

## ► Brunata HGP – static electronic energy meter type SIV

Type approved for energy billing,  
prepared for remote reading

### Characteristics

- Measuring range 1:1000, type approved range 1:250
- High accuracy and operation reliability
- Legible display with backlight ensuring easy readings
- Insensitive to impurities, overload not possible
- Flow sensor with low pressure drop, vertical and horizontal mounting
- No requirements for straight length of pipe before and after the flow sensor
- Monitoring and remote reading through databus or direct line LON / M-Bus / RS232
- Data are secured by back-up in EEPROM
- Registration of energy supplied and mean temperature
- Available as combined heat and cooling meter
- Available as glycol meter
- Type approval certificates OIML R75, class 4 (flow sensor) and EN 1434 class 2 (electronics)



### Further information

The HGP-SIV energy meter is approved for registration and billing of district heating and heat energy in other water-borne systems. It is also used for metering cooling energy and is available as combined heat and cooling meter with two separate energy counters. The meter consists of a flow sensor with separate electronics box, paired Pt 500 temperature sensors and an advanced microprocessor based electronics unit for wall mounting.

The Brunata HG-meter is fully electronically. The measuring principle is based on Faraday's magnetic induction principle. The meter has a straight passage and contains no moving parts that may be fretted or fouled. The water passes through a well-defined lining of PTFE (teflon). The water flow induces a voltage signal across the stainless, polished electrodes to the electronic unit. Overloading is not possible; the upper limit for maximum flow is only limited by the pump capacity. The flow sensor can be mounted vertically as well as horizontally.

The meter has only one push button and a logically-structured menu, which is freely programmable with regards to sequence and placing. Standard version 184 registers maximum values for effect, flow,  $\Delta t$ , supply-pipe and return-pipe temperatures with information about time and date every month. In addition, version 188 offers tariff registration according to different criteria, i.e. registration of induced energy. All versions allow for the logging of historic data in the programmable menu (24 periods).

The HGP-SIV meter has pulse output for energy and volume. Apart from the metering of energy it can also work as pulse collector with display readings on consumption from other meters, i.e. water meters, electricity meters etc.

### Order codes

#### HGP-SIVxx-yy-zzz / ABCDEF

xx: Permanent flow	A: Power supply:
yy: Flow sensor dimension, see table	1: 230 VAC
zzz: Menu/display:	2: 24 VAC
184: Standard with peak values	B: Backlight in display:
185: Combined heat/cooling meter	B: With/without
188: Tariff meter	C: External meters:
	0, 1 or 2
	D: Communications module:
	M-Bus / LonWorks / RS232
	/ - none
	E: No. of accounting periods:
	0 / 6 / 12 / 24
	F: Specials
	G: Programmed for Glycol
	P: PN25 Flow sensor
	H: High temperature version

Options: History menu with 24 periods  
Pulse collector for other meters  
Communications module RS232, M-Bus, LON  
Analogue output (separate plastic box) 4-20 mA  
Programmed for Glycol  
Hand terminal for external reading

*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 a/s has implemented a quality system in accordance with EN ISO 9001. Please contact us for further information on our products!*

## Technical data

		HGP 15	HGP 20	HGP 35	HGP 65	HGP 90	HGP 150	HGP 250	HGP 400	HGP 600
Max. flow (q <sub>v</sub> )	m <sup>3</sup> /h	16.5	22	38.5	71.5	99	165	275	440	660
Permanent flow (q <sub>p</sub> )	m <sup>3</sup> /h	15	20	35	65	90	150	250	400	600
Minimum flow (q <sub>l</sub> )	l/h	60	80	140	260	360	600	1000	1600	2400
Start flow	l/h	15	20	35	65	90	150	250	400	600
Flow sensor dimension		DN40*	DN40*	DN40*	DN50	DN65	DN80	DN100	DN125	DN150
		-	DN50	DN50	DN65	DN80	DN100	DN125	DN150	-
		-	-	DN65	DN80	DN100	DN125	DN150	-	-

\* Also valid for version 39, thread connection G2B

## Flow sensor dimensions

Flange	L [mm]	H [mm]	B1 [mm]	B2 [mm]	Weight [kg]
G2B*	300	164	116	186	7
DN40	300	164	116	186	9
DN50	270	164	116	186	11
DN65	300	194	118	216	14
DN80	300	194	118	216	16
DN100	360	268	152	286	26
DN125	360	268	152	286	34
DN150	500	268	152	286	41

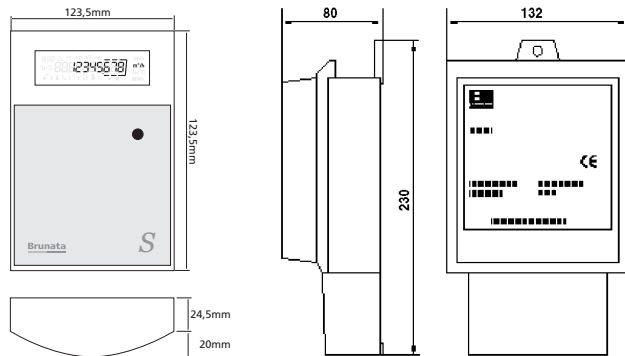
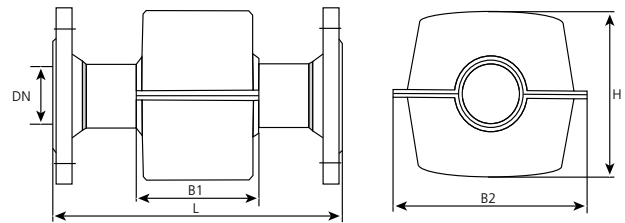
\* Thread connection G2B

## Technical data

Supply/Consumption	230 or 24 Volts AC/3 Watts
Dynamic measuring range	1:1000, approved to 1:250
Display value	999'999'999
No. of decimals	Max. 3
Temperature difference	1 – 110 K
Temperature digit	0.01 ° C
Temperature sensors	Pt100 or Pt500 (standard)
Accuracy	EN1434, class 2
Info 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	Electronics: IP44, flow sensor: IP54
Surrounding temp.	5 – 55 °C
Data communication	M-Bus protocol
Data modules	RS232, M-Bus, LON-works
Pulse output, volume	Potential free, open collector, max 20 mA, 28 V. Pulse value corresponds to the last significant digit on the display
Other output	5 V DC, HF signal for test equipment
Pulse output	External pulse meters (2 units), active or passive pulse signal course, max. 48V
Display functions	See separate data sheet
Pressure class	PN16, option PN25
Liquid temperature	T <sub>max</sub> = 120 °C, option 150 °C
Installation requirements	None
Conductivity requirements	>1mS/m [10µS/cm]
Cable length	Standard 3 m - 8, 10, 15, 20 and 25 m optional

## Temperature sensors

Pocket sensor	Type E, paired Pt500, diameter 6 with fixed silicone cable in brass pocket sensor
Standard size	R½ " x 85 mm (DN40-50) R½ " x 150 mm (DN65-100) R½ " x 210 mm (DN125-150)
Temperature range	0-150 ° C
Cable length	Standard 3 m – 5 and 8 m optional For longer cables, head sensor with special cable is used



## Head loss graph

