



MTKcoder®

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

- Long service life, robust domestic water meter:
Excellent measuring stability and reliability
- Measurement of low flow rates:
Increased cost effectiveness
- 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

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_n 1,5: Measuring range 1:50 (Q_{min} – Q_n)
- Q_n 2,5–15: Measuring range 1:100 (Q_{min} – Q_n)
- 5 dial resolution without 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
- Standard register with IEC interface

Options

- MTKcoder® register with M-Bus interface
- Flood proof MTKcoder® register (IP68) with IEC-interface and meter lid / 5m cable
- Flood proof MTKcoder® register (IP68) with M-Bus interface meter lid / 5m cable
- NPSM threaded connection
- **CE** Conformity according to European Measuring Instruments (MID)
 Documentation: MTKcoder® – EPe10112

Technical Data

Execution			MTKcoder® (horizontal)						MTKcoder®-VS or -VF (vertical) ¹⁾				
Nominal diameter	DN	mm	15	20	25	32	40	50	15	20	25	32	40
Connection thread on meter	G...B	Inch	1	1	1¼	1½	2	2 ¾/8	1	1	1¼	1½	2
Connection thread on coupling	R...	Inch	¾ ²⁾	¾ ²⁾	1	1¼	1½	2	¾ ²⁾	¾ ²⁾	1	1¼	1½
Operating pressure	PN	bar	16	16	16	16	16	16	16	16	16	16	16
Operating pressure (flanged)	PN	bar	-	25	25	25	25	25	-	-	-	-	-
Nominal flow rate	Q _n	m³/h	1,5	2,5	3,5	6	10	15	1,5	2,5	3,5	6	10
Overload flow rate ³⁾	Q _{max}	m³/h	3	5	7	12	20	30	3	5	7	12	20
Transitional flow rate ±2%	Q _t	m³/h	0,120	0,0375	0,0525	0,09	0,15	0,225	0,120	0,0375	0,0525	0,09	0,15
Minimum flow rate ±5%	Q _{min}	m³/h	0,03	0,025	0,035	0,06	0,1	0,15	0,03	0,025	0,035	0,06	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	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
Measuring range	Q _{min} /Q _n		1:50	1:100	1:100	1:100	1:100	1:100	1:50	1:100	1:100	1:100	1:100

Dimensions and weights			MTKcoder® (horizontal)						MTKcoder®-VS or -VF (vertical) ¹⁾				
Length without couplings	A	mm	165	190	260	260	300	300	105	105	150	150	200
Length with couplings		mm	259	284	374	374	434	454	199	199	264	264	334
Meter height with lid DK	B	mm	133	139	149	149	174	188	-	-	-	-	-
Meter height with lid DM	B1	mm	144	150	160	160	185	199	-	-	-	-	-
Meter height with lid DK from pipe center line	C	mm	98	99	105	105	128	131	-	-	-	-	-
Meter height with lid DM from pipe centre line	C1	mm	109	110	116	116	139	142	-	-	-	-	-
Meter depth	D	mm	-	-	-	-	-	-	148	148	169	183	226
Meter depth from pipe centre line	E	mm	-	-	-	-	-	-	130	130	143	156	190
Meter width	F	mm	95	95	100	100	135	151	95	95	98	101	139
Meter height with open lid	G	mm	191	197	206	206	232	246	-	-	-	-	-
Length with flanges PN 16 / 25		mm	-	190	260	260	300	300 ⁴⁾	-	-	-	-	-
Height with flanges	H	mm	-	146	156	165	197	209	-	-	-	-	-
Flange external dimension ⁵⁾		mm	-	105	115	140	150	165	-	-	-	-	-
Hole circle diameter ⁵⁾		mm	-	75	85	100	110	125	-	-	-	-	-
Number of screws ⁵⁾		Pcs.	-	4	4	4	4	4	-	-	-	-	-
Weight without couplings		app. kg	1,9	2,3	2,8	2,9	5,6	6,9	-	-	-	-	-
Weight without couplings MTK-VS		app. kg	-	-	-	-	-	-	2,1	2,1	3,2	3,2	6,2
Weight without couplings MTK-VF		app. kg	-	-	-	-	-	-	2,2	2,2	3,6	3,9	7,5
Weight with couplings		app. kg	2,2	2,6	3,3	3,6	6,7	8,5	-	-	-	-	-
Weight with couplings MTK-VS		app. kg	-	-	-	-	-	-	2,4	2,4	3,7	3,9	7,3
Weight with couplings MTK-VF		app. kg	-	-	-	-	-	-	2,5	2,5	4,1	4,6	8,6
Weight with flanges		app. kg	-	4,0	4,9	6,5	8,3	11,7	-	-	-	-	-

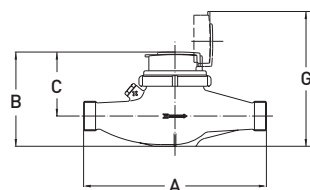
¹⁾ -VS = vertical riser / -VF = vertical down pipe
⁴⁾ Also supplied in length 270mm

²⁾ Also supplied with couplings R½
⁵⁾ DIN EN 1092-2

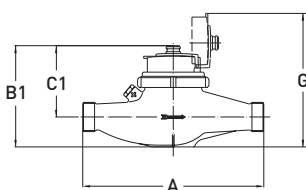
³⁾ Max. 1h per 24h, with max. total time of 100h

Dimension Diagram

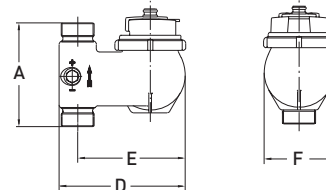
MTKcoder® with meter lid DK
without inductive interface



MTKcoder® with lid module DM
and inductive interface



MTKcoder®-V. with lid module DM
and inductive interface



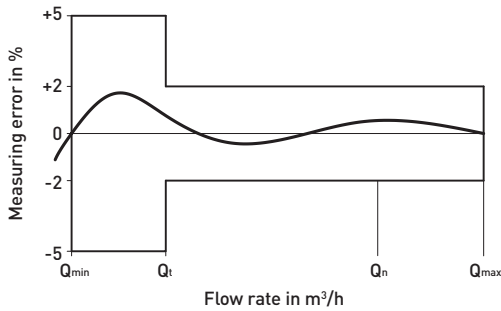
Register options:

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

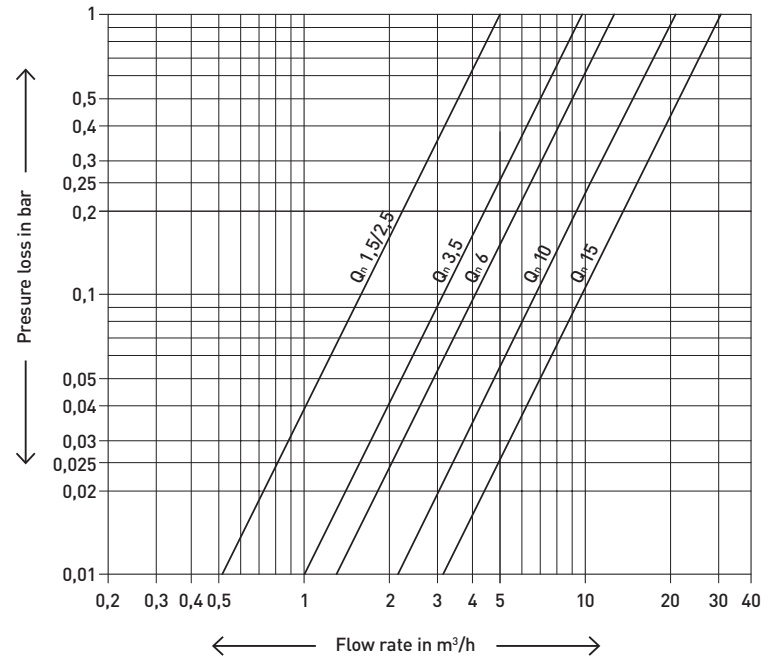
Materials

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, Chorme nickel
Seal material:	EPDM

Measuring error curve



Typical Head Loss Curve



Installation

Pipeline:	horizontal	—
	vertical	
Meter head:	upwards	↑

Installation Requirements

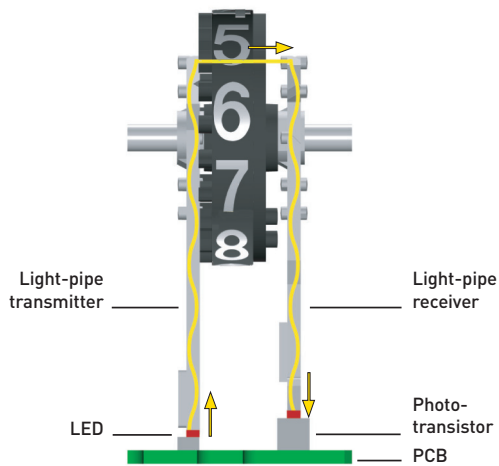
The meter must be installed so that the type plate is always horizontally positioned, facing upwards (do not tilt).

Documentation:

Installation and service instructions for water meters - BAe10101

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 5 light barriers (light-pipe 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.



GWFcoder®- Data package IEC

Medium:	Water/gas
Absolute meter reading:	123654m ³
Serial number:	43215678
Meter production date:	29-12-06
Meter size:	DN15 / G4

Standards and interface

GWFcoder®-registers can be implemented with all common standardized or interface definitions. The GWFcoder® system currently supports the following interfaces:

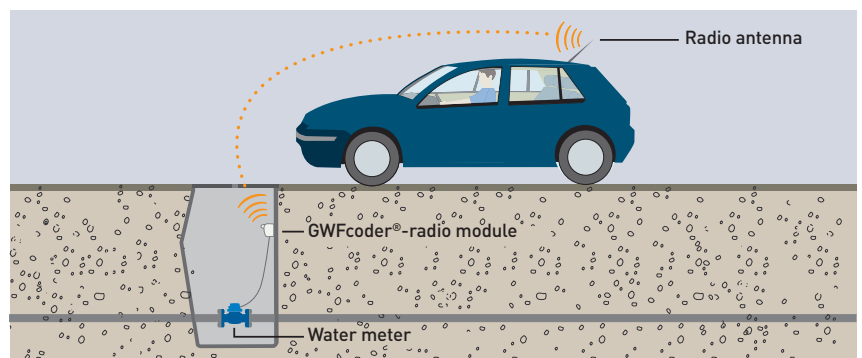
Interface

SCR/IEC:	IEC 62056-21 Mode A (IEC 1107)
M-Bus:	EN 13757-2/3
Namur:	EN 60947-5-6 (large-scale gas measurement)

Example of use

Wireless readout

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



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Subject to modification

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