



# Installation and Operating Instructions Unico2coder MP 3/4"

## 1. Field of application

Model		Unico2coder MP
Nominal pipe size		3/4"
Connection on meter		1" NPSM thread
Nominal flow rate	gpm	10
Max. flow rate	gpm	22
Min. flow rate	gpm	0,50
Max. working pressure	psi	200
Max. working temperature	°F	194
Ambient temperature	°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 flowrate 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:

- Nominal flow rate
- Max. working pressure
- Working temperature
- Ambient temperature
- Installation position

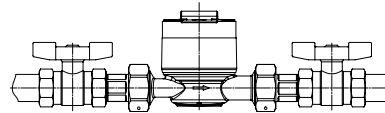
## 3. Installation information

1. Water meters can be installed in horizontal pipe lines. The water meter type plate 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.

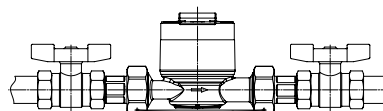
With an upstream and downstream shut-off valve installed

- 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.

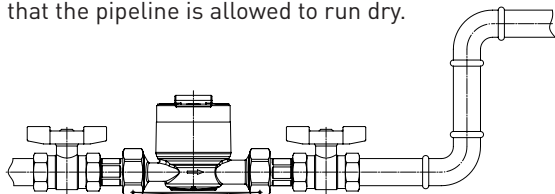


5. Pay attention to the direction of flow when installing the water meter. An arrow on the water meter body indicates the direction of flow.
6. Before installing the water meter check if a clean strainer is inserted inside the inlet part of the water meter.
7. During installation it is important to check 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.
8. 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.



9. 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 50mm.

## 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 stand still. 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 in tact.
- 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 Multi Protocol Interface

M-Bus (MP)	Wired M-Bus acc. EN 13757
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The polarity of the connecting wires makes no difference (polarity insensitive)

### Unico2coder MP

SUS	Sensus protocol (3-wires)
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The polarity of the connecting wires must be observed

## 9. Conformity in California

NTEP Conformity only with local county wire seal.