



# MTKcoder® MP

Multijet domestic water meter  
for cold water up to 30°C  
DN 15, 20, 25, 32, 40, 50  
PN 16/25

## Our strength: Your benefit

- Mechanical roller register with 1-litre-resolution:  
**Efficient consumption monitoring in smart metering applications**
- 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**
- Batteryless register:  
**No service life restriction**
- No programming required when commissioning the meter in a readout system (Plug & Play):  
**Easy and fast on-site installation**
- Standardised interface:  
**No service life restriction**
- Long service life, robust domestic water meter:  
**Excellent measuring stability and reliability**
- Measurement of low flow rates:  
**Increased cost effectiveness**

## Application

- 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

## Features

- Multijet impeller wheel, super dry-dial, magnetic coupling
- Q<sub>3</sub> 2,5: Measuring range R100
- Q<sub>3</sub> 4–25: Measuring range R160
- 8 dial resolution with 3 comma place
- Register can be turned through 360°
- Maximum operation pressure PN 16 bar (Flanged PN 25 bar)
- Maximum operating temperature 30°C
- Horizontal or vertical installation (Vertical riser/down pipe)
- Flanged configuration only for horizontal installation
- High grade wear resistant and corrosion proof materials
- Inlet strainer
- Reconditionable and recyclable execution
- Materials suited for contact with potable water
- SVGW-Certification
- **CE** Conformity according to European Measuring Instruments (MID)
- Standard register with Multiprotocol interface

## Options

- Flood proof MTKcoder® MP register (IP68) with Multiprotocol interface and meter lid / 5m cable
- NPSM threaded connection
- Radio module RCM® compact or RCM® split  
 Documentation: RCM® - EPe40232

# Technical Data

Execution			MTKcoder® MP (horizontal)							MTKcoder® MP-VS or -VF (vertical) <sup>1)</sup>				
Nominal diameter	DN	mm	15	20	25	25	32	40	50	15	20	25	32	40
Connection thread on meter	G...B	Inch	¾	1	1¼	1¼	1½	2	2¾	1	1	1¼	1½	2
Connection thread on coupling	R...	Inch	½	¾ <sup>2)</sup>	1	1	1¼	1½	2	¾ <sup>2)</sup>	¾ <sup>2)</sup>	1	1¼	1½
Operating pressure	PN	bar	16	16	16	16	16	16	16	16	16	16	16	16
Operating pressure (flanged)	PN	bar	–	25	25	25	25	25	25	–	–	–	–	–
Nominal flow rate	Q <sub>3</sub>	m³/h	2,5	4	6,3	10	10	16	25	2,5	4	6,3	10	16
Overload flow rate <sup>3)</sup>	Q <sub>4</sub>	m³/h	3,125	5	7,875	12,5	12,5	20	31,25	3,125	5	7,875	12,5	20
Transitional flow rate ±2%	Q <sub>2</sub>	m³/h	0,04	0,04	0,063	0,1	0,1	0,16	0,25	0,04	0,04	0,063	0,1	0,16
Minimum flow rate ±5%	Q <sub>1</sub>	m³/h	0,025	0,025	0,039	0,062	0,062	0,1	0,156	0,025	0,025	0,039	0,062	0,1
Smallest readable volume		l	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05
Maximum register reading		m³	100'000	100'000	100'000	100'000	100'000	100'000	100'000	100'000	100'000	100'000	100'000	100'000
Temperature		max. °C	30	30	30	30	30	30	30	30	30	30	30	30
Measuring range			R100	R160	R160	R160	R160	R160	R160	R100	R160	R160	R160	R160

Dimensions and weights			MTKcoder® MP (horizontal)							MTKcoder® MP-VS or -VF (vertical) <sup>1)</sup>				
Length without couplings	A	mm	165	190	260	260	260	300	300	105	105	150	150	200
Length with couplings		mm	239	282	352	352	372	432	452	197	197	242	262	332
Meter height with lid	B	mm	119	115	135	135	135	160	174	–	–	–	–	–
Meter height with inductive interface	B1	mm	131	127	147	147	147	172	186	–	–	–	–	–
Meter height with radio module RCM® compact	B2	mm	195	191	211	211	211	236	250	–	–	–	–	–
Meter height with lid from pipe centre line	C	mm	84	85	91	91	91	114	117	–	–	–	–	–
Meter height with inductive interface from pipe centre line	C1	mm	96	97	103	103	103	126	129	–	–	–	–	–
Meter height with radio module RCM® compact from pipe centre line	C2	mm	160	161	167	167	167	190	193	–	–	–	–	–
Meter depth with lid / inductive interface	D	mm	–	–	–	–	–	–	–	148	148	169	183	226
Meter depth with radio module RCM® compact	D1	mm	–	–	–	–	–	–	–	150	150	169	183	226
Meter depth with lid / inductive interface from pipe centre line	E	mm	–	–	–	–	–	–	–	130	130	143	156	190
Meter depth with radio module RCM® compact from pipe centre line	E1	mm	–	–	–	–	–	–	–	132	132	143	156	190
Installation depth with lid from pipe centre line	W	mm	48	48	50	50	50	68	76	48	48	49	51	70
Installation depth with radio module RCM® compact from pipe centre line <sup>4)</sup>	W1	mm	54	54	54	54	54	68	76	54	54	54	54	70
Installation depth IP68 or with inductive interface from pipe centre line <sup>4)</sup>	W2	mm	57	57	57	57	57	68	76	57	57	57	57	70
Meter height with open lid	G	mm	167	163	183	183	183	208	222	–	–	–	–	–
Length with flanges PN 16/25		mm	–	190	260	260	260	300	300 <sup>5)</sup>	–	–	–	–	–
Height with flanges	H	mm	–	146	156	156	165	197	209	–	–	–	–	–
Flange external dimension <sup>6)</sup>		mm	–	105	115	115	140	150	165	–	–	–	–	–
Hole circle diameter <sup>6)</sup>		mm	–	75	85	85	100	110	125	–	–	–	–	–
Number of screws <sup>6)</sup>		Pcs.	–	4	4	4	4	4	4	–	–	–	–	–
Weight without couplings		app. kg	1,7	2,1	2,6	2,6	2,7	5,4	6,7	–	–	–	–	–
Weight without couplings MTK-VS		app. kg	–	–	–	–	–	–	–	1,9	1,9	3,0	3,0	6,0
Weight without couplings MTK-VF		app. kg	–	–	–	–	–	–	–	2,0	2,0	3,4	3,7	7,3
Weight with couplings		app. kg	1,9	2,3	3,0	3,0	3,3	6,4	8,7	–	–	–	–	–
Weight with couplings MTK-VS		app. kg	–	–	–	–	–	–	–	2,1	2,1	3,4	3,6	7,0
Weight with couplings MTK-VF		app. kg	–	–	–	–	–	–	–	2,2	2,2	3,8	4,3	8,3
Weight with flanges		app. kg	–	3,8	4,7	4,7	6,3	8,1	11,5	–	–	–	–	–

<sup>1)</sup> -VS = Vertical riser / -VF = Vertical down pipe

<sup>2)</sup> Also supplied with couplings R½

<sup>3)</sup> Max. 1h per 24h, with max. total time of 100h

<sup>4)</sup> By turning the register / assembly installation depth W can be realised

<sup>5)</sup> Also supplied in lengths 270mm

<sup>6)</sup> DIN EN1092-2

## Materials

Housing with screwed connection: Brass (DIN 50930-6)

Housing with flanged connection: Cast iron

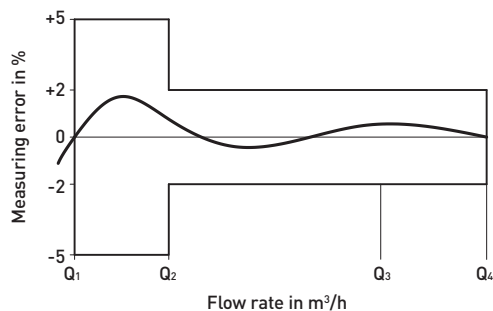
Sealing plate: Brass (DIN 50930-6)

Impeller / measuring insert: High grade synthetic materials

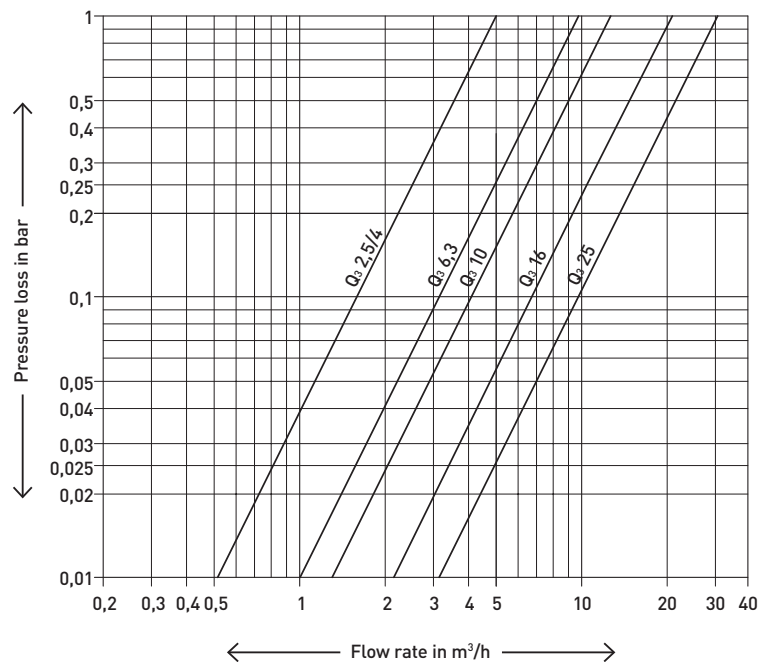
Bearings: Hard metal, Sapphire, Chrome nickel steel

Seal material: EPDM

## Measuring error curve

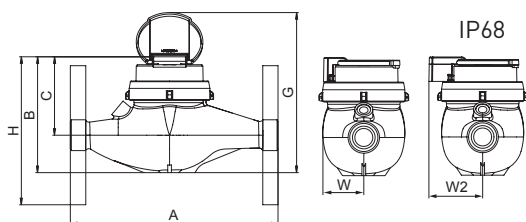


## Typical Head Loss Curve

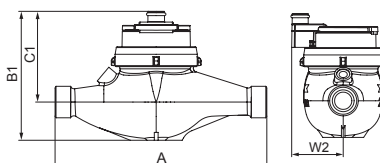


## Dimension Diagram

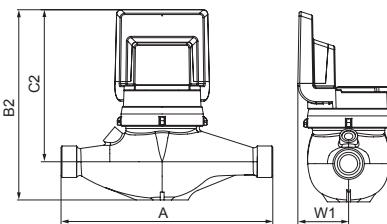
MTKcoder® MP  
with meter lid



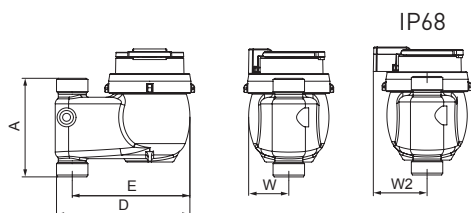
MTKcoder® MP  
with inductive interface



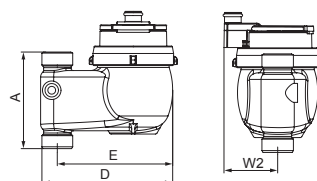
MTKcoder® MP  
with radio module RCM® compact



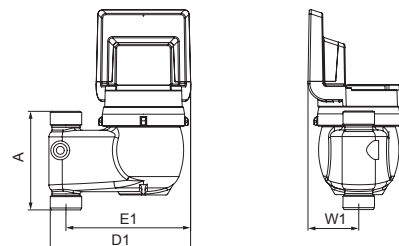
MTKcoder® MP-V...  
with meter lid



MTKcoder® MP-V...  
with inductive interface



MTKcoder® MP-V...  
with radio module RCM® compact



### Register options

- without cable
- with 1,5m cable for connection to wall modul WM
- Floodproof IP68 with 5m cable

## Installation

Pipeline:	horizontal	—
	vertical	
Meter head:	upwards	↑

## Installation Requirements

The meter must be installed so that the type plate is always horizontally positioned, facing upwards (do not tilt)

Documentation: GWF water meters - BAdfei10207

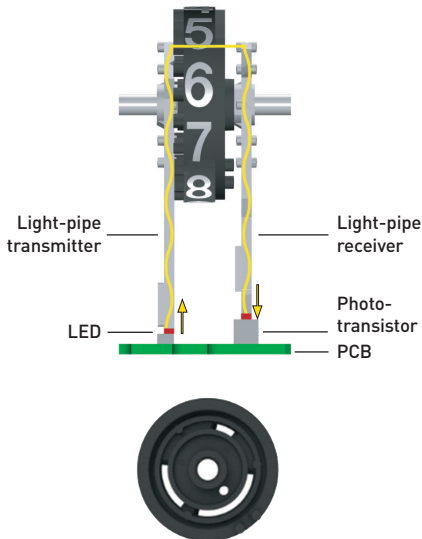
# GWFCoder®-Technology

## The 2<sup>nd</sup> 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 2<sup>nd</sup> 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 multiprotocol 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® the third interface can be used for wireless M-Bus.

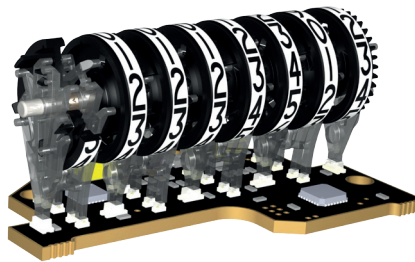


## GWFCoder®-Data package

Medium:	Water
Absolute meter reading:	12365,678m <sup>3</sup>
Serial number:	13215678
Meter size:	DN 20

M-Bus

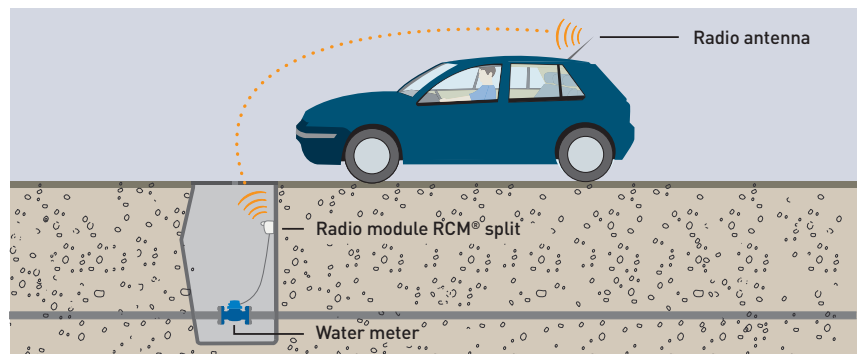
EN 13757 acc. OMS®



## Example of use

### Wireless readout

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



EPe10121 – 15.07.2013  
Subject to modification