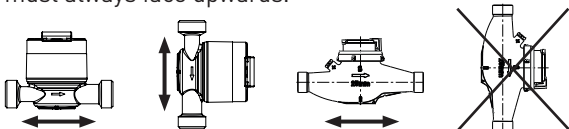
Water meters are to be sized according to the relevant rating. A continuous overload will lead to the water meter being damaged. The maximum flow rate may only take place at a maximum of 1 hour per day and over the life span of the water meter a maximum of 100 hours summed together. When specifying the water meter the operating conditions occurring in the application are to be considered. In particular these are:

- Max. continuous flow rate
- Max. working pressure
- Max. working temperature
- Ambient temperature
- Installation position

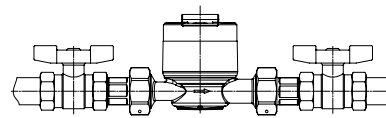
3. Installation information

1. Singlejet meters (Unico2) can be installed in horizontal or vertical pipe lines. Preferential is the installation in horizontal pipe lines. The type plate of singlejet meters (Unico2) can face upwards or sideways.

Multijet meters (MTK3 / MTW3) can be installed in horizontal pipe lines. The type plate of multijet meters (MTK3 / MTW3) must always face upwards.



2. For water meters no inlet and outlet distances must be adhered to. It is recommended to install the water meter in a location, that is accessible for reading, service and inspection.
3. It is recommended to install shut-off valves upstream and downstream of the water meter, to facilitate the installation and removal of the water meter for periodic inspection and maintenance work.



With only an upstream shut-off valve installed

- Open slowly the shut-off valve to remove air from the meter and pipeline
- Open slowly a consumer faucet to allow entrapped air to escape from pipeline
- Close the consumer faucet
- Observe the meter installation to ensure it is properly sealed w/o leaks.

With an upstream and downstream shut-off valve installed

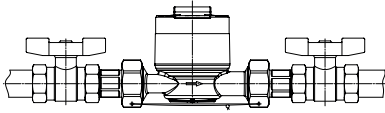
- Close the downstream shut-off valve
- Open slowly the upstream shut-off valve
- Observe the meter installation to ensure it is properly sealed w/o leaks
- Open slowly the downstream shut-off valve
- Open slowly a consumer faucet to allow entrapped air to escape from pipeline
- Close the consumer faucet

4. It is necessary to purge/rinse the pipeline before initial installation of the water meter. In place of the water meter a bypass piece must be installed, so that foreign objects do not block the strainer of the water meter. Thus, accurate measurement can be ensured.

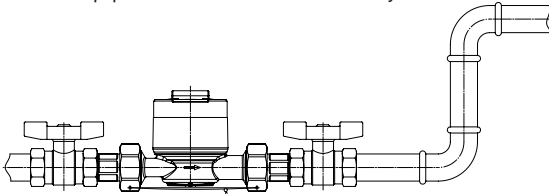


5. Pay attention to a stress-free installation of the water meter and to the direction of flow when installing the water meter. An arrow on the water meter body indicates the direction of flow.
6. Before installing the water meter check if a clean strainer is inserted inside the inlet part of the water meter.
7. During installation it is important to check that the inside of the couplings/unions are clean, intact and correctly positioned seals/gaskets are used. Whenever a water meter is removed from the pipe line, discard and replace the old seals/gaskets. Do not use pipe sealant or Teflon tape on meter threads.

- In order to prevent unauthorized manipulation of the water meter the couplings/unions can be secured by means of a wire and seals against tampering.



- Excessive force when tightening the couplings/unions of the water meter must be avoided in order to prevent damage being caused to the housing of the water meter.
- In order to guarantee correct measurement, it is very important to ensure that no air can enter the water meter or that the pipeline is allowed to run dry.



- With many installations water pipelines serve as earthing for electrical systems. Depending on the actual application an electrical bypass of the water meter is to be ensured.
- The water meter should be protected against mechanical jolts or vibration, which could be present in the installation place.
- The pipeline should be securely fastened upstream and downstream of the water meter.
- Measures should be taken, so that the water meter is not damaged by hydraulic influences such as, pressure shocks and cavitations. Additionally it should be guaranteed that the water meter is not damaged due to frozen water being encountered.
- Signal (Interface GWFcoder®) wiring should never be laid together with mains power lines and must be independently protected. The distance between signal (Interface GWFcoder®) and mains power line must be a min. distance of 2 Inch.

4. Commissioning

During commissioning and after every time the water meter has run dry, shut-off valves must be opened slowly in order to avoid pressure shocks on the water meter.

5. Maintenance and service

Water meters are maintenance free under normal operating conditions. They excel in that they have a long life span. The life span essentially depends on the water quality and on the conditions and capacity of flow. We recommend however to examine the following points periodically.

- Before working on the installation, it is to be examined whether the pressure is relieved in the pipeline.
- When the water supply is closed, all the pointers of the register should stop. When the water supply/inlet is slowly opened the pointers should begin to turn-over evenly and slowly.
- If the supply network is subject to dirty conditions, it is recommended, to clean the strainer on the inlet of the water meter on a regular basis.

- The stamp on the seal should be verified if it is intact.
- It should be verified that all shut-off valves upstream and downstream of the water meters are fully opened, and if they can be closed and there are no leaks present.
- The water meter and pipe work of the installation should be checked for leaks.
- Check to see that the environment, in which the water meter is installed, is devoid of water, where dripping water onto the register could lead to water ingress.
- Pay attention that the water meter connections are securely attached and that all pipelines are undamaged and intact.
- It should be verified that the ambient temperature lies within the admissible temperature range of the water meter.



6. Disassembly and disposal

It should be ensured that the water meters are disposed of in a recycling just manner. The local and national regulations for environmental protection are to be considered.

7. Safety guidelines

- The water meters should always be handled only on the water meter housing and should not be carried by either the lid or communication cable.
- The devices may only be used for the intended purpose. GWF MessSysteme AG guarantees in the context of the general trading conditions the quality of its products. The responsibility for the correct installation as well as professional handling falls within the scope and receipt of goods on the owner or operator.

8. Interface GWFcoder®

Unico2coder MP, MTK3coder MP, MTW3coder MP Multi Protocol Interface

M-Bus (MP)	Wired M-Bus acc. EN 13757 (wire length up to 3280 feet)
------------	--

The polarity of the connecting wires makes no difference (polarity insensitive)

ECO (MP)	Low power interface (wire length up to 50 feet)
----------	--

The polarity of the connecting wires must be observed

Unico2coder MP, MTK3coder MP, MTW3coder MP

SUS	Sensus protocol (3-wires)
-----	---------------------------

The polarity of the connecting wires must be observed

9. Radio module

Unico2coder MP, MTK3coder MP, MTW3coder MP

Frequency	915 MHz: max. 20 dBm (100 mW)
-----------	-------------------------------

10. Conformity in California

NTEP Conformity only with local county wire seal.

11. Safety information about radio

1. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
2. This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
3. This device must be installed to provide at least 20 cm separation from the human body at all times.
4. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures: Reorient or relocate the receiving antenna / Increase the separation between the equipment and receiver / Connect the equipment into an outlet on a circuit different from that to which the receiver is connected / Consult the dealer or an experienced radio/TV technician for help.

GWF MessSysteme AG
Obergrundstrasse 119
6005 Lucerne, Switzerland

T +41 41 319 50 50
info@gwf.ch, www.gwf.ch

Technical support:
T +41 41 319 52 00, support@gwf.ch

printed in
switzerland

Subject to modification, 30.09.2022 – BAe10105