Water

Meitwin with GWFcoder® MP

Combined meter

Your benefits

- Revolutionary multiprotocol interface (IEC and M-Bus in one meter):
  Investment protection through meter interoperability
- Transmission of the actual meter reading:
  No data loss, ensuring reliable consumption billing
- Battery-free operation:
  Maintenance-free
- Measurement from the lowest to the highest flow rates:
  Improved cost efficiency
- Removable measuring insert consisting of the main meter, bypass meter and changeover valve:
  Ensures retrofit capability and easy replacement
- One measuring insert for all housing sizes:
  Reduced inventory costs

Applications

- Measurement of high, highly fluctuating flow rates, for example:
  - Commercial and industrial facilities
  - Schools and sports complexes
  - Apartment buildings
  - Hotels
- Designed for pipeline dimensions specified for fire protection water demand
- Automated mobile or fixed-network reading of billing-relevant data
- Wired or wireless remote reading of difficult-to-access metering points, e.g. underground chambers

Properties

- One of the widest measuring ranges available with defined low error limits.
  Example: DN 80, Q_t = 16 l/h, Q_3 = 120,000 l/h, measuring range 1:7500
- Universal installation position
- No upstream straight pipe section required
- Maximum operating pressure: PN 16
- Temperature up to 50 °C
- Hydrodynamically balanced main meter impeller
- Available in the standard installation lengths for Woltman (WS) meters
- Optimum corrosion protection by powder coating
- Starting flow rate approx. 2 l/h
- Common protective cover for the main and bypass meters
- Spring-loaded changeover valve with low pressure loss
- Minimum upstream pressure of 0.5 bar required
- SVGW certified
- CE Complies with the European Measuring Instruments Directive (MID)
- IP68 flood-proof main and bypass register with multiprotocol interface (MP), 5 m cable and one mounting position for an HRI pulse transmitter
- M-Bus standard load: 2 unit loads (3 mA)

Options

- High-resolution HRI Pulse Transmitter
  Documentation: HRI
- RCM®-H200 Split Radio Modul
  Documentation: RCM®-H200

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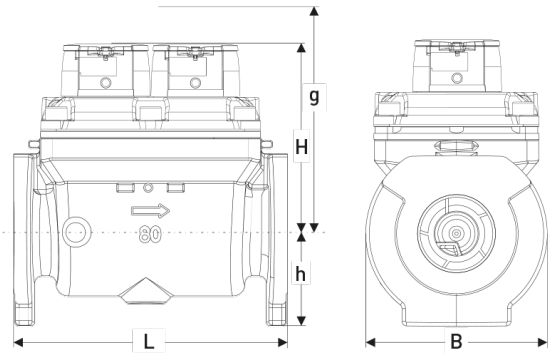
Technical Data

Manufacturer Specifications						
Nominal diameter	**DN**	**mm**	**50**	**65**	**80**	**100**
Nominal pressure	**PN**	**bar**	**16**	**16**	**16**	**16**
Permanent flow rate	**Q_3**	**m^3/h**	**50**	**70**	**120**	**180**
Overload flow rate (1 × 24 h)	Q_4	m^3/h	90	120	200	280
Transition flow rate (±2%)	Q_2	m^3/h	0,012	0,012	0,012	0,012
Minimum flow rate (±5%)	Q_1	m^3/h	0,006	0,006	0,006	0,006
Changeover point (increasing flow rate)		m^3/h	2,0-2,6	2,0-2,6	2,0-2,6	2,0-2,6
Changeover point (decreasing flow rate)		m^3/h	1,1-1,7	1,1-1,7	1,1-1,7	1,1-1,7
Maximum temperature		max.°C	50	50	50	50

Dimensions and weights						
Installation length	**L**	**mm**	**270**	**300**	**300**	**360**
Height	H	mm	287	287	287	287
Height	h	mm	80	92,5	100	100
Measuring insert height	g	mm	542	542	542	542
Width	B	mm	185	185	210	220
Meter weight		approx. kg	23	24,6	26,1	31
Measuring insert weight		approx. kg	7	7	7	7

MID Approval						
Permanent flow rate	Q_3	m^3/h	25	40	63	100
Maximum temperature		max.°C	30	30	30	30
Measuring range			R1600	R2500	R4000	R6300

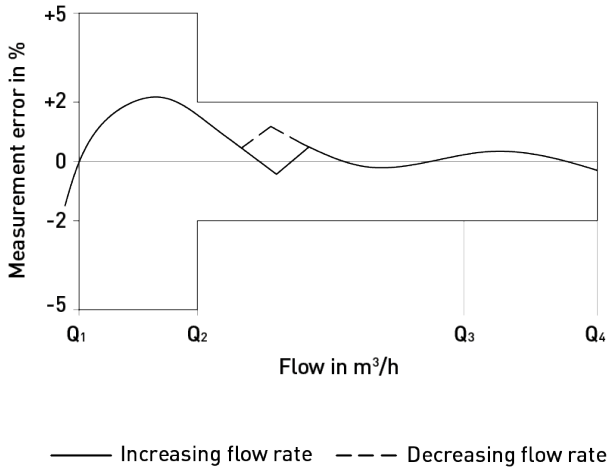
Dimensions



Materials

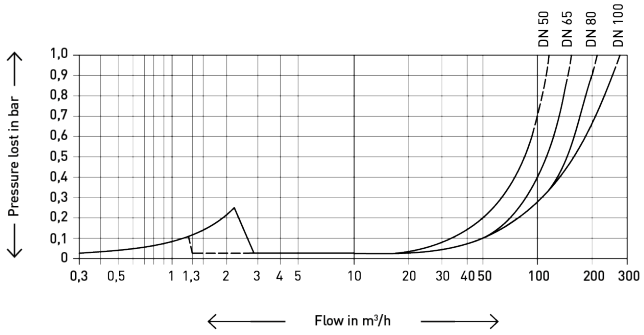
Main meter housing	Cast iron
Bypass meter housing	Brass
Measuring insert	Plastic
Impeller	Plastic
Spring-loaded changeover valve	Plastic / Stainless steel

Accuracy Curve



——— Increasing flow rate — — — Decreasing flow rate

Pressure Loss Curve



Installation Positions

Pipeline: Horizontal

Vertical

Meter register: Facing upwards

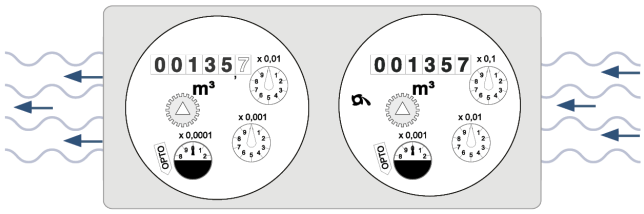
Facing sideways

Commissioning Note

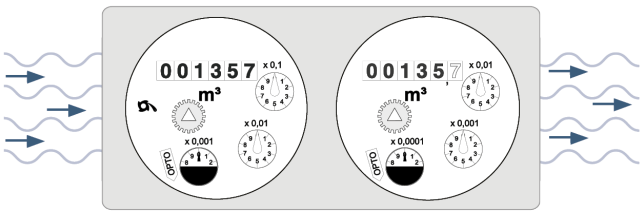
When commissioning the meter, always fill the pipeline slowly with water to ensure gradual venting of the system.

Flow Direction

Flow: right–left



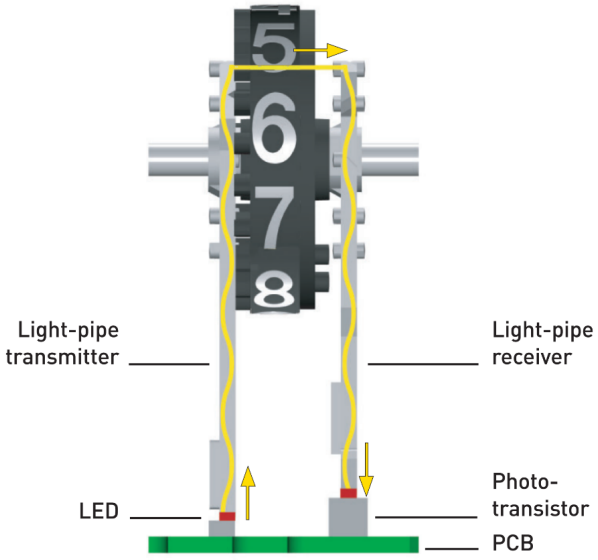
Flow: left–right



Pulse Value – HRI-Mei Pulse Transmitter

DN 50...100 1 pulse = ... litres	
Meitwin main meter	100 1000
Meitwin bypass meter	1 10

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

Medium	Water
Absolute meter reading	123654 m^3
Serial number	43215678
Meter size	DN 50

M-Bus: EN 13757 --> Cable colors black / red, polarity independent

ECO: EN 13757-3 --> Cable colors black / green / red, note polarity

Example of use

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).