



# MTKcoder<sup>®</sup> MP

Multijet domestic water meter



## Your benefits

- 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**

## Applications

- 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

- 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
- Maximum operation pressure PN 16 bar
- Maximum operating temperature 50 °C
- Horizontal or vertical installation (Vertical riser/down pipe)
- High grade wear resistant and corrosion proof materials
- Inlet strainer
- Reconditionable and recyclable execution
- Materials suited for contact with potable water
- **CE** Conformity according to European Measuring Instruments (MID)
- Standard register with Multiprotocol interface
- M-Bus standard unit load: 2 unit loads (3 mA)

## Options

- Flood proof MTKcoder<sup>®</sup> MP register (IP68) with Multiprotocol interface and meter lid / 5 m cable
- NPSM threaded connection (only for horizontal housing)
- Radio module RCM<sup>®</sup>-H200 compact or RCM<sup>®</sup>-H200 split  
📄 [Documentation: RCM<sup>®</sup>-H200 - EPe40265](#)
- Radio module RCM<sup>®</sup>-LRW...  
📄 [Documentation: RCM<sup>®</sup>-LRW... - EPe40261](#)

# 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	20	25	32	40
Connection thread on meter	G...B	Inch	¾	1	1¼	1¼	1½	2	2¾	1	1¼	1½	2
Connection thread on coupling	R...	Inch	½	¾ <sup>2)</sup>	1	1	1¼	1½	2	¾ <sup>2)</sup>	1	1¼	1½
Operating pressure	PN	bar	16	16	16	16	16	16	16	16	16	16	16
Nominal flow rate	Q3	m³/h	2.5	4	6.3	10	10	16	25	4	6.3	10	16
Overload flow rate <sup>3)</sup>	Q4	m³/h	3.125	5	7.875	12.5	12.5	20	31.25	5	7.875	12.5	20
Transitional flow rate ±2%	Q2	m³/h	0.04	0.04	0.063	0.1	0.1	0.16	0.25	0.04	0.063	0.1	0.16
Minimum flow rate ±5%	Q1	m³/h	0.025	0.025	0.039	0.063	0.063	0.1	0.156	0.025	0.039	0.063	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
Maximum register reading		m³	100'000										
Temperature		max. °C	30	50	50	50	50	50	50	50	50	50	50
Measuring range			R100	R160	R160	R160	R160	R160	R160	R160	R160	R160	R160

1) -VS = Vertical riser / -VF = Vertical down pipe 2) Also supplied with couplings R½ 3) Max. 1 h per 24 h, with max. total time of 100 h

Dimensions and weights			MTKcoder® MP (horizontal)							MTKcoder® MP-VS or -VF (vertical) <sup>1)</sup>			
<b>Length without couplings</b>	<b>A</b>	<b>mm</b>	<b>165</b>	<b>190</b>	<b>260</b>	<b>260</b>	<b>260</b>	<b>300</b>	<b>300</b>	<b>105</b>	<b>150</b>	<b>150</b>	<b>200</b>
Length with couplings		mm	239	282	352	352	372	432	452	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®-H200 compact	B2	mm	156	152	172	172	172	197	211	-	-	-	-
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®-H200 compact from pipe centre line	C2	mm	121	122	128	128	128	151	154	-	-	-	-
Meter depth with lid / inductive interface	D	mm	-	-	-	-	-	-	-	148	169	183	226
Meter depth with radio module RCM®-H200 compact	D1	mm	-	-	-	-	-	-	-	150	169	183	226
Meter depth with lid / inductive interface from pipe centre line	E	mm	-	-	-	-	-	-	-	130	143	156	190
Meter depth with radio module RCM®-H200 compact from pipe centre line	E1	mm	-	-	-	-	-	-	-	132	143	156	190

Dimensions and weights			MTKcoder® MP (horizontal)							MTKcoder® MP-VS or -VF (vertical) <sup>1)</sup>			
Installation depth with lid from pipe centre line	W	mm	48	48	50	50	50	68	76	48	49	51	70
Installation depth with radio module RCM®-H200 compact from pipe centre line <sup>4)</sup>	W1	mm	64	64	64	64	64	68	76	64	64	64	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	70
Meter height with open lid	G	mm	167	163	183	183	183	208	222	-	-	-	-
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	3.0	3.0	6.0
Weight without couplings MTK-VF		app. kg	-	-	-	-	-	-	-	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	3.4	3.6	7.0
Weight with couplings MTK-VF		app. kg	-	-	-	-	-	-	-	2.2	3.8	4.3	8.3

1) -VS = Vertical riser / -VF = Vertical down pipe 2) Also supplied with couplings R<sup>1</sup>/<sub>2</sub> 3) Max. 1 h per 24 h, with max. total time of 100 h 4) By turning the register / assembly installation depth W can be realised 5) only in NPSM execution

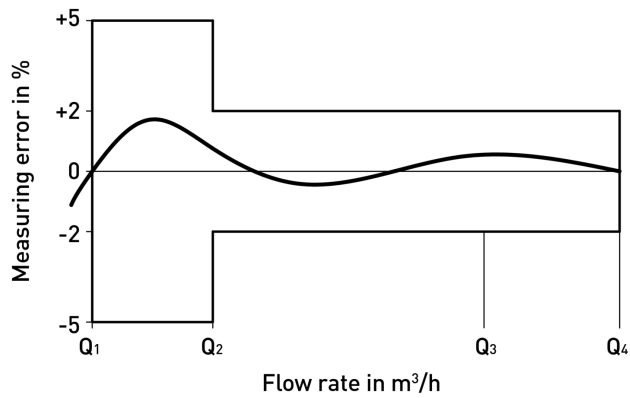
Certifications	MTKcoder® MP (horizontal)							MTKcoder® MP-VS or -VF (vertical) <sup>1)</sup>			
SVGW certification	x	x	x	x	x	x	-	x	x	x	x
UBA Brass (DIN 50930-6)	x	x	x	x	x	x	-	x	x	x	x
KTW / W270	x	x	x	x	x	x	-	x	x	x	x
NSF-61-G & 372	-	-	x <sup>5)</sup>	-	-	x <sup>5)</sup>	-	-	-	-	-

## Information

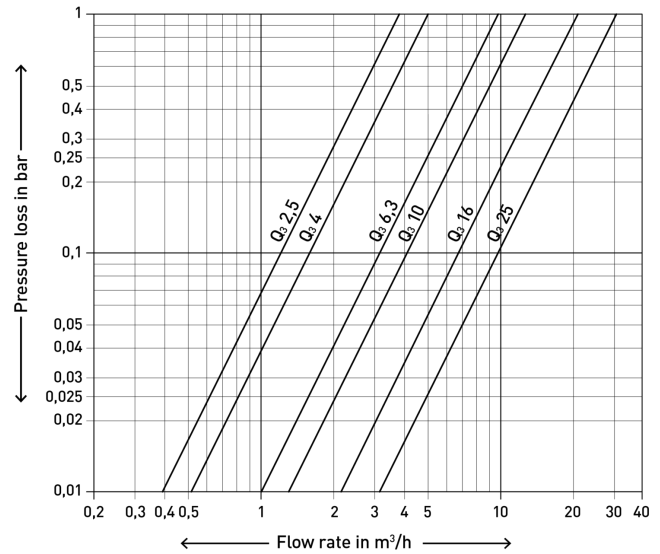
EU-REACH Art. 33 / ChemV Art. 71

Brass products contain lead > 0,1 %

## Measuring error curve



## Typical Head Loss Curve



## Materials

Housing	UBA Brass (DIN 50930-6)
Sealing plate	UBA Brass (DIN 50930-6)
Impeller / measuring insert	High grade synthetic materials
Bearings	Hard metal, Sapphire, Chrome nickel steel
Seal material	EPDM

# Dimension Diagram

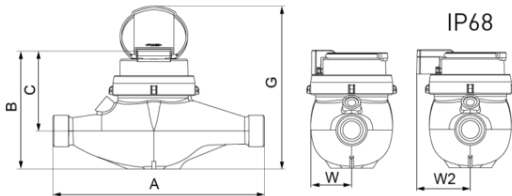
## Register options

Without cable

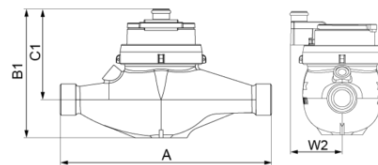
With 1,5 m cable

Floodproof IP68 with 5 m cable

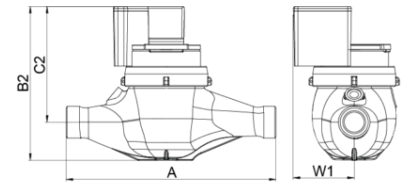
MTKcoder® MP  
with meter lid



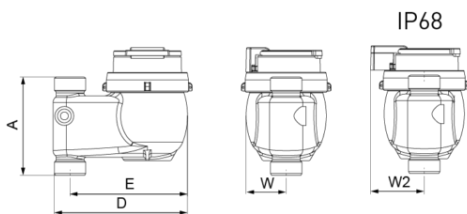
MTKcoder® MP  
with inductive interface



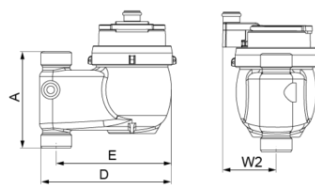
MTKcoder® MP  
with radio module RCM®-H200 compact



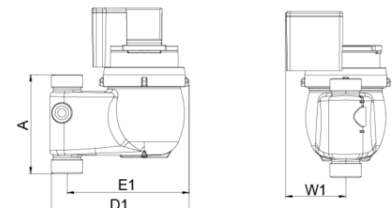
MTKcoder® MP  
with meter lid



MTKcoder® MP  
with inductive interface



MTKcoder® MP  
with radio module RCM®-H200 compact



## Installation

<b>Pipeline:</b>	horizontal	—
	vertical	
<b>Meter head:</b>	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**

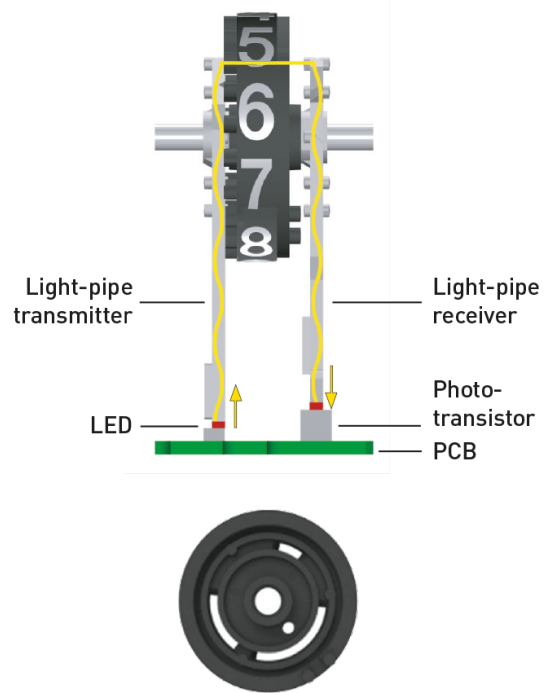
# GWFcoder®-Technology

## The 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.

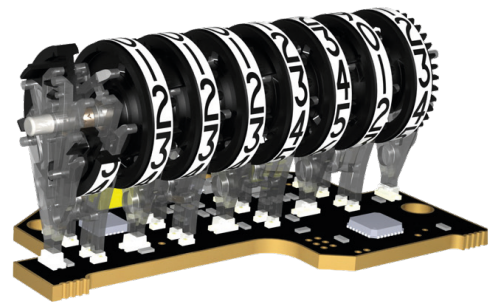
GWF enhanced the reliable Smart Metering technology in its 2nd generation, so that 8 instead of 5 number wheels are being scanned and therefore a resolution of 1 liter is possible. Moreover, all products with multiprotocol functionality provide the flexibility to switch between SCR(IEC) and M-Bus which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

In combination with the GWF radio module RCM®-H200 the third interface can be used for wireless M-Bus.



## GWFcoder®-Data package

SCR: IEC 62056-21 Mode A (IEC 1107)	
Medium	Water
Absolute meter reading:	12365,678 m <sup>3</sup>
Serial number:	13215678
Meter size:	DN 20
M-Bus	EN 13757
ECO	EN 13757-3



## Example of use

### Wireless readout

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

