Water

MTKcoder® 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_3 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® MP register (IP68) with Multiprotocol interface and meter lid / 5 m cable
- Radio module RCM®-H200 compact
  Documentation: RCM®-H200
- Radio module RCM®-LRW...
  Documentation: RCM®-LRW...

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Technical Data

Execution			MTKcoder® MP (horizontal)						MTKcoder® MP-VS or -VF (vertical)[1]			
Nominal diameter	**DN**	**mm**	**20**	**25**	**32**	**32**	**40**	**50**	**20**	**25**	**32**	**40**
Connection thread on meter	G...B	Inch	1	1¼	1½	1½	2	2⅜	1	1¼	1½	2
Connection thread on coupling	R...	Inch	¾[2]	1	1¼	1½	1½	2	¾[2]	1	1¼	1½
Operating pressure	**PN**	**bar**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**
Nominal flow rate	**Q_3**	**m^3/h**	**4**	**6,3**	**10**	**16**	**16**	**25**	**4**	**6,3**	**10**	**16**
Overload flow rate[3]	Q_4	m^3/h	5	7,875	12,5	12,5	20	31,25	5	7,875	12,5	20
Transitional flow rate ± 2 %	Q_2	m^3/h	0,04	0,063	0,1	0,1	0,16	0,25	0,04	0,063	0,1	0,16
Minimum flow rate ± 5 %	Q_1	m^3	0,025	0,039	0,025	0,025	0,1	0,156	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
Maximum register reading		m^3	100'000									
Temperature		max.°C	50	50	50	50	50	50	50	50	50	50
Measuring range			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)[1]			
Length without couplings	A	mm	220	260	260	273	300	300	105	150	150	200
Length with couplings		mm	310	370	370	390	434	454	195	260	260	334
Meter height with lid	B	mm	125	135	135	135	160	174	-	-	-	-
Meter height with inductive interface	B1	mm	137	147	147	147	172	186	-	-	-	-
Meter height with radio module RCM®-H200 compact	B2	mm	162	172	172	172	197	211	-	-	-	-
Meter height with lid from pipe centre line	C	mm	85	91	91	91	114	117	-	-	-	-
Meter height with inductive interface from pipe centre line	C1	mm	97	103	103	103	126	129	-	-	-	-
Meter height with radio module RCM®-H200 compact from pipe centre line	C2	mm	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
Installation depth with lid from pipe centre line	W	mm	48	50	50	50	68	76	48	49	51	70

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Dimensions and weights			MTKcoder® MP (horizontal)						MTKcoder® MP-VS or -VF (vertical)[1]			
Installation depth with radio module RCM®-H200 compact from pipe centre line[4]	W1	mm	64	64	64	64	68	76	64	64	64	70
Installation depth IP68 or with inductive interface from pipe centre line[4]	W2	mm	57	57	57	57	68	76	57	57	57	70
Meter height with open lid	G	mm	173	183	183	183	208	222	-	-	-	-
Weight w/o couplings		app. kg	2,1	2,6	2,7	2,8	5,4	6,7	-	-	-	-
Weight w/o couplings MTK-VS		app. kg	-	-	-	-	-	-	1,9	3,0	3,0	6,0
Weight w/o couplings MTK-VF		app. kg	-	-	-	-	-	-	2,0	3,4	3,7	7,3
Weight with couplings		app. kg	2,4	3,1	3,4	3,5	6,5	8,3	-	-	-	-
Weight with couplings MTK-VS		app. kg	-	-	-	-	-	-	2,2	3,5	3,7	7,1
Weight with couplings MTK-VF		app. kg	-	-	-	-	-	-	2,3	3,9	4,4	8,4

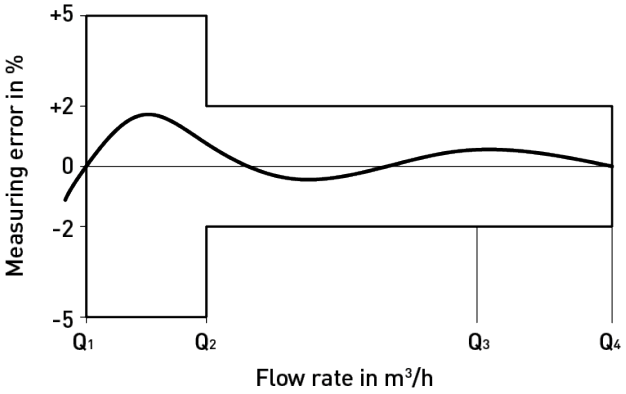
4] By turning the register / assembly installation depth W can be realised 5) only in NPSM execution

Certifications	MTKcoder® MP (horizontal)						MTKcoder® MP-VS or -VF (vertical)[1]			
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[5]	-	x[5]	-	-	-	-	-	-

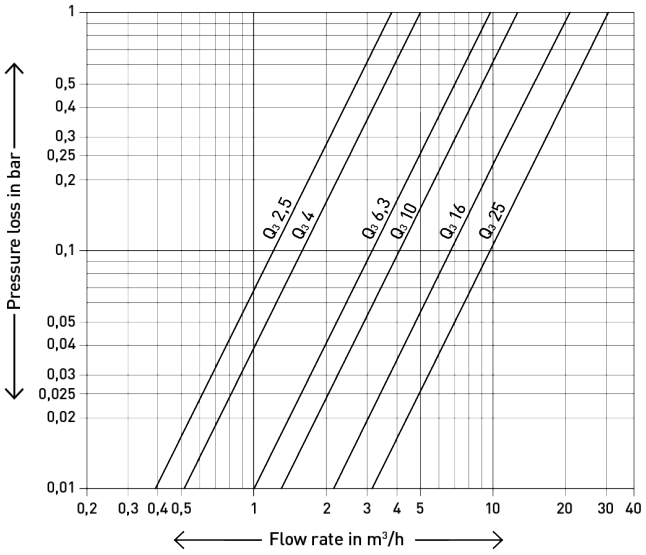
5] Only in NPSM execution

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

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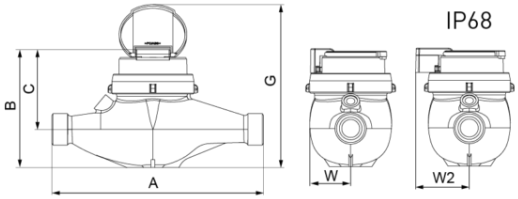
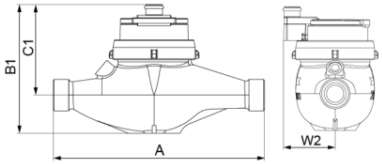
Dimension Diagram

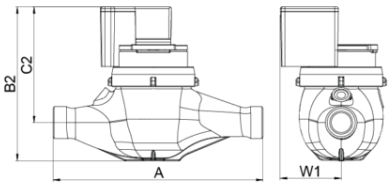
MTKcoder® MP
with meter lid



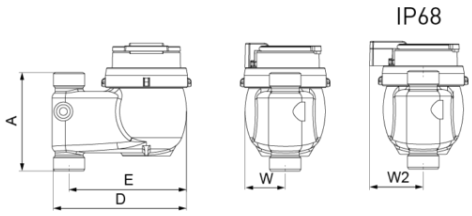
MTKcoder® MP
with inductive interface



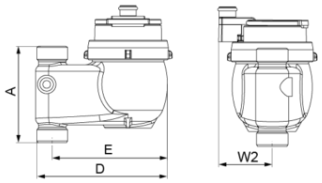
MTKcoder® MP
with radio module RCM®-H200 compact



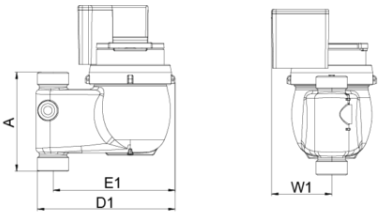
MTKcoder® MP
with meter lid



MTKcoder® MP
with inductive interface



MTKcoder® MP
with radio module RCM®-H200 compact



Ausführungsvarianten

- without cable
- with 1,5 m cable
- Floodproof IP68 with 5 m 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

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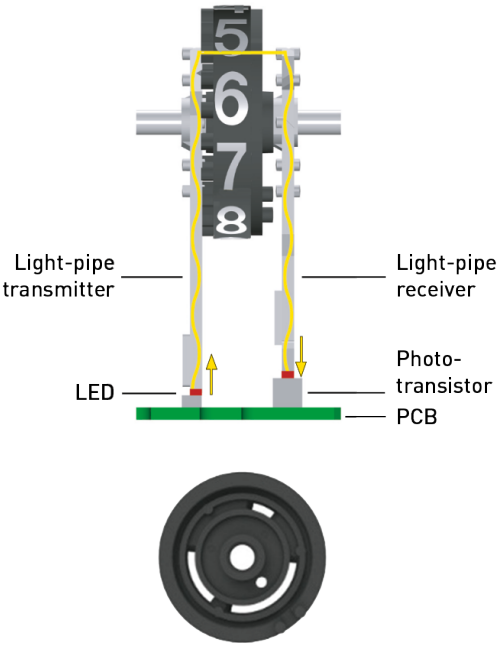
GWFcoder®-Technology

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.

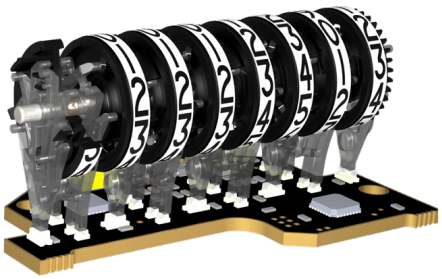
GWF enhanced the reliable Smart Metering technology in its 2nd generation, so that 8 instead of 5 number wheels are being scanned and therefore a resolution of 1 liter is possible. Moreover, all products with multiprotocol functionality provide the flexibility to switch between SCR(IEC) and M-Bus which 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^3
Serial number:	13215678
Meter size:	DN 20
M-Bus:	EN 13757
ECO:	EN 13757-3



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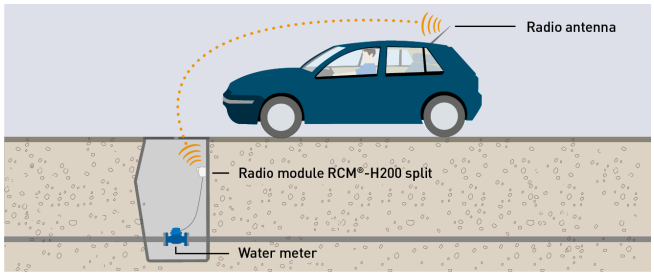
Example of use

Wireless readout

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



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