



SS2U

Energy meter with ultrasonic flow meter

Range of compact energy meters with ultrasonic flow meter, intended for heating or cooling.

SS2U is a range of compact energy meters featuring a built-in ultrasonic flow meter, intended for heating or cooling.

Function

The menu system, available in the display, makes it possible to read a large number of parameters, such as heat and cold consumption, total energy spent on heating and cooling, temperatures along with current energy consumption.

Installation is normally in the return pipe.

Connection

SS2U comes equipped with two PT1000 temperature sensors. The resistors for the sensors are composed of platinum and maintain a standard of DIN IEC 60751.

The return temperature sensor is normally integrated into the flow meter while the supply temperature sensor is connected via a cable.

High reliability

The meter offers reliable and accurate performance over long periods of measurement.

Mounting

The temperature sensor can be mounted directly in the medium or in sensor pockets. The compact design of the energy meter allows it to be mounted even in narrow spaces.

More installation accessories are also available such as ball valves with pocket for temperature sensors or pipe connection kits etc. See separate accessories on page 3.

Short facts about SS2U

- Flow measurement without any moving parts
- Nominal flow is 100 % overloadable
- Removable calculator
- Low pressure drops
- Available with M-Bus, pulse output or M-Bus and 2 pulse inputs
- Back flow detection

Flexible design

Due to the multiple combination options offered by its components, meters in the SS2U range can easily be adapted to suit a large number of individual requirements. Models with M-Bus, pulse output or M-Bus + pulse input are available.

Energy meters with M-Bus have a default address of "0", which is not a valid primary communication address. This primary address can be changed by searching for secondary addresses (i.e., the ID number of the meter). For more information on different options, see ordering examples and item number structure overleaf.

Ordering code selection table

Options	SS2U				
Flow (thread on meter body) (DN) (length of flow meter)	0.6 m ³ /h (G3/4") (DN15) (110 mm)	15-0,6 ¹			
	1.5 m ³ /h (G3/4") (DN15) (110 mm)	15-1,5			
	2.5 m ³ /h (G1") (DN20) (130 mm)	20-2,5			
	3.5 m ³ /h (G1") (DN20) (130 mm)	20-3,5			
	3.5 m ³ /h (G1 1/4") (DN25) (150 mm)	25-3,5			
Type of measurement and installation point	Heating, installation of flow meter in return pipe (MID approval)		-	HR	
	Cooling ² , installation of flow meter in return pipe		-	CR	
Communication interface	M-Bus				- M
	M-Bus with 2 pulse inputs				- MPI
	Pulse output for energy				- PO

¹ 0,6 is only available for heating, not for cooling

² National German approval.

If any further requirements or options are needed, please contact Regin.

Ordering code table explanation

Example 1:

Desired application: Meter with 1.5 m³/h. Heating, installation in return pipe. M-Bus.

Resulting item ordering number: SS2U15-1,5-HR-M

Possible accessories needed:

- KH-³/₄, 2pcs, ball valve connection for both sides of the meter, alternatively brass fittings VSR-¹/₂
- KH-S-³/₄, 1pc, ball valve with temperature sensor pocket for supply flow

Example 2:

Desired application: Meter with 3.5 m³/h, DN25. Cooling, installation in return pipe. M-Bus + pulse input.

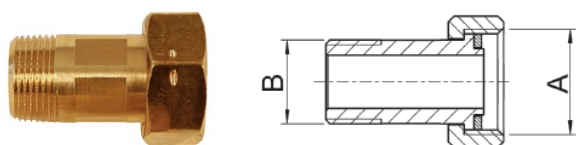
Resulting item ordering number: SS2U20-3,5-CR-MPI

Possible accessories needed:

- KH-1¹/₄, 2pcs, ball valve connection for both sides of the meter or brass fitting VSR-1
- KH-S-1¹/₄, 1pc, ball valve with temperature sensor pocket for supply flow

Accessories

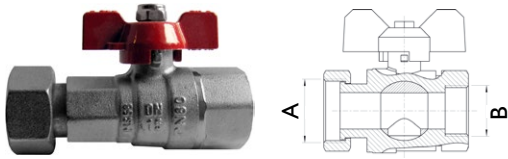
Brass threaded fittings with coupling ring and gasket



Meter DN	Connection A	Connection B	Compatible with	Article number
15	G ³ / ₄	R ¹ / ₂	q _p 0.6/1.5 m ³ /h	VSR- ¹ / ₂
20	G1	R ³ / ₄	q _p 2.5/3.5 m ³ /h	VSR- ³ / ₄
25	G1 ¹ / ₄	R1	q _p 3.5 m ³ /h	VSR-1

Accessories, cont.

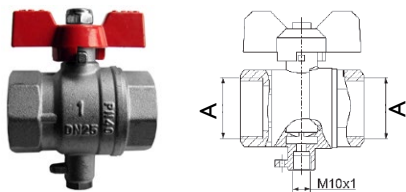
Ball valves with coupling ring and gasket



Meter DN	Connection A	Connection B	Compatible with	Article number
15	G $\frac{3}{4}$	Rp $\frac{3}{4}$	q _p 0.6/1.5 m ³ /h	KH- $\frac{3}{4}$
20	G1	Rp1	q _p 2.5/3.5 m ³ /h	KH-1
25	G1 $\frac{1}{4}$	Rp1 $\frac{1}{4}$	q _p 3.5 m ³ /h	KH-1 $\frac{1}{4}$

Accessories, cont.

Ball valves with installation point for a temperature sensor (sockets M10x1)



Meter DN	Connection A	Compatible with	Article number
15	G $\frac{3}{4}$	q _p 0.6/1.5 m ³ /h	KH-S- $\frac{3}{4}$
20	G1	q _p 2.5/3.5 m ³ /h	KH-S-1
25	G1 $\frac{1}{4}$	q _p 3.5 m ³ /h	KH-S-1 $\frac{1}{4}$

Forward flow adapter with gasket, for direct mounting of temperature sensor in T-piece



Connection A	Article number
G $\frac{1}{2}$, M10x1	VAD- $\frac{1}{2}$ "
G $\frac{3}{8}$, M10x1	VAD- $\frac{3}{8}$ "

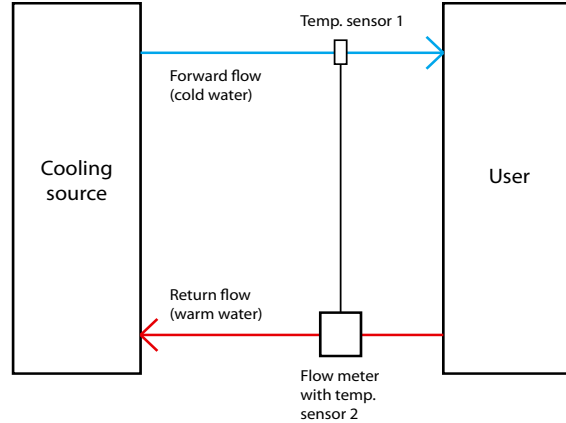
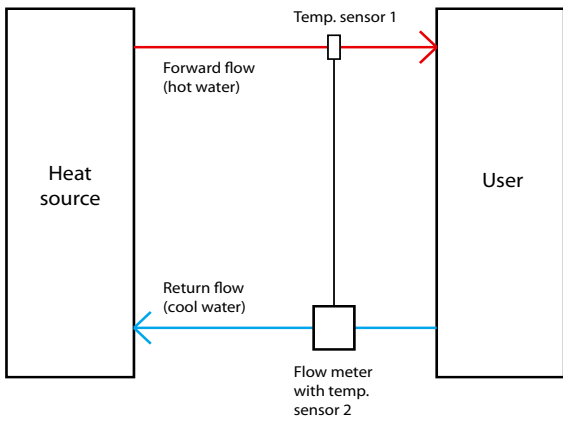
Threaded adapters to replace flow meter temporarily or permanently



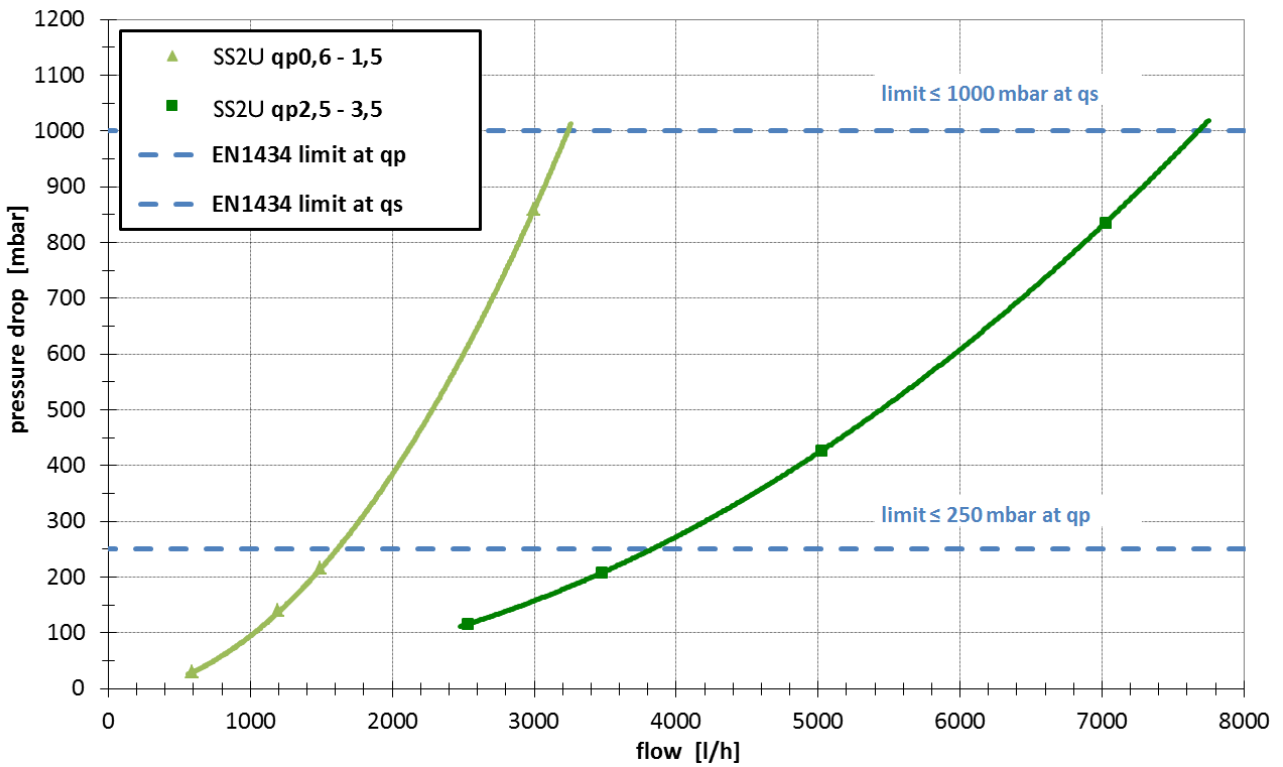
Meter DN	Connection A	Installation length L	Compatible with	Article number
15	G $\frac{3}{4}$	110 mm	q _p 0.6/1.5 m ³ /h	PS-110- $\frac{3}{4}$
20	G1	130 mm	q _p 2.5/3.5 m ³ /h	PS-130-1
25	G1 $\frac{1}{4}$	150 mm	q _p 3.5 m ³ /h	PS-150-1 $\frac{1}{4}$

Installation example, heating

Installation example, cooling



Pressure drop curves



Technical data

Calculator

Power supply	3V lithium battery, min. 6+1 years
Temperature range	1...105°C
Temperature difference limits	3...100 K
Minimum temperature difference	>0.5 K
Temperature resolution	0.01°C
Measurement frequency at qp	4...60 s
measurement cycle flow	>2 s
Ambient temperature	5...55°C
Storage temperature	5...55°C
Protection class	IP54
Memory	Non-volatile memory, data stored once daily
Reading dates	15 monthly values via display, annual billing date selectable; 18 monthly values
Interfaces	M-Bus, pulse output or M-Bus with 2 pulse inputs
Display	LCD, 8 digits + special characters
Display heat energy	3 decimal places
Units	kWh, MWh, GJ, l, m ³ , m ³ /h, l/h, kW, MW



Measuring Instruments Directive: This product conforms to the requirements of the Measuring Instruments Directive 2004/22/EC through product standards OIML R75, EN 1434, EN 60751, EN 14154 and PTB-Richtlinie K 7.1.

Low Voltage Directive (LVD) standards: This product conforms to the requirements of the European Low Voltage Directive (LVD) 2006/95/EC through product standards EN 61140, VDE 0140-1, EN 60529 and DIN 40050.

EMC emissions & immunity standards: This product conforms to the requirements of the EMC Directive 2004/108/EC through product standards EN 13757-2, EN 13757-3 and DIN 12900-1.

RoHS: This product conforms to the Directive 2011/65/EU of the European Parliament and of the Council.

Temperature sensors

Platinum precision resistor	PT1000, DIN IEC 60751
Sensor diameter	Ø5.0 mm
Sensor cable length	1.5 m

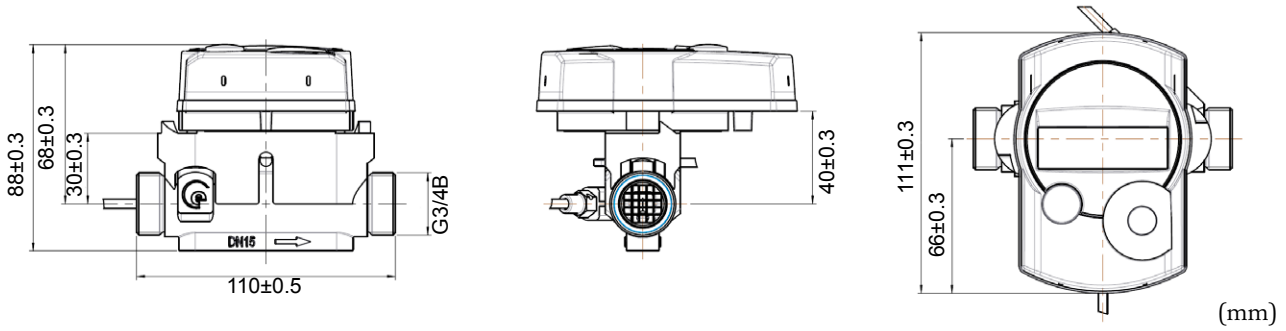
Flow meter

Sizes nominal flow qp (m ³ /h)	0.6	1.5	2.5	3.5	3.5
Low flow threshold (l/h)	6	6	12	17	17
Minimum flow qi (l/h)	12	15	25	35	35
Maximum flow qs (m ³ /h)	1.2	3.0	5	7	7
Pressure drop Δp at q _p /q _s	0.03/0.15	0.21/0.87	0.115/0.425	0.21/0.835	0.21/0.835

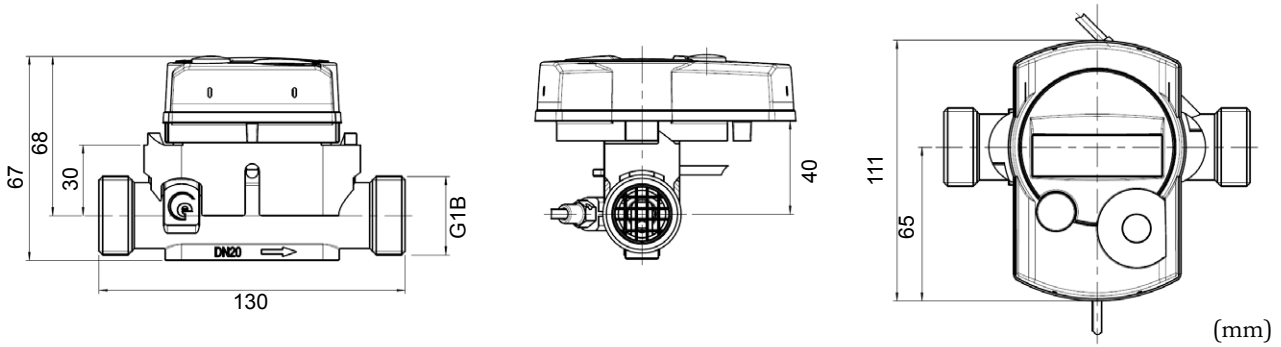
Media	Water (only permissible media)
Measuring method	Ultrasonic time-of-flight
Dynamic range qi/qp [-]	1:100
Pressure rating	PN16
Mounting position	Horizontal or vertical
Low flow threshold values	12, 17 l/h
Temperature range	15...90°C
Accuracy class according to MID	Class 2
Point of installation	Return flow

Dimensions

DN 15 - 3/4"



DN 20 - 1"



DN 25 - 1 1/4"

