



Water

**GWF**



# Meistream Plus with GWFcoder<sup>®</sup> MP

Bulk water meters



## Your benefits

- Revolutionary Multiprotocol interface:  
**Investment security due to the interoperability of the meter**
- Transfer of the effective meter reading:  
**No data loss and guaranteed security of the billing data**
- No programming required when commissioning the meter in a readout system (Plug & Play):  
**Easy and fast on-site installation**
- Measurement of low flow rates:  
**Increased cost effectiveness**
- Removable measuring insert:  
**Retrofittability and replaceability guaranteed**
- One measuring insert for various bodies:  
**Lower storage costs**

## Applications

- Measurement of medium to high flow rates
- Measurement of low flow rates during offpeak periods
- Automated mobile or fixed network readout of relevant billing data
- Wired or radio remote readout of hard to access metering installations, e. g. meter pits, reservoirs

## Properties

- Horizontal installation position
- No straight flow section required before the meter
- Register can be turned through 355°
- Maximum operating pressure PN 16 bar
- Temperatures up to 50 °C
- Rotor is hydrodynamically, radially and axially balanced
- Available in the standard installation lengths for WS and WP meters
- Powder coating provides optimum corrosion protection
- Non-ferrous metal design
- SVGW certification
- **CE** Conformity according to the European Measuring Instrument Directive (MID)
- Flood-proof register (IP68) with Multiprotocol interface (MP), 5 m cable and provision for a HRI pulser
- M-Bus standard unit load: 2 unit loads (3 mA)

## Options

- High-resolution pulse generator HRI  
 [Documentation: HRI](#)
- Radio module RCM<sup>®</sup>-H200 split  
 [Documentation: RCM<sup>®</sup>-H200](#)

# Technical Data

## Manufacturer information

<b>Nominal diameter<sup>1)</sup></b>	<b>DN</b>	<b>mm</b>	<b>50</b>	<b>50</b>	<b>65</b>	<b>65</b>	<b>80</b>	<b>80</b>	<b>100</b>	<b>100</b>	<b>150</b>
<b>Nominal pressure</b>	<b>PN</b>	<b>bar</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>
<b>Nominal flow rate</b>	<b>Q3</b>	<b>m<sup>3</sup>/h</b>	<b>35</b>	<b>35</b>	<b>40</b>	<b>40</b>	<b>63</b>	<b>63</b>	<b>100</b>	<b>100</b>	<b>250</b>
Overload flow rate (few minutes)	Q4	m <sup>3</sup> /h	55	55	60	60	120	120	160	160	400
Transitional flow rate ± 2 %	Q2	m <sup>3</sup> /h	0,13	0,13	0,16	0,16	0,25	0,25	0,4	0,4	0,63
Minimum flow rate ± 5 %	Q1	m <sup>3</sup> /h	0,07	0,07	0,1	0,1	0,13	0,13	0,2	0,2	0,35
Temperature		max.°C	50	50	50	50	50	50	50	50	50

## Dimensions and weights

<b>Overall length</b>	<b>L</b>	<b>mm</b>	<b>200</b>	<b>270<sup>2)</sup></b>	<b>200</b>	<b>300</b>	<b>225<sup>3)</sup></b>	<b>300</b>	<b>250</b>	<b>360</b>	<b>300<sup>4)</sup></b>
Height	H	mm	157	157	157	157	187	187	187	187	214
Height	h	mm	73	73	85	85	95	95	105	105	135
Dismantling height of measuring unit	g	mm	237	237	237	237	307	307	307	307	393
Meter weight		app. kg	7,8	9,6	10,1	12	14,2	16,3	18,2	20,2	35,9
Measuring insert weight		app. kg	1,5	1,5	1,5	1,5	3,2	3,2	3,2	3,2	5,9
Body weight		app. kg	6,3	8,1	8,6	10,5	11	13,1	15	17	30

1) Nominal size DN 40 upon request

2) Also available with 300 mm body length

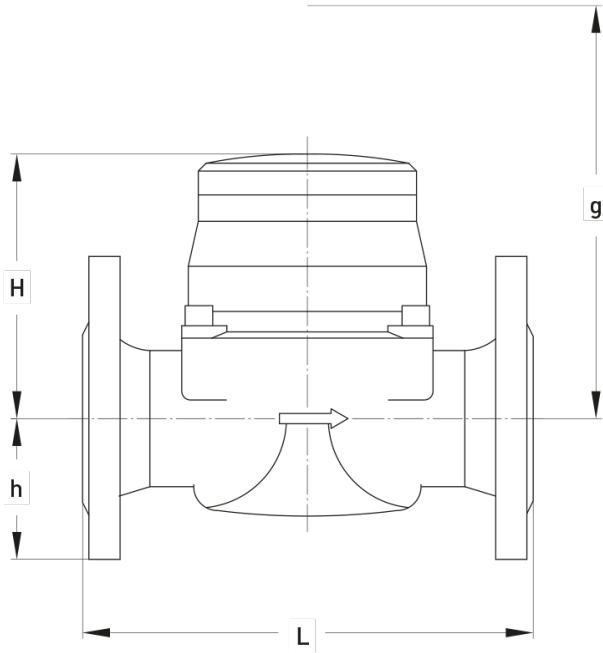
3) Also available with 200 mm body length

4) Also available with 500 mm body length

## MID certification data

Nominal flow rate	Q3	m <sup>3</sup> /h	25	25	40	40	63	63	100	100	250
Temperature		max.°C	50	50	50	50	50	50	50	50	50
Measuring range			R315	R315	R400	R400	R400	R400	R400	R400	R630
Standard marking			R315	R315	R315	R315	R315	R315	R315	R315	R315

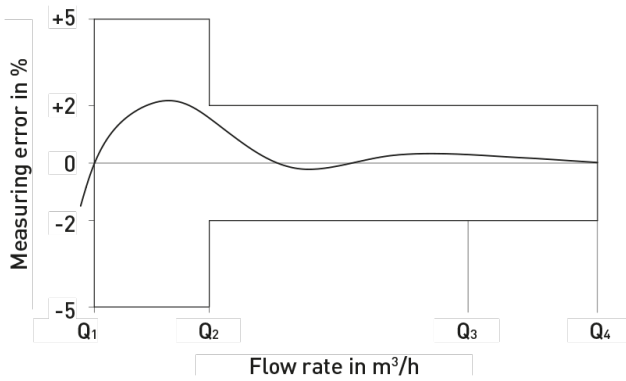
## Dimension Diagram



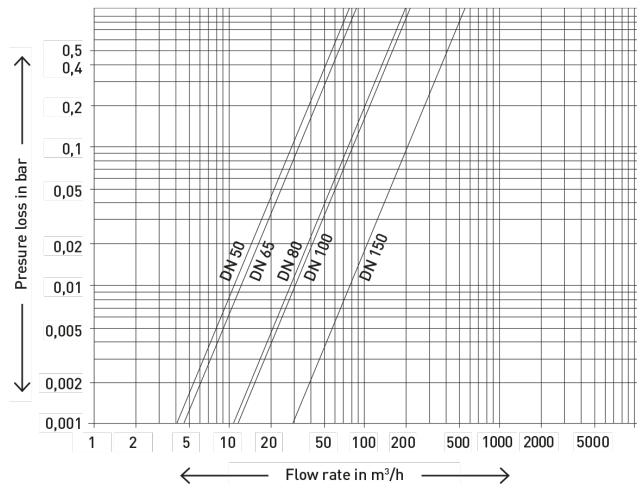
## Materials

Body	Cast iron
Measuring unit	Plastic
Rotor	Plastic
Other materials	Brass / non-rusting steel

## Measurement error curve



## Typical Head Loss Curve



## Installation

**Pipeline:** horizontal —

**Meter head:** upwards ↑

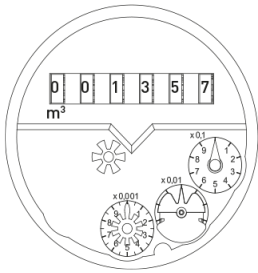
## Commission



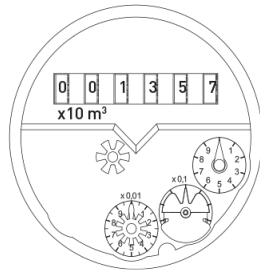
When commissioning the meter the measuring section must be filled slowly (bleed slowly).

## Dial

DN 50 – DN 100



DN 150

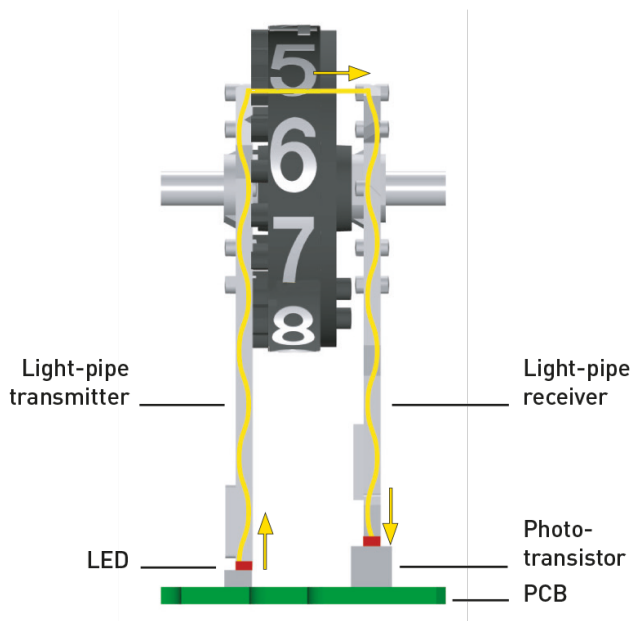


Nominal size	DN	50–100	150
Smallest reading	m <sup>3</sup>	0,0005	0,005
Maximum register reading	m <sup>3</sup>	1'000'000	10'000'000

## Pulse values HRI Pulser

Meter sizes	DN 50...100 1 Pulse = ...Liter	DN 150 1 Pulse = ...Liter
Meistream Plus	100 1000	1000 10000

## GWFCoder®-Technology



In the GWFCoder® system, the individual rollers of the mechanical register are read out optoelectronically. The position of the various long asymmetrically arranged slits in the roller counters is scanned using five light barriers (lightpipe transmitter and receiver). The light barriers are implemented with phototransistors. LEDs and light conductors, which are all consecutively scanned and evaluated. The precisely defined position of each individual roller counter is encoded as an absolute roller counter reading and read out as a part of the protocol via the GWFCoder® interface. This functioning principle is patented by GWF. The GWFCoder® interface, compared to a meter with a pulse output, has an incomparably higher level of information content and readout accuracy. A GWFCoder® register does not require a battery, which, in turn, does not compromise existing revision cycles. The readout device supplies the power for the readout.

Moreover, all products with multiprotocol functionality provide the flexibility to switch between wall readout (inductive or CL), Wired M-Bus or radio readout which leads to an easy and fast «Plug & Play» installation on site.

# GWFcoder®-Data package

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Medium	Water
Absolute meter reading	123654 m <sup>3</sup>
Serial number	43215678
Meter size	DN 50

M-Bus: EN 13757 --> cable colours black / red, independent of polarity

ECO: EN 13757-3 --> cable colours black / green / red, observe polarity

## Example of use

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### Wireless read-out

Meter with GWFcoder® register is read out automatically by radio using a mobile infrastructure (for example radio module RCM®-H200 and MEx).

