

► Brunata HGQ and HGS – static electronic volume meter

Approved for heating systems,
prepared for remote reading

Characteristics

- Measuring range 1:1000, approved for 1:250
- High accuracy and operation reliability
- Easily read display with backlight ensuring easy reading
- Insensitive to impurities, overload not possible
- Flow sensor with low pressure drop, vertical as well as horizontal installation
- No requirements for straight pipe distance before and after flow sensor
- Monitoring and remote reading via databus or direct connection LON / Mbus / RS232
- Data backup in EEPROM
- Approved according to EN 1434, class 2, TS no. 27.01.090
- Environmental approval in accordance with best class, EN 1434 class C

Further information

The HGQ and HGS volume meter is approved for use in waterborne heating systems. It is available as a complete meter with display or as water meter sub-assembly without display but including serial and/or pulse output. The meter consists of a flow sensor and an advanced micro-processor-based electronic unit for wall mounting.

The Brunata HG-meter is fully electronic and the measuring principle is based on Faraday's magnetic induction principle.

The meter has a straight passage and contains no moving parts which can be worn or choked up. The water passes through a well-defined lining of Polysulfone / Ultrason S. 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's capacity. The flow sensor can be installed vertically as well as horizontally.

Versions with display have only one operating key, a logically structured menu and are programmable with regards to sequence and placing. Version 174 registers maximum flow values with information about time and dates every month. In addition to this, version 178 also has tariff registration according to either maximum flow or time. Both versions allow for the logging of historic data in the programmable menu (24 accounting periods).

Both versions have pulse output for volume quantity. It can also work as a pulse collector with display readings on consumption from other meters, i.e. water meters, electricity meters etc.



Version 107 has no display. It has pulse output, and remote reading of information is possible due to an integral communication card. Version 207 only has pulse output.

Ordering information

HGxx-Ry-zzz / ABCDE

xx: Meter size: Q1, Q3, S5, S9, S16	A: Power supply: 1: 230 VAC 2: 24 VAC
y: Connection: R0, R3, R4, R6	B: Backlight in display: B: with/-: without
zzz: Menu/display: 174: Standard meter 178: Tariff meter 107: Meter without display, serial output 207: Meter without display, pulse output	C: External meters: 0, 1 or 2 (pulse values stated)
	D: Communication module: M-Bus / LonWorks / RS232 / - None
	E: No. of accounting periods: 0 / 6 / 12 / 24

Options/ : Menu with 24 accounting periods
acesories : Pulse collector for other meters
Communication module RS232, M-Bus, LON
Analogue output (separate box) 4-20 mA
Handheld terminal for outdoor 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 als has implemented a quality system in accordance with EN ISO 9001. Please contact us for further information on our products!

Technical data

		HGQ1	HGQ3	HGS5	HGS9	HGS16
Upper flow limit	m ³ /h	1.8	4.5	7.5	13.5	24
Max. flow (q _v)	m ³ /h	1.5	3.6	6	10.8	19.2
Permanent flow (q _p)	m ³ /h	1.2	3	5	9	16
Flow at Δp=10kPa	m ³ /h	0.9	2	3	5.5	10
Minimum flow (q _{min})	l/h	4.8	12	20	36	64
Lower flow limit	l/h	1.2	3	5	9	16

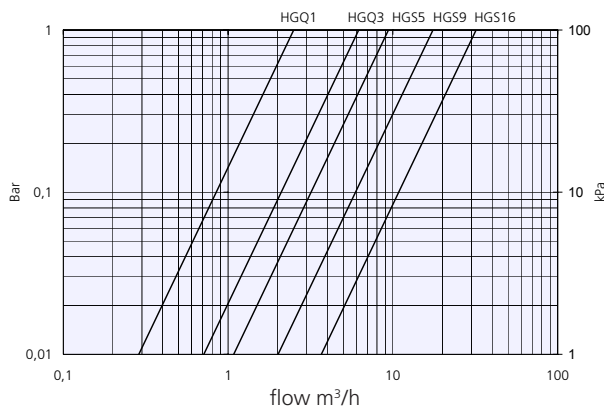
Meter types and dimensions

Dimension and overall length			Code for flow sensor dimensions				
D [mm]	Thread [Inches]	Overall length L [mm]	HGQ1	HGQ3	HGS5	HGS9	HGS16
20	G¾B	110	-R0-	-R0-			
25	G1B	105	-R2-	-R2-			
25	G1B	130	-R3-	-R3-			
25	G1B	190	-R4-	-R4-	-R4-	-R4-	-R4-
32	G1¼B	260			-R6-	-R6-	-R6-

Alternative connecting dimensions

Dimension wanted	Thread/ Flange	Meter type	Connection	Connecting dimensions for each mtr
G¾B x 130	Thread	-R0-	Adapter	1
G¾B x 165	Thread	-R0-	Adapter	1
G1B x 220	Thread	-R4-	Adapter	1
G1¼B x 260	Thread	-R4-	Adapter	2
G2B x 300	Thread	-R6-	Adapter	2
DN25 x 260	Flange	-R4-	Loose flange	2
DN32 x 260	Flange	-R4-	Loose flange	2
DN40 x 300	Flange	-R4-	Loose flange	2
DN50 x 270	Flange	-R4-	Loose flange	2

Pressure loss curve

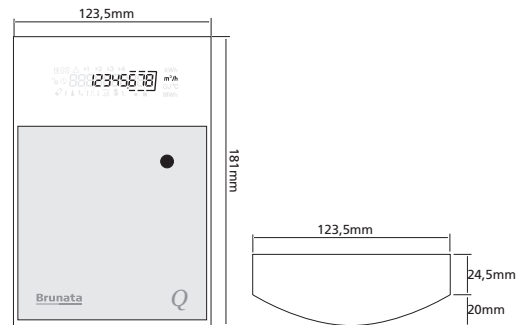


Technical data

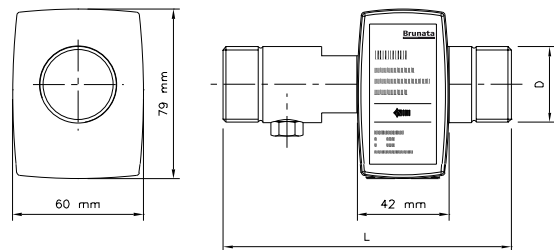
Supply / Consumption	230 or 24 Volts AC/3 Watts
Dynamic measuring range	1:1000, approved to 1:250
Display value	999'999'999
No. of decimals	Max. 3
Accuracy	EN1434, class 2
Information and error registration	Present error and date/time as well as previous error with error type and date. Duration in hours with erroneous function is recorded (hour counter)
Protection class	Electronics: IP44, flow sensor: IP54
Surrounding temperature	5 – 55 °C
Data communication**	Mbus protocol
Pulse output	Potential free open collector, max 20 mA, 28 V
Other output	5 V DC, HF signal for test equipment
Pulse input**	External pulse meters (2 units), active or passive pulse signal course, 48 V max. See separate data sheet
Display functions	PN16
Pressure class	T _{max} = 120 °C
Liquid temperature	None
Installation requirements	> 2 mS/m [20 µS/cm]
Conductivity requirements	Standard 1.5 meter, 3, 5 and 8 mtr. optional
Cable length	

* not version 107 and 207 ** not version 207

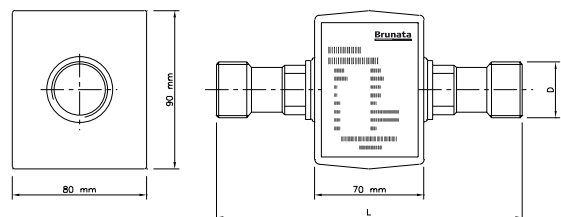
Dimensional outlines



Electronic HGQ and HGS



Flow sensor HGQ1 and 3



Flow sensor HGS5, 9 and 16