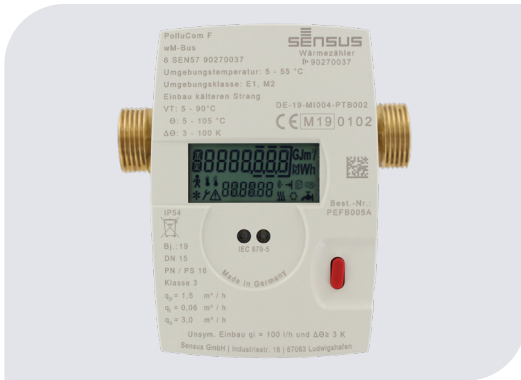


## PolluCom F

### Compact Heating / Cooling Meter



#### Application

- Any installation position except head down
- With integrated radio – cost-effective, legally compliant, certified radio function, and data protection processes
- Temperature range of the flow sensor from 5 to 90 °C, thus also ideal applicability for so-called „6/12 °C cooling systems“
- Optionally available with removable calculator for narrow installation sites: PolluCom F/S with ca. 0.3 m connection cable
- Standard optical interface
- Tariff function for differentiated consumption billing (e.g. in dependency on heating output)
- Password protected parameter selections right on the meter itself without additional peripheral equipment

The compact meter PolluCom F is used for measuring energy consumption in heating or cooling circuits. Due to its high-precision flow sensor the application range reaches from district heating transfer stations to consumption billing for individual apartments.

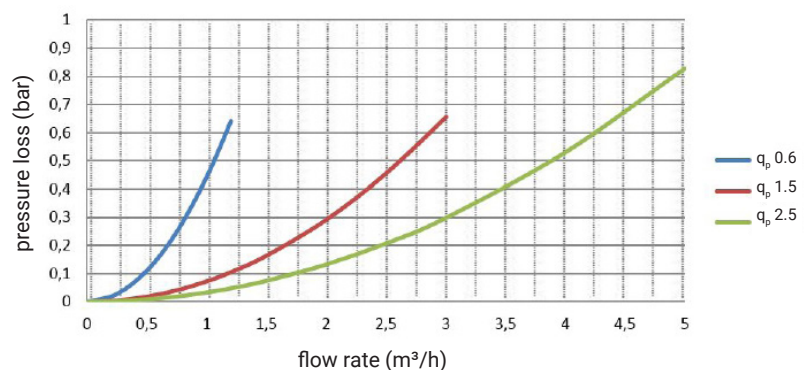
It is equipped as standard with integrated wM-Bus OMS Profile A Version 5 or Profile B Version 7.

Key management is regulated by Sensus through a GDPR and BSI certified customer portal.

The following modules for remote reading and data communication are available:

- M-Bus according to EN 1434-3 with unlimited number of readouts with configurable user M-Bus telegram
- Wireless M-Bus OMS Profile A Version 5 or Profile B Version 7 with two inputs for consumption meters with remote counting pulse output
- M-Bus according to EN 1434-3 with two inputs for consumption meters with remote reading pulse output
- Integrated data logger with 1200 hours, 120 days, 120 months, 500 events and 500 changes tracking
- Potential- and bounce-free remote reading pulses (1 kWh per pulse)

#### Head loss curve





## Standard version with integrated wM-Bus

### Wireless M-Bus OMS

The measuring device features integrated wireless M-Bus communication, with Mode T1 or Mode C1 selectable according to EN 13757 and OMS specification.

The wireless M-Bus is certified by the OMS group according to OMS specification, Volume 2 and Edition 4.0.2, to fully comply with the requirements of the EED regarding interoperability, radio function, and data protection.

C1 mode is used in conjunction with our Diavaso reading software for walk by/drive by (e.g. basic package).

T1 mode is used in conjunction with OMS-based stationary networks (e.g. AMR-2-AMI Bridge).


There are three different data packets for T1 and C1 mode:

- Long telegram data packet
- Short telegram data packet
- Very short telegram data package

Detailed information on the above-mentioned packages can be found in the PolluCom F communication interface manual.

The radio function is activated by one of the following steps:

- Manually by pressing the button of the PolluCom F for 5 seconds for initial activation
- Manually by setting a date
- Optically with the MiniCom 3 software
- Automatically after 100 liters of volume

After successful activation, the radio symbol  appears in the LC display.

## Communication options

For electronic meter reading and connection to building automation systems, PolluCom F offers a range of factory integrated communication options.

### M-Bus according to EN 1434-3

This option allows the meter to be read via its primary or secondary address with an M-Bus level converter (Maximum baud rate up to 38400. Among these, the baud rates of 300 and 2400 baud have automatic detection).

The secondary address is factory set with the eight-digit meter serial number. If necessary, both M-Bus addresses can be changed directly on the meter.

Thanks to the short update time for power and flow values of only 4 seconds, the PolluCom F is ideally suited for connection to district heating stations.

Suitable M-Bus reading software:

DOKOM CS (further information in the Dokom CS data sheet)

Suitable M-Bus readout hardware:

See data sheet for the M-Bus system

### wM-Bus or M-Bus with two inputs for external consumption counter

This option allows the connection of up to two external consumption meters with passive remote counter output, e.g., a cold water meter and a hot water meter. The consumption of these meters can then be read via the M-Bus interface of PolluCom F.

Required pulse length:	> 125 ms
Pulse input frequency:	< 3 Hz
Terminal voltage:	3 V

### Remote counting pulse

This option provides potential-free and bounce-free remote counter pulses that can be added up with a remote counter:

Pulse value:	1 kWh
Closing time:	125 ms
Bounce time:	none
Max. Voltage:	28 V CC or AC
Max. Current:	0.1 A

### Integrated data logger

PolluCom F has an integrated data logger with a recording capacity of 1200 hours, 120 days, 120 months, plus 500 events and 500 errors.

The following values are stored at a selected time interval (3...1440 minutes):

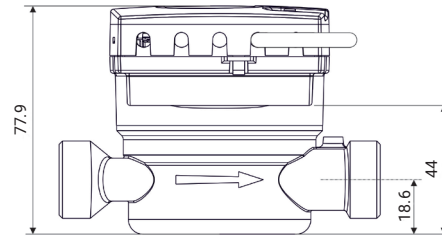
- Energy consumption (including tariff consumption) and, if applicable, the consumption of the two external meters
- Volume of heating or cooling medium
- Flow rate of the heating or cooling medium
- Heating or cooling capacity
- Temperature in the warmer pipe
- Temperature in the colder pipe
- Temperature difference
- Possible error hour

## Technical data

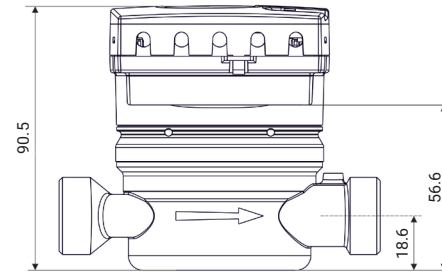
Meter size	q <sub>p</sub> 0.6	q <sub>p</sub> 1.5	q <sub>p</sub> 2.5
Nominal flow q <sub>p</sub> in m <sup>3</sup> /h	0.6	1.5	2.5
Minimum flow q <sub>i</sub> m <sup>3</sup> /h according to approval in m <sup>3</sup> /h	0.006	0.015	0.025
Accuracy class	2 or 3 acc. to EN 1434		
Ratio q <sub>i</sub> /q <sub>p</sub>	1:25, 1:50 or 1:100		
Maximum flow q <sub>s</sub> in m <sup>3</sup> /h (short-term)	1.2	3	5
Starting flow in m <sup>3</sup> /h (average value)	0.0015	0.0025	0.003
Temperature measuring range	5 ... 105 °C (-20 ... 105 °C for water-antifreezeliqids, not calibrated)		
Temperature difference range	3 ... 100 K		
Cut-out threshold	0.15 K		
Permissible temperature in the flow sensor	5 ... 90 °C		
Flow rate at 0.1 bar head loss in m <sup>3</sup> /h	0.5	1.2	1.7
Head loss at q <sub>p</sub> in bar	0.15	0.17	0.21
kvs-value (flow rate at 1 bar head loss in m <sup>3</sup> /h)	1.53	3.65	5.45
Permissible working pressure in bar	16		
Overall length in mm	110	110	130
Nominal diameter	R½"	R½"	R¾"
Connection thread	G¾B	G¾B	G1B
Connection cable length of split meters	PolluCom F/S C, FX/S C: ca. 0.3 m		
Weight in kg	ca. 0.8	ca. 0.8	ca. 0.86
Permissible environmental temperature	5 ... 55 °C		
Electromagnetic environmental condition	Class E 1		
Mechanical environmental condition	Class M 2		
Protection	IP 54		
Storage temperature	-20 ... 65 °C		
Relative humidity	< 90 %		
Battery lifetime for PolluCom F, FX, F/S, FX/S	8 years (for a standard configuration)*		

\* assumption based on 2 years storage time + 6 years active measuring mode.  
High ambient temperatures generally have a negative impact on the battery lifetime.

## Dimensional drawings



Compact device



Split device

