



# WPV with GWFcoder<sup>®</sup> MP

Combined meter



## Your benefits

- Revolutionary multiprotocol interface (IEC and M-Bus in one meter):  
**Investment protection due to meter interoperability**
- Transmission of the actual register reading:  
**No data loss and therefore secure consumption billing**
- No battery limiting operating time:  
**Maintenance-free**
- Measurement from very low to very high flow rates:  
**Improved efficiency**

## Applications

- Measurement of high, strongly fluctuating flow rates, e.g.:
  - Commercial and industrial installations
  - School and sports complexes
  - Apartment blocks
  - Hotels
- Specified pipe sizing for fire-fighting water demand
- Automated mobile or fixed network readout of billing-relevant data
- Wired or wireless remote readout of hard-to-access metering points, e.g. pits

## Properties

- Achievement of the largest known measuring range with defined low error limits
- Horizontal installation position
- No inlet straight pipe section required
- Maximum operating pressure PN 16 bar
- Temperature up to 50 °C
- Hydrodynamic vane balancing of the main meter
- Optimal corrosion protection by powder coating
- Starting flow approx. 8 l/h
- Spring-loaded changeover valve with low pressure loss
- Minimum pressure of 0.5 bar upstream of the meter required
- SVGW certification
- **CE** Conformity according to the European Measuring Instruments Directive (MID)
- Flood-proof main and secondary registers (IP68) with multiprotocol interface (MP), 5 m cable and one interface each for an HRI pulse transmitter
- M-Bus standard load: 2 loads (3 mA)

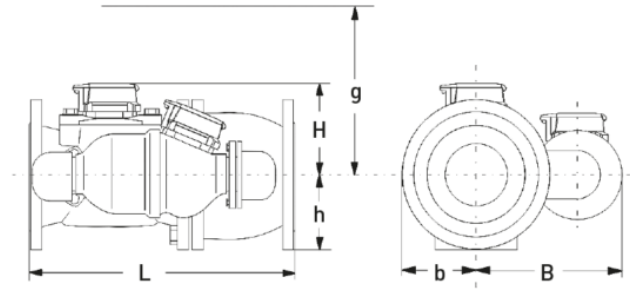
## Options

- High-resolution pulse transmitter HRI
  - ☐ [Documentation: HRI - EPe10213](#)
- Radio module RCM<sup>®</sup> split
  - ☐ [Documentation: RCM<sup>®</sup> - EPe40232](#)
- Radio module RCM<sup>®</sup>-LRW...
  - ☐ [Documentation: RCM<sup>®</sup>-LRW... - EPe40261](#)

## Installation positions

<b>Pipeline:</b>	horizontal	—
<b>Head of meter</b>	upwards	↑

## Dimension Diagram



## Technical Data

Technical Data			
Nominal diameter	DN	mm	150
Nominal diameter secondary meter	DN	mm	40
Nominal pressure	PN	bar	16
Permanent flow rate	Q <sub>3</sub>	m <sup>3</sup> /h	400
Maximum flow rate (1x24h)	Q <sub>4</sub>	m <sup>3</sup> /h	600
Transitional flow rate ±2%	Q <sub>2</sub>	m <sup>3</sup> /h	0,15
Minimum flow rate +/- 5%	Q <sub>1</sub>	m <sup>3</sup> /h	0,035
Changeover at increasing flow rate		m <sup>3</sup> /h	8,3
Changeover at decreasing flow rate		m <sup>3</sup> /h	4,7
Temperature		max. °C	50

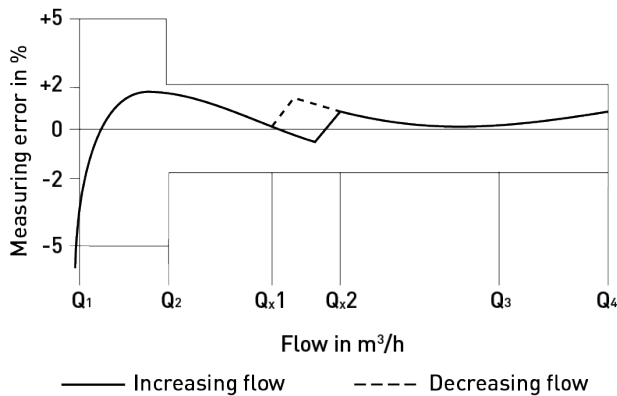
Dimensions and weights			
Length	L	mm	500
Hight	H	mm	214
Hight	h	mm	135
Measuring insert removal height	g	mm	393
Width	B	mm	275
Width	b	mm	145
Meter weights		approx. kg	60

MID approval data			
Permanent flow rate	Q <sub>3</sub>	m <sup>3</sup> /h	250
Temperature		max. °C	30
Measuring range			R2500

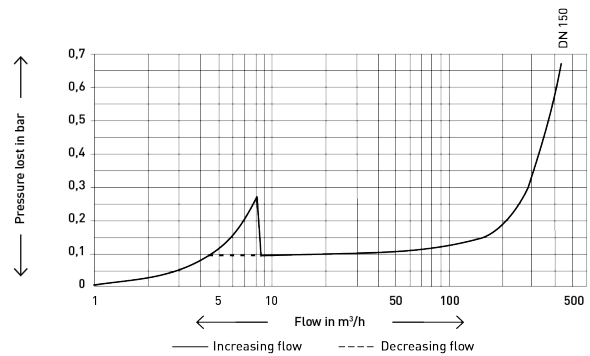
# Materials

Housing primary meter:	Grey cast iron
Housing secondary meter:	Brass
Measuring insert primary and secondary meter:	Plastic
Spring-loaded changeover valve:	Plastic / Stainless steel

## Measuring error curve



## Pressure lost curve



## Commissioning note



During commissioning, the pipes must be filled with water slowly (ensure slow venting).

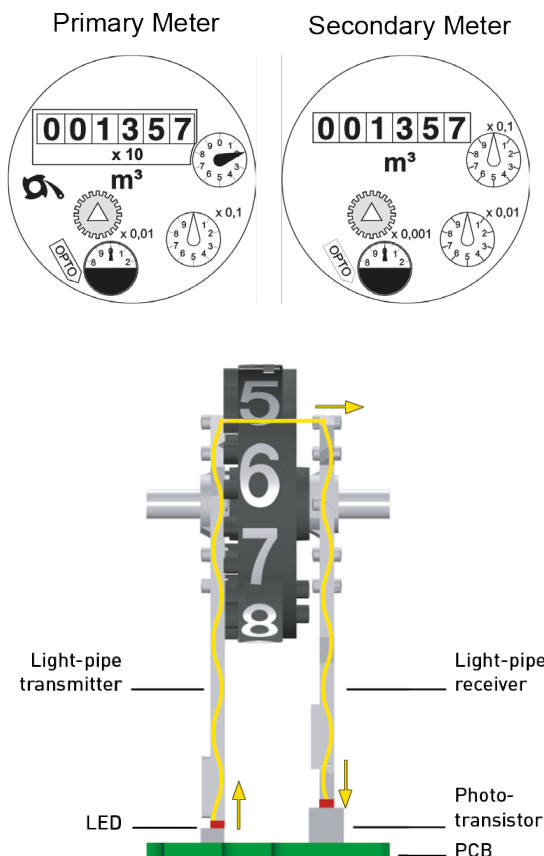
## Pulse value of the HRI pulse transmitter

Meter size	DN 150 Impuls = ...liters
WPV-MS primary meter	1000 10000
WPV-MS secondary meter	100 1000

## Bestellangabe

Direction of flow	Position of secondary meter
left-right	...in flow direction right
right-left	...in flow direction left

## Register dials



## GWFcoder® technology

In the GWFcoder® system, the individual rollers of the mechanical counter are scanned optoelectronically. The asymmetrically arranged slots of varying lengths in the number rollers are scanned for their position using 5 light barriers (optical fiber transmitters and receivers). The light barriers are implemented with phototransistors, LEDs, and optical fibers, which are all scanned and evaluated in sequence. The precisely defined position of each individual number roller is coded as an absolute number roller position and read out as part of the protocol via the GWFcoder® interface. This operating principle is patented by GWF. Compared to a meter with a pulse output, the GWFcoder® interface has an incomparably higher information content and increases readout reliability. A GWFcoder® meter does not require a battery, which means that existing audit cycles are not affected. The energy for the readout is supplied by the readout device.

In addition, products with the suffix "MP" (multi-protocol) offer the flexibility to choose between wall reading (inductive or CL), wired M-Bus, or radio reading, and to put the system into operation quickly and easily via "plug & play."

## GWFcoder\*®\*\* data set

**SCR: IEC 62056-21 Mode A (IEC 1107)**

Medium: Water

Absolute register reading: 123654 m<sup>3</sup>

Serial number: 43215678

Meter size: DN 50

**M-Bus: EN 13757 ECO: EN 13757-3**

## Commissioning note



When starting up, it is essential to fill the pipes slowly with water (slow venting).

## Application example

### Radio reading

Meters with GWFcoder® counters are read automatically using mobile infrastructure (e.g., RCM® radio module and MEx).

