PolluTherm® F

Integrator for measuring heating and cooling energy

District Heat / Industry Heat
Commercial Heating / Cooling (HVAC)
Domestic Warm Water Generation / Charging Systems

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FEATURES

MID approval in class 2 per EN 1434

Application

In combination with our paired Pt 500 temperature sensors and the following flow sensors:

Model series AN130
Model series WPD FS/FSL
Model series MeiStream FS
Model series PolluFlow 90 °C/PN16,

The PolluTherm® calculator serves to determine energy consumption in heating or cooling circuits and connect via a wide range of communication options.

In regard to data communication and remote reading, PolluTherm® F offers one slot for retrofitting of various at any time with modules such as wired M-Bus, Modbus, wireless M-Bus (OMS), LoRaWAN or pulse output plus some pulse input choices.

Important Note:

Our flow sensor series PolluFlow 130 °C/ PN25 series requires our PolluTherm® or PolluWatt Duo II as PolluTherm® F only operates only with passive flow sensors, so without a voltage output to supply these active flow sensors.

Main Features

- Can be combined with all Sensus flow sensors not in need for an external voltage supply (passive sensors)
  We recommend: Choose PolluTherm® F for applications in combination with our ultrasonic flow sensor PolluFlow for all 90 °C / PN16 applications together with our ultrasonic compact meter PolluStat, as technically the calculators PolluTherm® F and PolluStat are the same.
- Standard possibility to connect temperature sensors Pt 500 in two-wire technology.
- Mounting space to retrofit one communication option.
- Power supplied by a 3V battery as standard.
  Optional external 230V / AC or 24V / AC power supply.

Recommendation: PolluTherm® F + PolluFlow

PolluTherm® F with Ultrasonic flow sensor **PolluFlow**

Ultrasonic flow sensor threads 5-90°/PN16 q_p 0.6 to q_p 10 (G¾" for R½" to G2" for R1½", DN15 to DN40)

Ultrasonic flow sensor flange 5-90°/PN16 q_p 0.6 to q_p 60 DN15 to DN100

sensus
a xylem brand

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Technical Data

CALCULATOR

Temperature range medium heat Temperature range medium cooling	°C °C	0 to 150 0 to 50
Ambient temperature in the field Transport temperature Storage temperature	°C °C	5 to 55 at 95 % relative humidity -25 to 70 (for maximal 168 h) -25 – 55
Temperature difference range ΔΘ heat	K	3 to 100
Temperature difference range ΔΘ cooling	K	-3 to -50
Minimum temperature difference ΔΘ heat	K	> 0.05
Minimum temp. difference ΔΘ cooling	K	< -0.05
Minimum temperature difference $\Delta\Theta_{HC}$ heat / cooling	K	> 0.5 / < -0.5
Resolution temperature	°C	0.01
Measuring cycle energy in normal operation	s	60 with a lifetime of 10 years; 30 with a lifetime of 6+1 years (optional); 2 using a power pack
Pulse values, optional	l/Imp	1; 10; 100; 1,000
Display		LCD – 8 digits + special characters
Decimal places		Up three digits: 00,000.**000**
Units		MWh, kW, m³, m³/h (kWh, GJ); Unit can be set at the display as long as consumption is still ≤ 10 kWh
Interfaces		Standard: optical interface (M-Bus protocol) Optional: wireless M-Bus; wireless M-Bus + 3 pulse inputs; M-Bus; M-Bus + 3 pulse inputs; 1 pulse output; 2 pulse outputs; Modbus RTU; LoRaWAN
Power supply		Standard: 3 V lithium battery Option: 230V/AC or 24V/AC external power supply
Estimated lifetime	years	10 (No Com.-Options or 1 pulse output); With Com.- options 7+1
Data storage		Nonvolatile memory
Reading dates		selectable yearly reading date; 15 monthly and semimonthly values: via display or wireless M-Bus (compact mode); 24 monthly and semimonthly values: via optical interface or M-Bus
2 tariff registers		Can be custom-set individually; adding up energy or time
Storage of maximum values		Flow, power and temperatures (inlet, outlet, ΔΘ), plus the respective maximum values of the last 15 months
Protection class		IP54
CE		Yes
Mechanical / electromagnetic class		M2 / E2
Pulse input interface		Microcontroller CMOS input class IB according to EN 1434-2:2015 (D)
Medium		Standard: Water without admixtures Optional: Water with glycol percentage at a rate of 20 %, 30 %, 40 % or 50 % (* type and concentration of glycol can be set at any time)
Weight	kg	0.350
Length x Width x Depth	mm	L150 x W130 x D35

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FLOW SENSOR REQUIREMENTS

Class of pulse output device (acc. to EN 1434-2:2015)		OA (reed contact); OC (open collector)
Maximum input frequency	Hz	10
Pulse length and pulse pause		at least 25 ms pulse length; at least 50 ms pulse pause

TEMPERATURE SENSOR REQUIREMENTS

Platinum precision resistor		Pt 500
Temperature Sensor length of cables (unshielded)	m	Up to 10 m in 2-wire technique
Installation		Direct mounted or in temperature pockets

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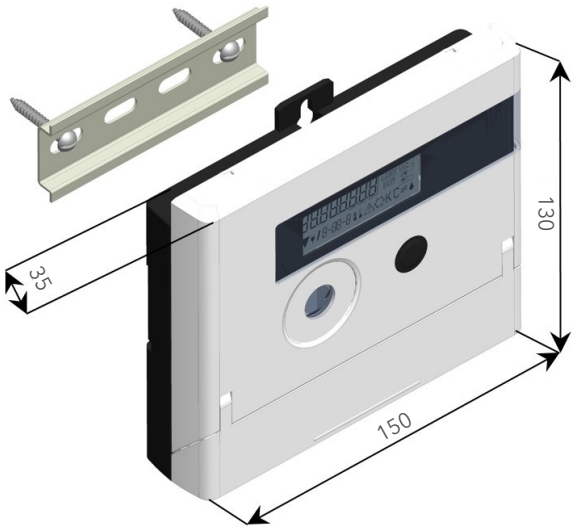
Ultrasonic flow sensor flange 5-90°/PN16 q_p 0.6 to q_p 60
DN15 to DN100

Dimensions



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