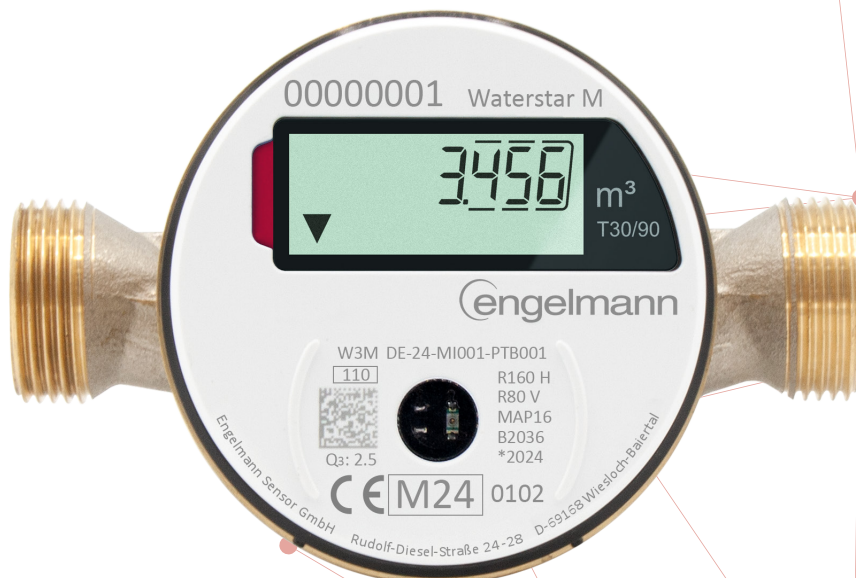


Engelmann **Radio Water Meter**

WaterStar M

The radio-integrated electronic water meter
for all common installation points



Most accurate measurement results
for every application

Various installation options

Leakage and tampering detection for maximum
reliability

Individually configurable

Flexible adjustment of the radio settings via
software or app

WATERSTAR M

The perfect choice for accurate and reliable measurement and transmission of your water consumption

The radio-integrated water meter is the perfect solution for recording your water consumption. With a wide range of single-jet and multi-jet flow sensors for cold and hot water applications, the meter is suitable for all common installation points and applications.

The integrated wireless M-Bus radio according to the OMS standard enables the secure and reliable transmission of your consumption data at any time. Thanks to the automatic detection and transmission of leakage and tampering warnings, you can always keep an eye on your system and react immediately in case of doubt.



Gateway/AMR



Readout Software

Features

- Available as inline meters and measuring capsule meters in all common variants
- Integrated wireless M-Bus communication interface
- Easily readable LCD display
- Inductive impeller scanning
- Return flow detection
- Leakage and tampering detection
- Battery capacity: 12 years

General data

Measuring method	inductive scanning
Mechanical class (MID)	M1
Electromagnetic class (MID)	E1
Environmental class (MID)	B
Protection class	IP68
Pressure class	MAP16
Mounting position	horizontal/vertical
Approvals	DE-24-MI001-PTB001; DE-24-MI001-PTB002; CE
Radio mode	adjustable: C1; T1
Power supply	3 V lithium battery
Battery capacity, designed	12 years (depending on radio settings)

Display	LCD – 8 digits + special characters; display can be rotated 360°
Unit	m ³
Billing dates	freely selectable annual billing date; 15 monthly values via radio; 15 monthly and semi-monthly values via optical interface
Interfaces	wireless M-Bus; optical interface for configuration and readout
Temperature range	T30 (0.1 – 30 °C) T30/90 (30 – 90 °C)
Ambient temperature in the field	5 – 55 °C at 95 % relative humidity
Storage and transport temperature range	-25 – 70 °C

Type-specific data

Inline meters

Type	DN 15	DN 15	DN 15	DN 15	DN 15	DN 20	DN 20
Installation length [mm]	80	110	115	115	130	130	130
Q ₃ [m ³ /h]	2.5	2.5	2.5	2.5	2.5	2.5	4.0
Low flow threshold value [l/h]	6	6	6	6	6	6	6
Thread	G3/4"	G3/4"	G3/4"	G3/4" – G7/8"	G3/4"	G1"	G1"
Ratio Q ₃ /Q ₁	R160 H / R80 V						
Weight approx. [kg]	0.245	0.289	0.286	0.299	0.367	0.348	0.348

Measuring capsule meters

Type (ISO 4064)	IST	MET	TE1	MOC/MOE	A34
Q ₃ [m ³ /h]	2.5	2.5	2.5	2.5	2.5
Low flow threshold value [l/h]	6	6	6	6	6
Thread	G2"	M64x2	M62x2	M65x2	M77x1.5
Ratio Q ₃ /Q ₁	R80				
Weight approx. [kg]	0.099	0.074	0.087	0.074/0.081	0.143

Measuring capsule meters with converter

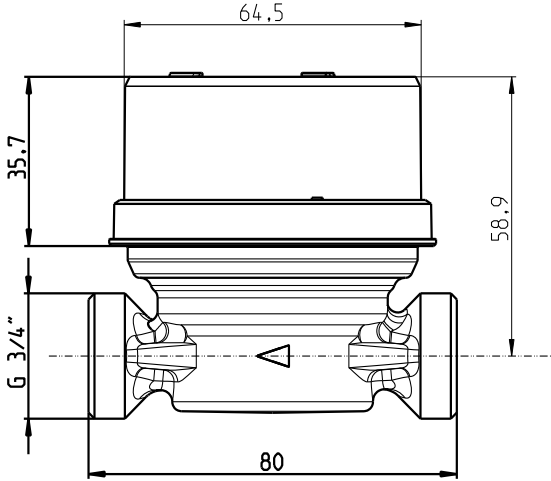
Type (ISO 4064)	MUK	DM1	HT2	MB3	WE1	WGU
Q ₃ [m ³ /h]	2.5	2.5	2.5	2.5	2.5	2.5
Low flow threshold value [l/h]	6	6	6	6	6	6
Thread	G2¼"	M60x2	M66x1	M76x1.5	M78x1.5	M66x1.25
Ratio Q ₃ /Q ₁	R80					
Weight approx. [kg]	0.296	0.275	0.264	0.337	0.381	0.263

TECHNICAL DATA

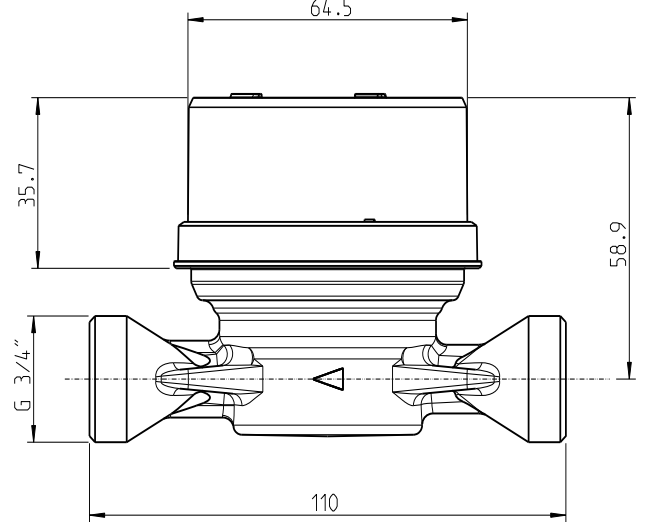
Dimensions

Inline meters

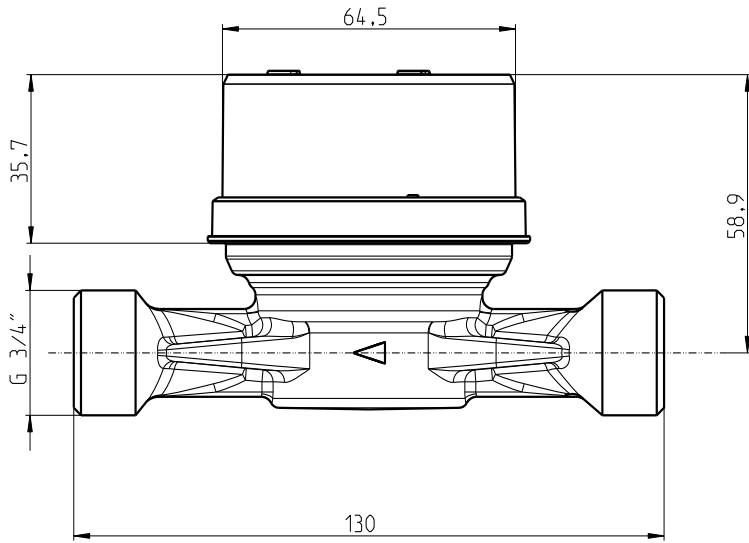
DN 15 IL 80 mm



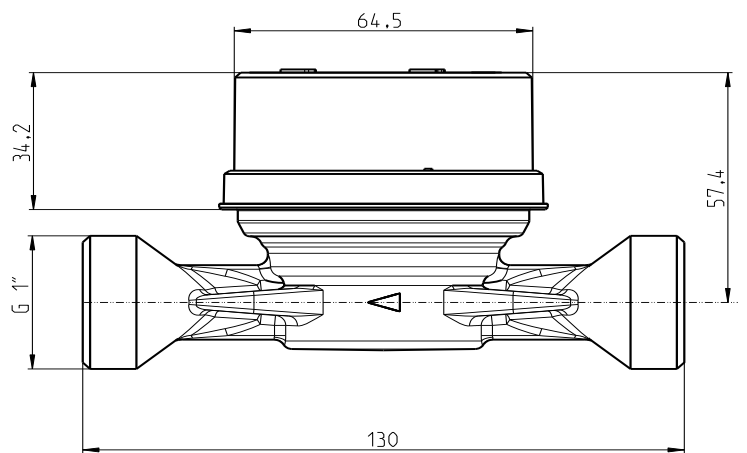
DN 15 IL 110 mm



DN 15 IL 130 mm

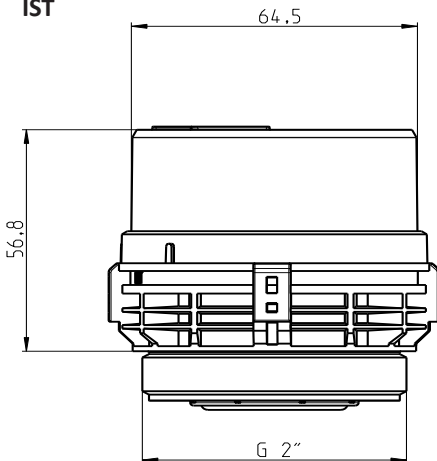


DN 20 IL 130 mm

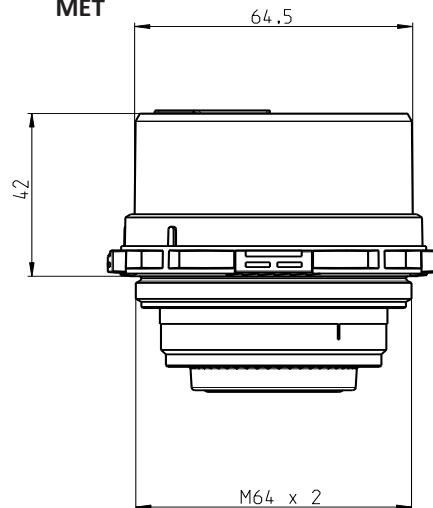


Measuring capsule meters

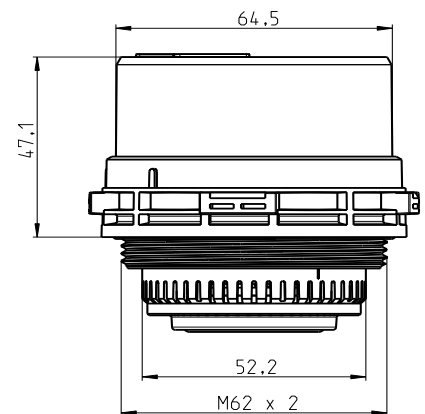
IST



MET

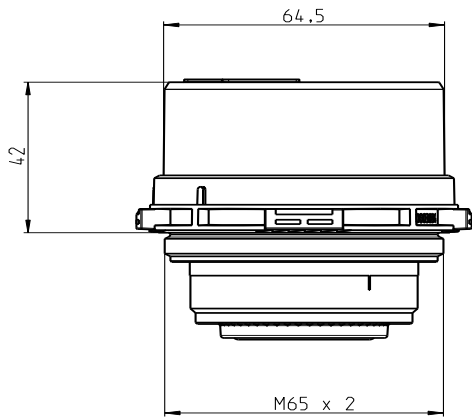


TE1

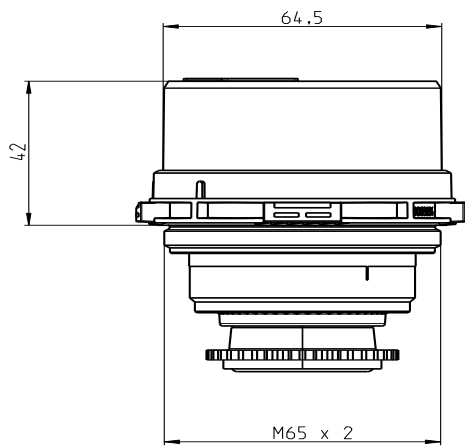


TECHNICAL DATA

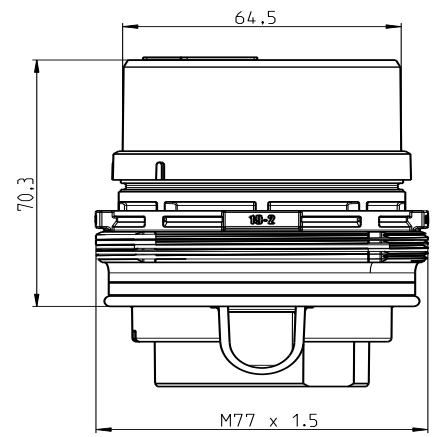
MOC



MOE

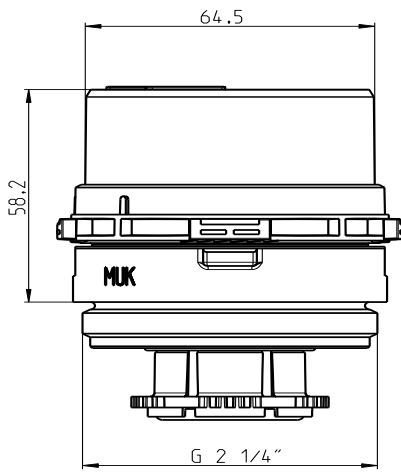


A34

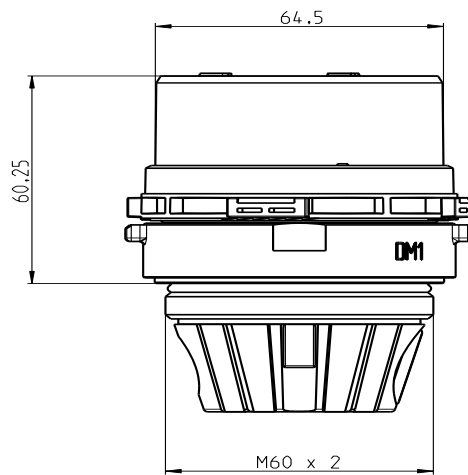


Measuring capsule meters with converter

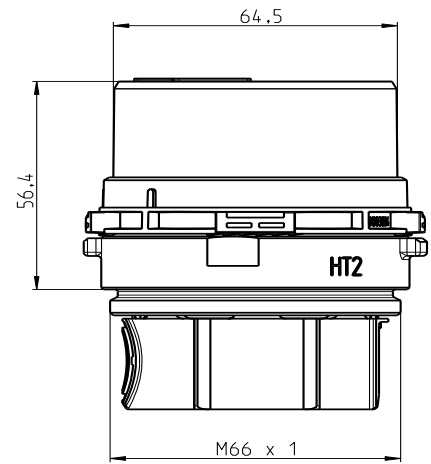
MUK



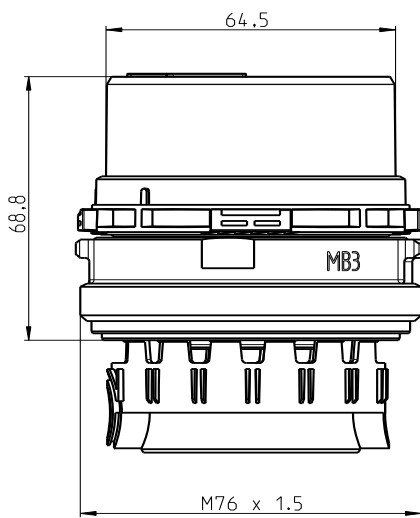
DM1



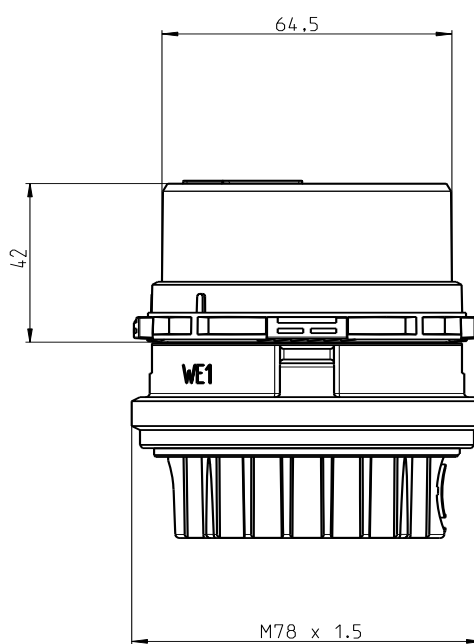
HT2



MB3



WE1



WGU

