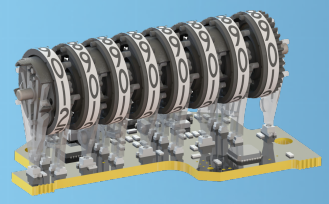
Water Gas



GWFcoder® MP

Mechanical counters

Your benefits

- Transfer of the effective meter reading:
  No data loss and guaranteed security of the billing data
- Register without batteries:
  No service life restriction
- No programming required when commissioning the meter in a readout system (Plug & Play):
  Easy and fast on-site installation

Applications

- Automated mobile or fixed network readout of relevant billing data of water and gas meters
- Wired or radio remote readout of hard to access metering installations, e.g.
  - Meter pits
  - Commercial and industrial metering
  - Reservoirs
  - Transfer or infeed points for water organisations

Properties

- Proven mechanical roller register with serial interfaces
- Wired M-Bus according EN 13757-2/3
- SCR(IEC) according 62056-21 mode A
- Wireless M-Bus according EN 13757-4 in combination with RCM® radio
- Greater level of information and readout accuracy compared to meters with pulse output
- Guaranteed correlation between electronic readout and register reading
- Reactionless readout of the data set via the GWF patented opto-electronic GWFcoder® technology
- Enables the retrofitting of wired or wireless automated reading without having to modify the water or gas meter – «Plug & Play»

Options

- Flood-proof execution (IP68) due to hermetically sealed roller register made of glass/cooper

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GWFcoder®-Data protocol

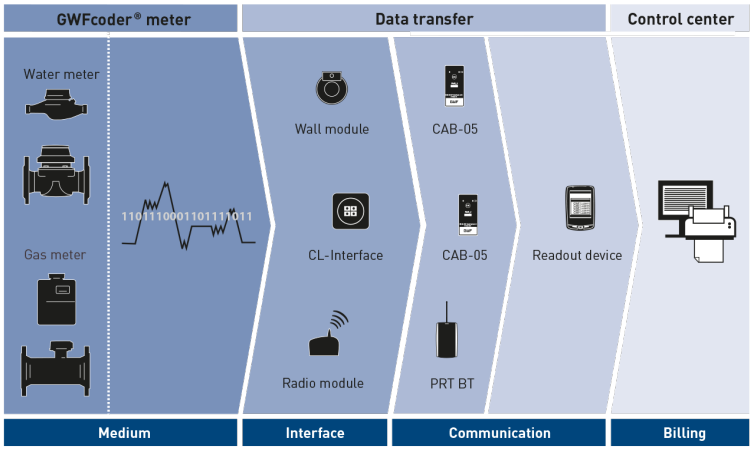
SCR(IEC):	
Medium:	Water / Gas
Absolute meter reading:	12365,421 m^3
Serial number:	43215678
Meter size:	DN 20 / G 4

Reading technologies

Water and gas meters with GWFcoder® register are ideal for future upgrading to remote or direct readout technologies

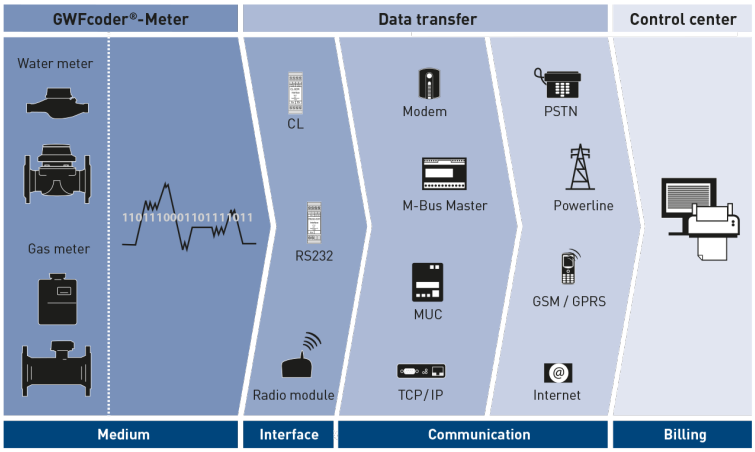
Mobile on-site reading

- Direct or outside wall readout via the inductive interface; transmission distance of up to max. 150 m
- Outside wall readout via the CL interface without access to the measuring point; transmission distance of up to max. 150 m
- Mobile «walk-by» meter reading or «drive-by» meter reading from a moving vehicle without access to the property



Remote meter reading

- The GWFcoder® technology enables the combined remote reading of water, gas and electricity meters
- Depending on the interface at the communication unit (e.g. modem), various interfaces are available to integrate the GWFcoder® water and gas meters in the remote meter reading



Encoder register variants

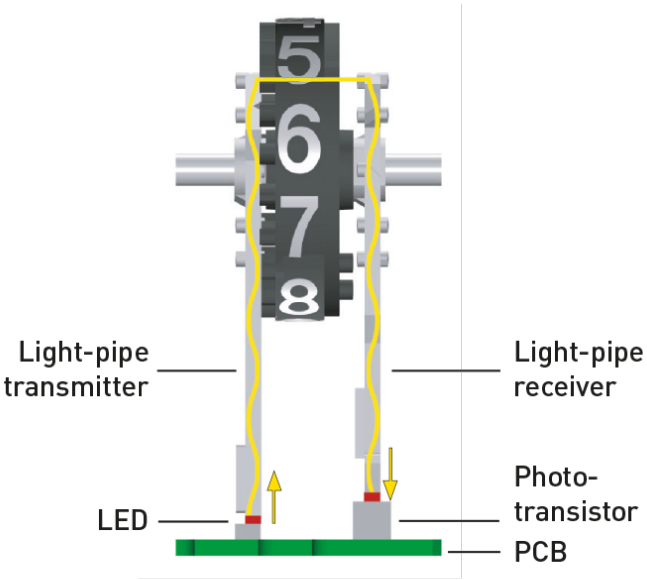
Water Domestic	Water Bulk	Gas Domestic	Gas Bulk



GWFcoder®-Technology

The 2nd generation – even more flexible

The well-established GWFcoder®-system reads the absolute mechanical register value precisely and reliably and provides the data through standardized interfaces. The number wheels with three various long, asymmetrically arranged slots are being scanned through light pipes which are connected to five light emitting diodes (LED). Thus, the exact position of each number wheel can be detected and the encoded absolute register read can be transmitted as part of the protocol by the GWFcoder®-interface. This GWF patented functional principle is being used in millions of installations worldwide since more than 15 years. The GWFcoder®-interface guarantees absolute correlation between the electronic readout and the register reading and provides an incomparably higher level of information compared to meters with pulse output. Meters with GWFcoder®-technology do not contain a battery which, in turn, does not compromise existing revision cycles. The readout device supplies the power for the readout.



GWF enhanced the reliable Smart Metering technology in its 2nd generation, so that 8 instead of 5 number wheels are being scanned and therefore a resolution of 1 liter is possible. Moreover, all products with multi-protocol functionality provide the flexibility to switch between SCR(IEC) and M-Bus which leads to an easy and fast «Plug & Play» installation on site.

In combination with the GWF radio module RCM® interface can be used for wireless M-Bus.

Standards and interface

GWFcoder® registers can be implemented with all common interface definitions such as:

Interface	
SCR(IEC)	IEC 62056-21 Mode A (IEC 1107)
M-Bus	EN 13757-2/3
Namur	EN 60947-5-6 (large-scale gas measurement)
Sensus	UI-1203
Wireless M-Bus	EN 13757-4 in combination with RCM®

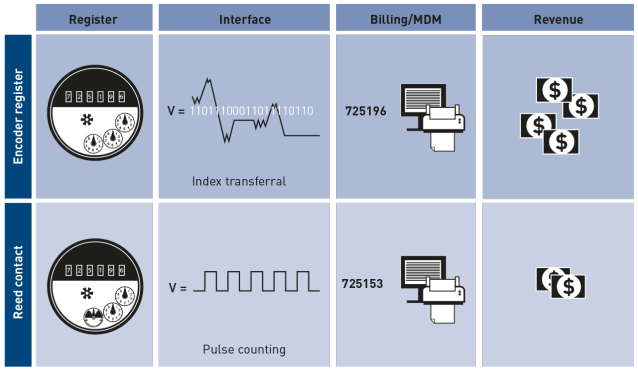
Comparison «absolute meter reading» vs. pulse

GWFcoder® technology:
Transfers the effective meter reading. The readout value in the billing system and the invoice are the same as the meter reading.

Pulse transfer:
The potential sources of error for a reproduced meter reading with pulse transmission are:

- Bouncing
- Backflow water
- Temporary signal interruption
- Double pulses
- Incorrect pulse value

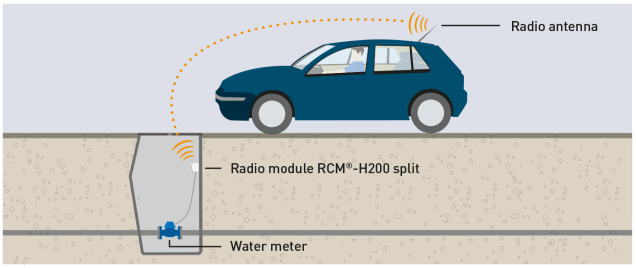
The readout value in the billing system and the invoice may differ from the meter reading leading to diminished revenue stream.



Applications

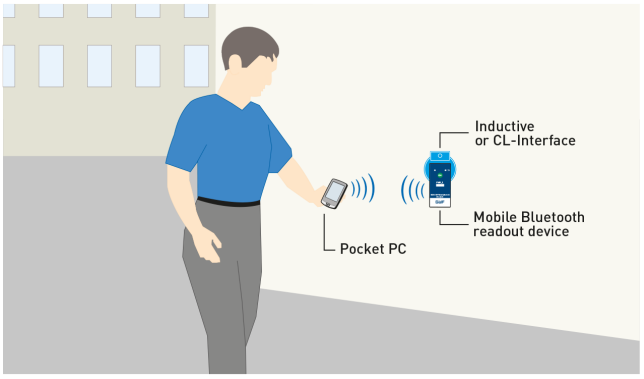
Wireless readout

Meter with GWFcoder® register is read out by radio using a mobile infrastructure.



Wall pad reading

Encoder meters with a wall pad can be read without entering the property by means of an inductive wall pad. The meter data is then automatically assigned to the customer. The meter readout device then transmits this data wireless via Bluetooth to the Mobile readout device



M-Bus remote reading

The meters with GWFcoder® register are connected to an M-Bus remote reading system. This ensures that the meter data is transferred directly via an M-Bus data centre or level converter to a PC where the data is further processed.