

► Brunata HGS-IV integrator

Prepared for remote reading

Approved for energy metering together with volume meter with pulse output

Characteristics

- Pulse input 0.1 – 1000 litres/pulse
- High accuracy
- Display with backlight ensuring easy and accurate reading
- Monitoring and remote reading via databus or direct connection LON / MBus / RS232
- Pulse output for volume and energy
- Data back-up in EEPROM
- Recording of maximum values for flow, Δt and return temperature
- Analogue output available
- History menu available
- Tariff according to power, Δt and return temperature
- Correction factor for glycol-containing water
- Combined meter for heating and cooling
- Approved according to OIML R75, class 4, TS no. 27.01.133 and EN1434, class 2 TS no. 27.01.133
- Environmental approval in accordance with best class, EN1434, class c

Further information

The HGS-IV energy integrator meter is approved for registration and billing of district heating and heat energy in other waterborne heating systems. It is also used for the metering of cooling energy and is available as combined meter for heating and cooling with two separate energy registers. The meter is used together with an approved volume meter and consists of a flow sensor, paired Pt 500 temperature sensors and an advanced microprocessor-based electronic unit for wall mounting.

The meter is approved for connection with Brunata HGP volume meter and is furthermore designed for use with any volume meter with active or passive pulse outlet. Advanced software allows for the configuration of a very broad measuring range, see table.

Normally, the integrator comes with paired temperature sensors. They can, however, be used with all approved and verified temperature sensors of the type Pt100 or Pt500.

The meter has a logically structured menu and every month it records maximum values for flow, power and Δt with information about date and time. The advanced version offers an extra tariff register allowing for sum-



ming up according to time, flow, temperature or supplied energy. Further options are: logging of historic data in the programmable menu, pulse collection and display of consumption from other water meters, district heating meters, electricity meters etc.

Accessories

- Communication module RS232, MBus or LON
- 4-20 mA analogue output HG-F/I-420/SD in separate plastic box
- Handheld terminal for external reading, Brunata PSION

Pulse value [l/puls]	Max reading [m ³ /h]	Min. reading [l/h]
0.1	6	0.2
0.25	15	0.5
1	60	2.0
2.5	150	5.0
10	600	20
25	1,500	50
100	6,000	200
250	15,000	500
1,000	60,000	2,000

Brunata is a 100 % Danish owned company. We have more than 85 years of experience within developing and producing heat cost allocators and heating accounts. Brunata als has implemented a quality system in accordance with EN ISO 9001. Please contact us for further information on our products!

Momentary flow and analogue signal

To obtain the most correct registration of flow, HGS-IV is designed as a fast-reacting system that reacts rapidly on changes in flow speed.

This means that measurement is not suppressed and thus able to overshoot at sudden flow speed changes.

Overshoot may cause variations in the display as well as the analogue signal.

Meter types and dimensions

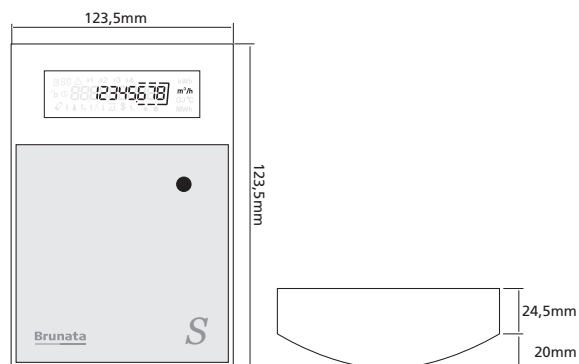
Versions: -184 is the standard version showing peak values in the user menu

-188 is the advanced version with tariff function

-185 is the combined heating and cooling meter

Options: Menu with 24 accounting periods

Pulse collector for other meters



Technical data

Supply / Consumption	230 or 24 Volts AC/3 Watts
Display value	999'999'999
No. of decimals	Max. 3
Temperature difference	1 – 110 K
Temperature resolution	0.01 °C
Temperature sensors	Pt100 or Pt500
Accuracy	EN1434, class 2
Information and error registration	Present error and date/time as well as previous error with error type and date. Duration in hours with erroneous function is recorded.
Protection class	IP44
Surrounding temperature	5 – 55 °C
Data protocol	Mbus protocol
Data communication	Insertion module MBus, RS232 or Lonworks
Pulse output	Potential free, open collector, max 20 mA, 28 V
Other output	5 V DC, HF signal for test equipment
Pulse input from volume mtr	Pulse length > 30 ms, interval >30 ms. Choose between active or passive pulse signal course, 48 V max
Pulse input 2	External meter (1 unit), active or passive pulse signal course, 48 V max
Display functions	See separate data sheet

Temperature sensors

Pocket sensors	Type E, paired Pt500, diameter 6mm in pocket sensor R½"x85mm. Temperature range 0-150 °C Cable length 1.5 m
Alternative pocket length	60, 120 and 210 mm
Alternative cable length	3 – 5 – 8 m
Direct sensors (option)	Type DS, paired Pt500, diameter 3.3 with R½" bushing (2 units). Temperature range 0-150 °C Cable length 1.5 – 3 – 5 – 8 m

Ordering code

HGS-IV-ZZZ / ABCDEF

ZZZ: Menu/display	A: Power supply:
184 : Standard version	1 : 230 VAC
185 : Heating and cooling meter	2 : 240 VAC
188 : Tariff meter	B: Backlight in display:
	B : With/-: Without
	C: External meters:
	0 or 1
	D: Communication module:
	M -Bus / L on-Works /
	RS232 / -: None
	E: No. of accounting periods:
	0 / 24
	F: Programmed for G lycol