MeiStreamRF Plus

Class C Bulkmeter with eRegister for cold potable water, DN 40...150 PN 16

APPLICATIONS

- Metering endpoint in radio based Smart Water Networks
- Measurement for billing of potable water up to 50 °C
- Measurement of medium and high flowrates
- Measurement of low flow e. g. in light load periods
- For leakage control

MATERIALS

Body	Cast iron
Metrological module	Engineering polymer
Rotor	Engineering polymer
Battery	Lithium
We also use the following materials	Brass Stainless steel

BATTERY LIFETIME

Radio interval profile MeiStreamRF Plus 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

Main characteristics

- Register with integrated radio communication and data logger with up to 6200 data sets
- LC-display for consumption and status information
- Secured encrypted data transmission
- Meter with MID pattern approval acc. to annex MI001
- Exchangeable metrological unit with MID pattern approval acc. to annex MI001
- Unique measuring range; Q_3/Q_1 315 in horizontal installation
- High overload capability
- No straight inlet length necessary (U0D0 acc. to OIML R49 and ISO 4064-1:2017)
- Meter body in short (WP) and long (WS) overall length acc. to DIN 19625 and ISO 4064-1:2017 available
- Meter can be submerged; protection class IP68
- Used materials are temperature resistant up to 70 °C

Available options

- Radio communication with different frequencies
- ¼" pressure monitoring port

Environmental Conditions

Acc. to ISO 4064-1:2017

Environmental class B

Environmental temperature 5-70 °C

Electromagnetic environmental class E1

Approval Mark

Meter cpl. and exchangeable metrological module

Marking CE M-XX* 0102

DE-09-MI001-PTB 012

* year of production

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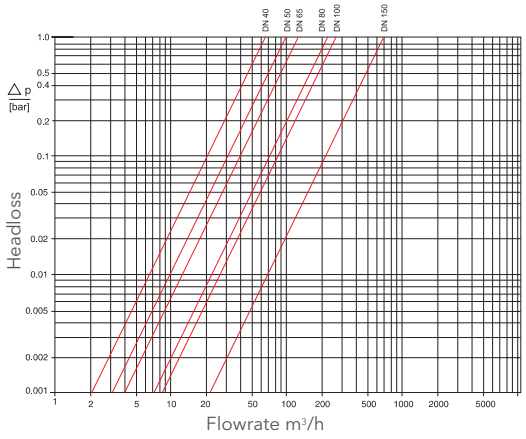
METROLOGICAL DATA ACC. TO MANUFACTURERS VALUES

	Size	DN	40	50	65	80	100	150
Q_5	Max. Peak Flow	m³/h	50	55	60	120	160	400
Q_3'	Continuous Flow	m³/h	30	35	40	63	100	250
Q_2	Transitional Flowrate horizontal acc. to MID	m³/h	0.13	0.13	0.16	0.25	0.4	0.63
Q_1'	Minimum Flow horizontal	m³/h	0.08	0.07	0.1	0.13	0.2	0.35
	Starting Flow	m³/h	0.03	0.03	0.035	0.04	0.065	0.12

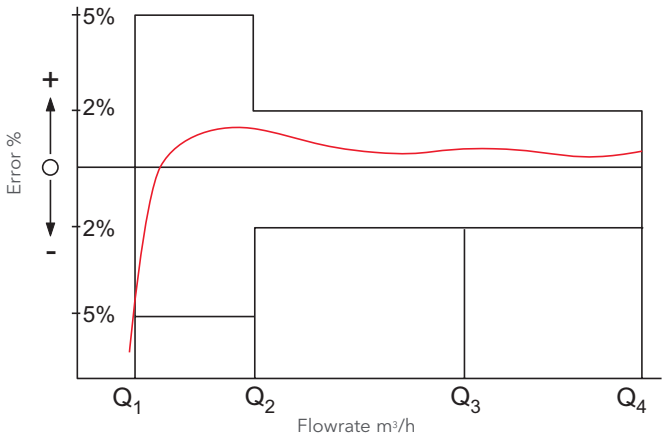
METROLOGICAL DATA ACC. TO 2014/32/EU (MID)

	Size	DN	40	50	65	80	100	150
Q_4	Overload Flowrate acc. to MID	m³/h	31.25	31.25	50	78.75	125	312.5
Q_3	Permanent Flowrate acc. to MID	m³/h	25	25	40	63	100	250
Q_2	Transitional Flowrate horizontal acc. to MID	m³/h	0.13	0.13	0.16	0.25	0.4	0.63
Q_1	Minimum Flowrate horizontal acc. to MID	m³/h	0.08	0.08	0.1	0.16	0.25	0.4
Q_3/Q_1	max. Ratio		315	315	400	400	400	630
Q_3/Q_1	Standard Marking		315	315	315	315	315	315
Δp	Headloss at Q_3 acc. to ISO 4064-1:2017	bar	0.09	0.08	0.17	0.07	0.16	0.14

Typical Headloss Curve



Typical Error Curve



Dial

DN 40 ... 100

DN 150

Nominal diameter DN	Smallest reading m³	Max. reading m³
40 ... 100	0.001	999,999.999
150	0.01	9,999,999.99

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

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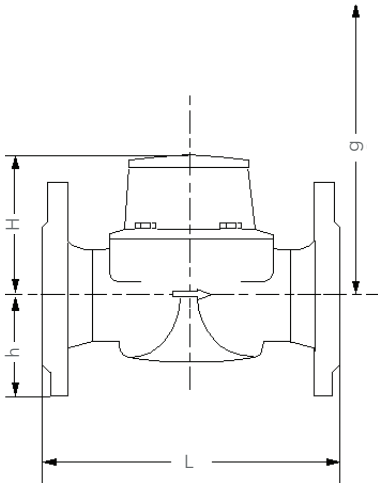
INSTALLATION

Pipe	horizontal ———
Meter head	upwards ↑

Dimension Picture



Installation Requirements

- Unrestricted straight pipe upstream 0 x DN
- No abrupt restrictions directly downstream of the meter

Order Example

MeiStream Plus, DN 50, T50, PN16 — Type, Size, Max. medium temperature, Nominal pressure
Drilling EN 1092 PN16 — Drilling pattern
Length 270 mm — Body length
eRegister / m³ — Register type / unit
with MID conformity — Approval standard

DIMENSIONS AND WEIGHT

Dimensions	Nominal Diameter		DN	40	50	50	50	65	65	80	80
	Overall length	L	mm	220	200	270	300	200	300	200	225
	Height	H	mm	120	120	120	120	120	120	150	150
	Height to pipe axis	h	mm	69	73	73	73	85	85	95	95
	Dismantling height	g	mm	200	200	200	200	200	200	270	270
Weight	Meter complete		kg	7.5	7.8	9.6	9.9	10.1	12.0	13.8	14.2
	Metrological module		kg	1.5	1.5	1.5	1.5	1.5	1.5	3.2	3.2
	Body		kg	6.0	6.3	8.1	8.4	8.6	10.5	10.6	11.0

Dimensions	Nominal Diameter		DN	80	80	100	100	100	150	150
	Overall length	L	mm	300	350	250	350	360	300	500
	Height	H	mm	150	150	150	150	150	177	177
	Height to pipe axis	h	mm	95	95	105	105	105	135	135
	Dismantling height	g	mm	270	270	270	270	270	356	356
Weight	Meter complete		kg	16.3	17.7	18.2	20.0	20.2	35.9	44.2
	Metrological module		kg	3.2	3.2	3.2	3.2	3.2	5.9	5.9
	Body		kg	13.1	14.5	15.0	16.8	17.0	30.0	38.3

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MeiStreamRF Plus infrastructure

The MeiStreamRF Plus 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

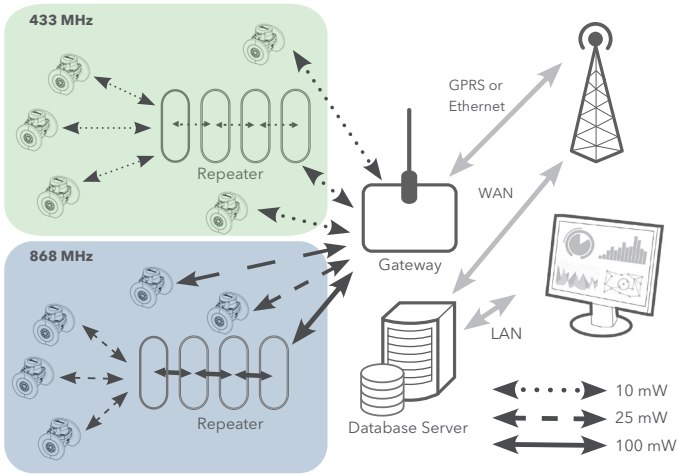
SIRT (Sensus Interface Radio Tool)

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

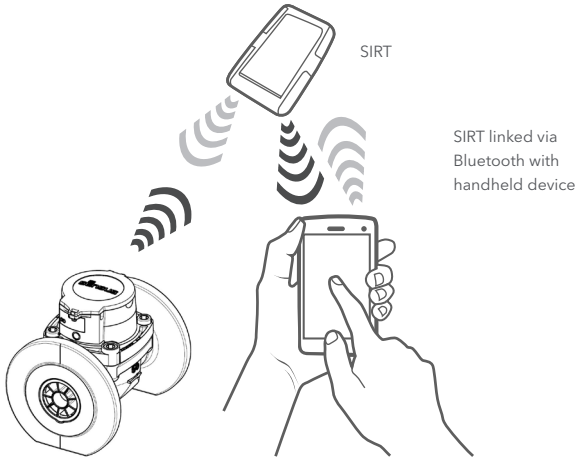
- Installation and readout of devices
- Reception of frequently transmitted radio messages from Sensus RF radio endpoints
- Request additional information from the radio endpoints
- Change configuration of radio endpoints (alarm, level settings...)

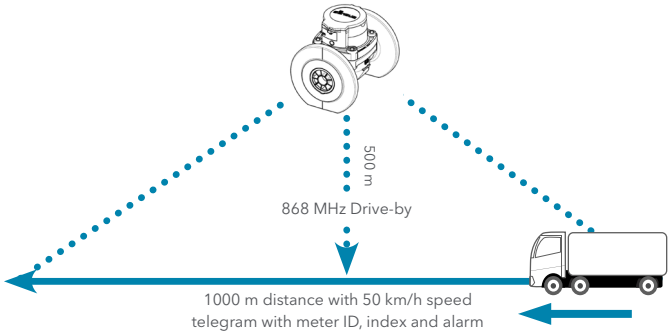
For further information please refer to the SensusRF brochure.

MeiStreamRF Plus Fixed radio network - Remote Access & Monitoring



Unidirectional/Bidirectional communication





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