MeiTwinRF

Compound Water Meter for potable water up to 50 °C DN 50, DN 65, DN 80, DN 100

Main Features

Registers with integrated radio communication and data logger with up to 6200 data sets

LC-display for consumption and status information

Secured encrypted data transmission

The main meter and the by-pass meter are arranged one behind the other in the direction of flow.

There is no longer any need for the differentiation between the "by-pass meter on the right" and "by-pass meter on the left".

No straight upstream or downstream pipe necessary due to integrated flow straightener (U0D0).

Removable metrological unit consisting of the main meter, the changeover valve and the by-pass meter ("3 in 1" concept).

A multirange metrological unit allows an easy economical replacement after the validity period of the calibration has expired.

Main meter with hydrodynamic balanced rotor.

Spring-loaded change-over valve with low headloss and extended lifetime.

By-pass meter specified as a piston meter cartridge 612MTW-RF with plug-in non-return valve, register copper/glass, protection class IP68.

Minimum flowrate: 6 l/hour for piston type by-pass meter.

Available in body lengths specified as per DIN 19625 and ISO 4064.

APPLICATIONS

Measurement of high flow rates with extremely wide spread flow profile

Measurement of very small flow rates for leakage detection

Ideal for fire service pipes

OPTIONS

Radio communication with different frequencies

Optional by-pass meter:

Spool piece for extension of meter casing as per DIN 19625

Port for ¼" pressure sensor

BATTERY LIFETIME

Radio interval profile MeiTwinRF with 15 years battery lifetime [1]

wM-Bus T1	SensusRF
≥ 3600 sec	BUP 15 sec / LAT 60 sec

[1] calculated lifetime with typical power consumption of electronics under allowed ambient condition

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PATTERN APPROVAL

Marking	CE M-XX* 0102
	DE-21-MI001-PTB006
	*Year of production

INSTALLATION

Pipe	horizontal vertical	
Meter head	upwards sideways	

The meter does not require any upstream or downstream straight length.

TECHNICAL DATA

| Performance Table acc. to Manufacturers Values						
Size	DN	[mm]	50	65	80	100
Maximum Working Pressure	PN	[bar]	16			
Maximum Peak Flow	Q_s	[m³/h]	90	120	200	280
Continuous Flow	$Q_{3'}$	[m³/h]	50	70	120	180
Changeover Flowrate at Increasing Flow	Q_{x2}	[m³/h]	2.0 - 2.6			
Changeover Flowrate at Decreasing Flow	Q_{x1}	[m³/h]	1.1 - 1.7			
Transitional Flowrate	Q_2	[m³/h]	0.012			
Minimum Flowrate	$Q_{1'}$	[m³/h]	0.006			
Performance Table acc. to MID Pattern Approval						
Size	DN	[mm]	50	65	80	100
Maximum Working Pressure	PN	[bar]	16			
Maximum Peak Flow	Q_4	[m³/h]	31.25	50	78.75	125
Continuous Flow	Q_3	[m³/h]	25	40	63	100
Changeover Flowrate at Increasing Flow	Q_{x2}	[m³/h]	2.0 - 2.6			
Changeover Flowrate at Decreasing Flow	Q_{x1}	[m³/h]	1.1 - 1.7			
Transitional Flowrate	Q_2	[m³/h]	0.025			
Minimum Flowrate	Q_1	[m³/h]	0.016			
Ratio	Q_3/Q_1		1600	2500	4000	6300

Typical Accuracy Curve

flowrate m³/h
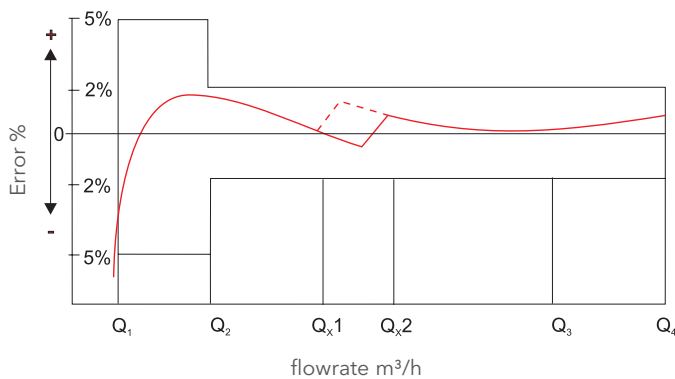
Q_1 minimum flow ±5%

Q_2 transitional flow ±2%

Q_3 continuous flow ±2%

Q_4 maximum peak flow ±2%
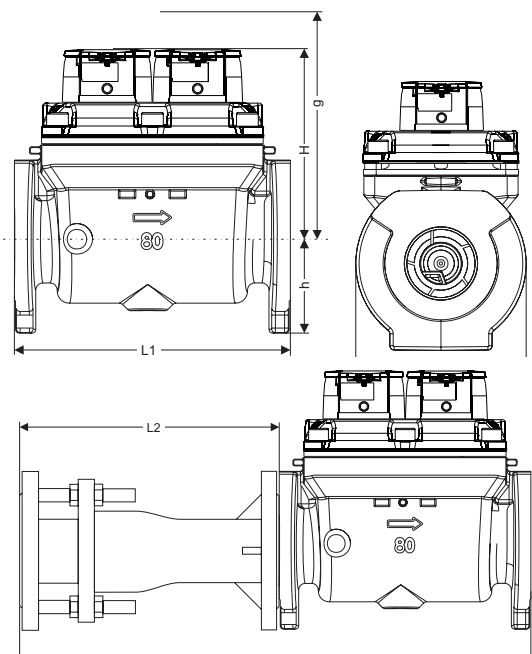
Typical Head Loss Curve
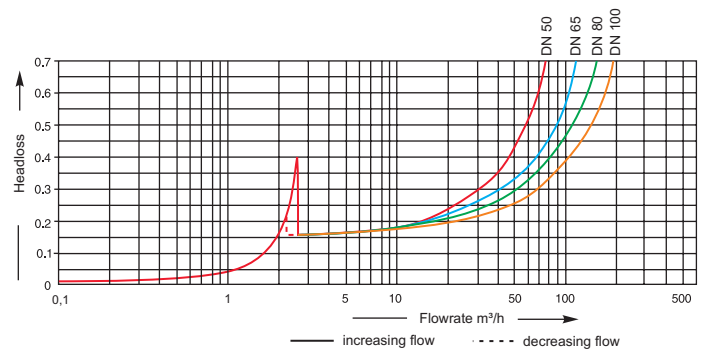
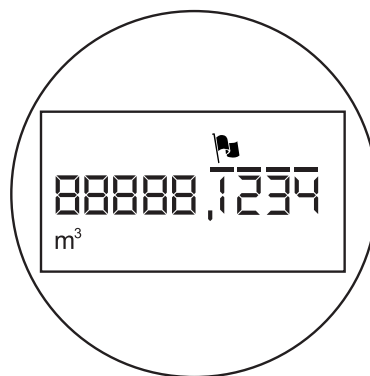# MeiTwinRF

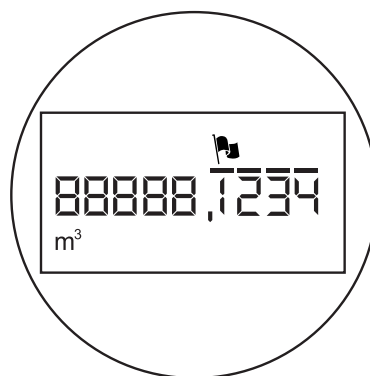## Compound Water Meter for potable water up to 50 °C DN 50, DN 65, DN 80, DN 100

Dimensional Diagram

Dials

Main meter

By-pass meter (type 612MTW-RF)

DIMENSIONS AND WEIGHTS

Nominal Diameter		mm	50	65	80	100
Overall length	L1	mm	270		300	360
	L1	mm	300	300	350	350
Height	H	mm	250			
	h	mm	80	92.5	100	100
Dismantling height	g	mm	505			
Length	L2	mm	330±40		400±60	440±60
	L*	mm	600±40		700±60	800±60
Width		mm	185	185	210	220
Weight	meter	kg	23.0	24.6	26.1	31.0
	measuring unit	kg	7			
	spool piece	kg	10.5		16.5	20.5

* for MeiTwinRF with body length according DIN 19625

	Smallest reading m³	Max. reading m³
Main meter	0,001	999,999.999
By-pass meter	0,001	999,999.999

🏴 Alarm is triggered

◇ Low battery level is reached

((Radio is activated

🔔 System is set up in hydraulic testing mode

⊕⊖ Indicates positive or negative flow

m³ Indicates the unit

MATERIALS

Body	Main meter	cast iron
	By-pass meter	brass
Measuring element (both meters)		plastic
Rotor (both meters)		plastic
Spring loaded valve		plastic and stainless steel
Battery		Lithium

By-pass Meters

Piston meter cartridge dry dial
type 612MTW-RF Q$_3$ 4

By-pass meter
(type 612MTW-RF)

MeiTwinRF

Compound Water Meter for potable water up to 50 °C DN 50, DN 65, DN 80, DN 100
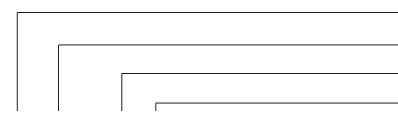
AVAILABLE DESIGN

Size	DN	50	65	80	100
Nominal size	Q_3	25	40	63	100
		Overall length as per DIN 19625			
Overall length	mm	270		300	360
		Overall length as per ISO 4064			
Overall length	mm	300	300	350	350

Accessories

Spool pieces for extension of meter casing as per DIN 19625

Size	DN	50	65	80	100
Overall length	mm	330±40		400±60	440+60

Order example

	Type
	Size
	Temperature
	Pressure
MeiTwinRF, DN 50, T30/16	
Drilled to EN 1092 PN 16	Flange drilling
eRegister / 868 MHz / m³	Register type / frequency / unit
Type 612MTW-RF by-pass meter Q_3 4	By-pass meter
Overall length 270 mm	Overall length
With MID conformity	Type of approval
With spool piece	Fittings
DN 50	Nominal width

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MeiTwinRF infrastructure

The MeiTwinRF has SensusRF integrated technology providing the advantages of both uni- and bidirectional system architecture as described below. SensusRF is the optimized license free radio system for battery driven endpoints and repeaters. Scalable for mobile and remote reading without exchange of components, it is available in 433 MHz and 868 MHz.
OMS® compatible.

SensusRF offers two communication modes

1. Fixed Radio Network

- Auto configuration wizard (gateway sniffing for endpoints and repeaters)

- Integrating repeaters (up to 7 hops in a chain)

- Self-healing network (using alternative routes)

- Meter reading transparent and local

- Fast track alarms

- DMA snap shot (snap shot of a water network for evaluation)

- TCP/IP technology for the WAN communication

- High level of data security (end-to-end encryption)

- Enables cloud technologies, FTP and other remote database applications

2. Mobile read - Walk-by / Drive-by

- Unidirectional telegrams

- Bidirectional communication

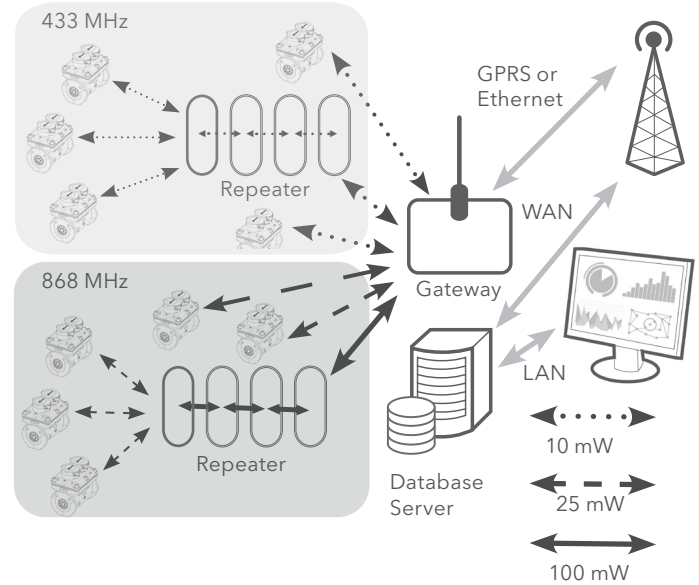- Spontaneous reception possible without route

- Configuration of the endpoint

SIRT (Sensus Interface Radio Tool)

SIRT is a radio modem for SensusRF radio, connected to a handheld via Bluetooth and using DIAVASO Mobile Reading software with the following features:
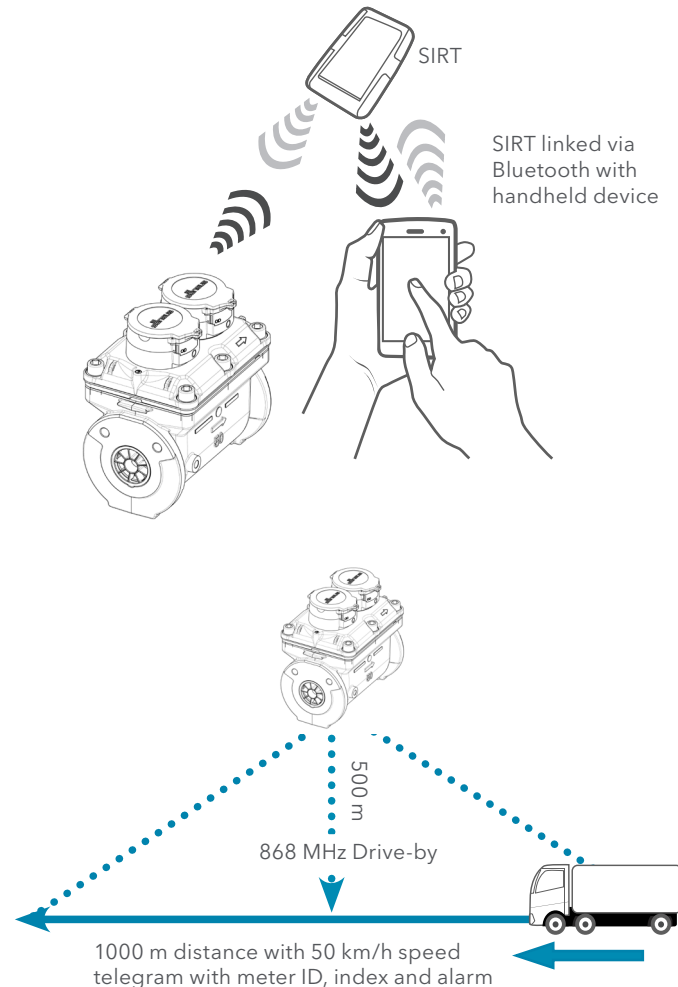
- Installation and readout of devices

- Reception of frequently transmitted radio messages from Sensus RF radio endpoints

- Request additional information from the radio endpoints

- Change configuration of radio endpoints (alarm, level settings...)

For further information please refer to the SensusRF brochure.

MeiTwinRF Fixed radio network - Remote Access & Monitoring

Unidirectional/Bidirectional communication

SIRT linked via Bluetooth with handheld device

868 MHz Drive-by

1000 m distance with 50 km/h speed telegram with meter ID, index and alarm