



## 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 1/4" pressure sensor

## Main characteristics

Registers with integrated radio communication and data logger

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 change-over 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.

## Pattern Approval

Marking CE M-XX\* 0102  
SK 11-MI001-SMU020

\*Year of production

## Installation

|            |                        |   |
|------------|------------------------|---|
| Pipe       | horizontal<br>vertical |  |
| Meter Head | upwards<br>sideways    |  |

The meter does not require any upstream or downstream straight length

## Technical data

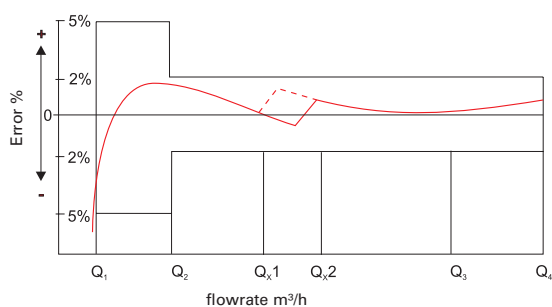
Performance Table acc. to Manufacturers Values

| 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

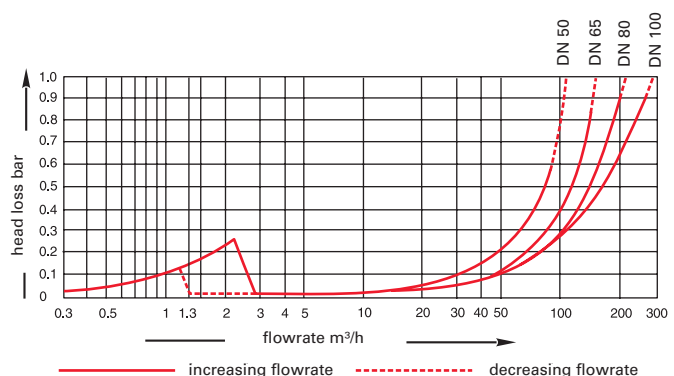
| Size                                   | DN        | [mm]   | 50        | 65   | 80    | 100  |
|--|-----------|--------|-----------|------|-------|------|
| Maximum Working Pressure               | PN        | [bar]  | 16        |      |       |      |
| Maximum Peak Flow                      | $Q_4$     | [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

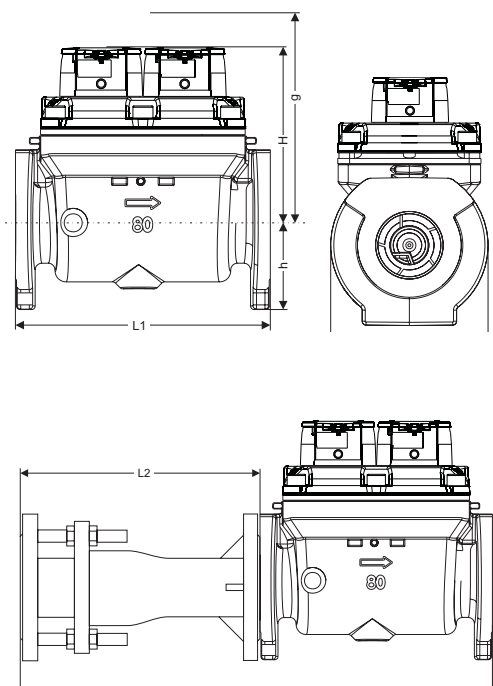


- $Q_1$  minimum flow  $\pm 5\%$
- $Q_2$  transitional flow  $\pm 2\%$
- $Q_3$  continuous flow  $\pm 2\%$
- $Q_4$  maximum peak flow  $\pm 2\%$

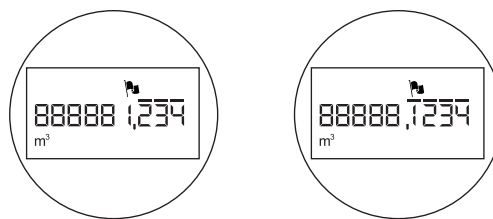
## Typical Head Loss Curve



Dimension Picture



Dials



Main meter By-pass meter (type 612MTW-RF)

|               | Smallest reading m³ | Max. reading m³ |
|---------------|---------------------|-----------------|
| Main meter    | 0,001               | 999,999.999     |
| By-pass meter | 0,0001              | 99,999.9999     |

- 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

Dimensions and Weights

| Nominal Diameter   |                | mm | 50     | 65   | 80     | 100    |
|--------------------|----------------|----|--------|------|--------|--------|
| Overall length     | L1             | mm | 270    |      | 300    | 360    |
|                    | L1             | mm | 300    | 300  | 350    | 350    |
| Dismantling height | H              | mm | 250    |      |        |        |
|                    | h              | mm | 80     | 92.5 | 100    | 100    |
|                    | g              | mm | 505    |      |        |        |
| Length             | L2             | mm | 330±40 | n/a  | 400±60 | 440±60 |
|                    | L*             | mm | 600±40 | n/a  | 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   | n/a  | 16.5   | 20.5   |

\* for MeiTwinRF with body length according DIN 19625

Materials

|                     |               |                            |
|---------------------|---------------|----------------------------|
| Body                | main meter    | Cast iron                  |
|                     | by-pass meter | Brass                      |
| Measuring element   | both meters   | Plastic                    |
| Rotor               | both meters   | Plastic                    |
| Spring loaded valve |               | Pastic and stainless steel |
| Battery             |               | Lithium                    |

By-pass Meters

Piston meter cartridge dry dial type 612MTW-RF Q<sub>3</sub> 4



By-pass meter (type 612MTW-RF)

## Available design

| Size           | DN             | 50                              | 65  | 80  | 100 |
|----------------|----------------|---------------------------------|-----|-----|-----|
| Nominal size   | Q <sub>3</sub> | 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 | n/a | 400±60 | 440+60 |

## Order example

|   |                                  |
|---|----------------------------------|
| MeiTwinRF, DN 50, T30/16                      | Type                             |
| Drilled to EN 1092 PN 16                      | Size                             |
| eRegister / 868 MHz / m <sup>3</sup>          | Temperature                      |
| Type 612MTW-RF by-pass meter Q <sub>3</sub> 4 | Pressure                         |
| Overall length 270 mm                         | Flange drilling                  |
| With MID conformity                           | Register type / frequency / unit |
| With spool piece                              | By-pass meter                    |
| DN 50   | Overall length                   |
|   | Type of approval                 |
|   | Fittings                         |
|   | Nominal width                    |

# 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

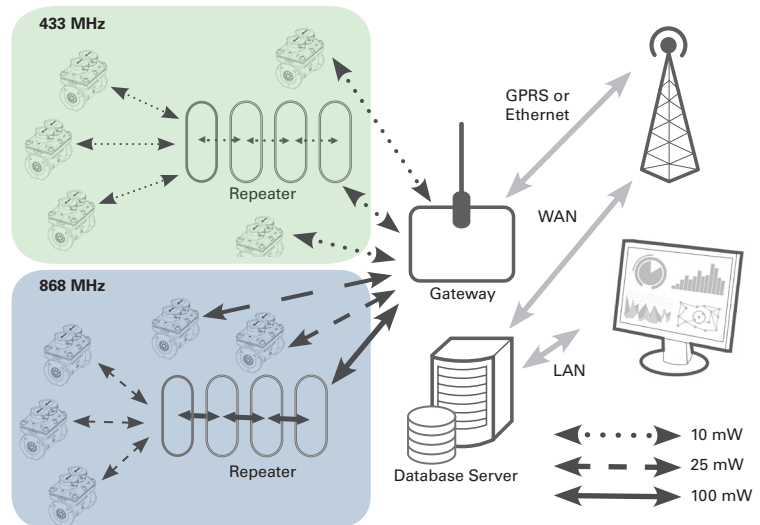
### SIRT (Sensus Interface Radio Tool)

SIRT is a radio modem for SensusRF radio, connected to a handheld via Bluetooth and using SensusREAD Mobile Reading software with the following features:

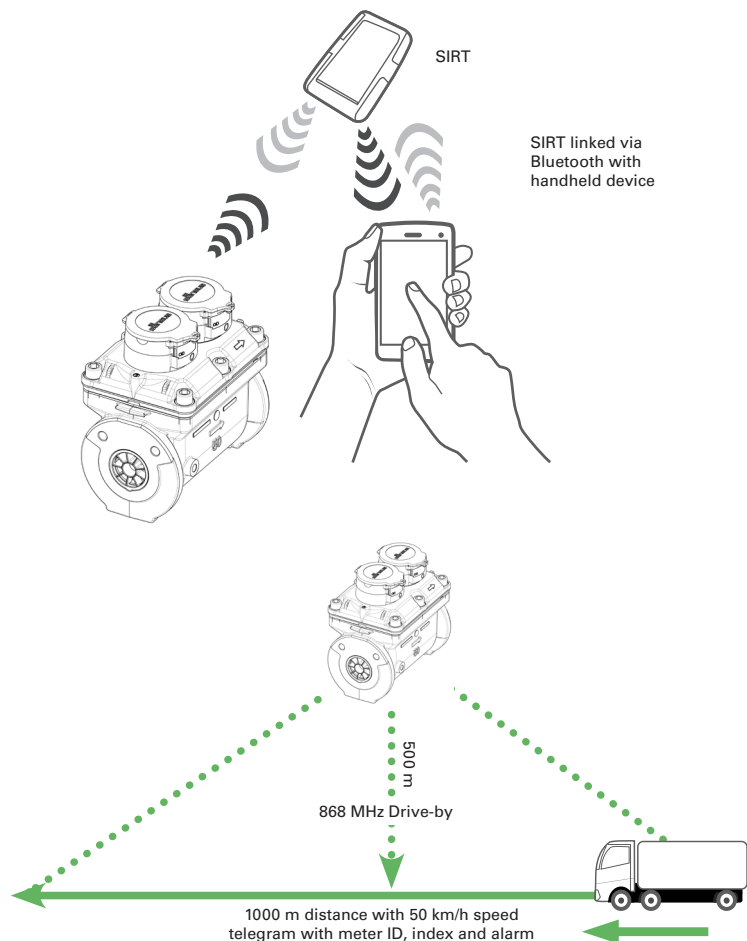
- Installation and readout of devices
- Reception of frequently transmitted radio messages from Sensus RF radio endpoints
- Request additional information from the radio endpoints
- Change configuration of radio endpoints (alarm, level settings...)

For further information please refer to the SensusRF brochure.

## MeiTwinRF Fixed radio network - Remote Access & Monitoring



## Unidirectional/Bidirectional communication



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Quality Management System Quality Austria Reg.no. 3496/0

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