

► Brunata Analogue Converter – Type HG-420 and HG-420HF for Pulse Output Meters

Characteristics

- High accuracy
- For pulse output meters
- Programmable for all normal pulse outputs
- Programmable measuring range
- Active output signal
- Short circuit fuse
- Low power consumption
- 4-20 mA analogue signal
- Can be altered to voltage output 2-10V
- 230V output
- CE-certified



Yderligere information

The Brunata analogue converter for pulse output meters is available in two versions:

1. HG-420 for meters with normal pulse outlet.
2. HG-420HF for rapid pulses from meter types HGR and HGP.

Type HG-420 converts pulse signals from a meter (electricity, water or energy meter) to an 0-20 or 4-20 mA analogue signal. The converter can be connected to any HG meter or any relay or open collector pulse output from another meter. The converter converts a given frequency to a current. The HG-420 input frequency can vary between 0.00002 Hz and 4 Hz, i.e. from 1 pulse per 833 minute to 4 pulses per second. HG-420 should not be used for regulation purposes at flows at the lower end of the meter's measuring range.

Type HG-420HF uses rapid pulses from the meter types HGR and HGP and very quickly picks up even sudden flow changes. This version is therefore very suitable for regulation purposes.

The analogue converter box is designed for wall-mounting and the 230V output acts as the meter's voltage supply (if the analogue box is provided for 24V voltage supply, the output is also 24V). The accompanying cable,

which must not be extended, is connected to the meter's data outlet. The analogue signal and the meter's data output are galvanically separated.

The converter's output is active, i.e. external DC voltage supply is not required.

The output signal is updated after the meter's measuring cycle and will therefore show the meter's current flow. To counteract random variations, the signal is averaged over 4 measuring periods by a jumper.

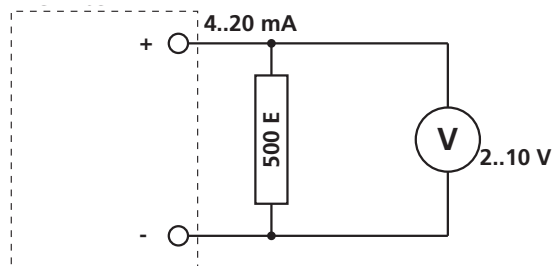
The converter is preset to the meter's full flow range, so that 4 mA corresponds to the minimum flow and 20 mA to the meter's permanent flow. However, type HG-420HF is also available in special versions with other values for 20 mA, see table overleaf.

Other analogue converters

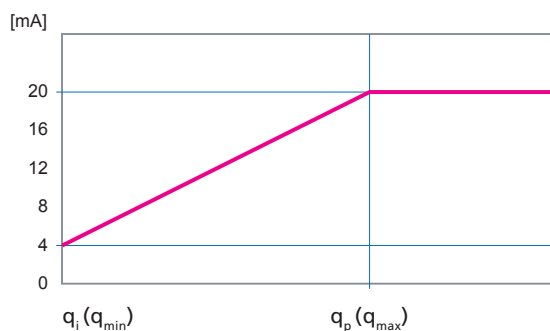
Type HG-420SD uses the serial output signal from recent Brunata meters such as HGQ, HGS or HGW, see separate data sheet.

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By mounting a constant resistance above the output terminals, the output signal can be converted to a voltage signal, e.g. 2..10V, see drawing.



The overload protection ensures that the output signal remains constant if the preset maximum frequency is exceeded, see diagram.



Technical Data

Technical specifications HG-420:

Terminal voltage	230 Volt AC, 50 Hz (option: 24 Volt AC)
Power consumption	< 2 Watt
Protection	Electronic short circuit fuse
Resolution	12 Bit
Memory	EE-prom
Safety	100 % galvanic separation
Max. output voltage	12 Volt at 600 ohm
Max. input frequency (20mA)	4 Hz
Max. input frequency (0/4mA)	0.00002 Hz (1 pulse every 833 min)
Pulse outputs	Potential free open collector max. 20 mA, max. 28 V.
Pulse time	5 – 200 ms (150 ms standard)

Technical specifications HG-420HF:

Terminal voltage	230 Volt AC, 50 Hz (option: 24 Volt AC)
Power consumption	< 2 Watt
Protection	Electronic short circuit fuse
Memory	EE-prom
Safety	100 % galvanic separation
Output current, min.	4 (0) mA at the meter's minimum flow (q_i in accordance with EN1434)
Output current, standard version	20 mA at 100% x the meter's permanent flow (q_p in accordance with EN1434)
Output current, special version	20 mA at 67, 75, 80 or 83% x q_p (see table)
Output current, max.	24 mA at 1.2 x q_p
Updating frequency	1.28 sec. (HGP > 100 m ³ /h: 2.56 sec.)
Pulse outputs	Potential free open collector max. 20 mA, max. 28V
Pulse time	150 ms

Box:

Measurements (HxWxD)	93 mm x 93 mm x 55 mm
Material	Polystyrene
Colour	Light grey (RAL 7035)
Inflammability	Tested to UL94V-2
Mounting	Directly on wall
Ambient temperature	5 – 55 °C
Storage temperature	-10 – 65 °C
Humidity	10 – 70 % (non-condensing)
Safety class, standard	IP44 (membrane)
Safety class, special	IP65 (couplings)
Length of signal cable	0.4 m

Setting values for type HG-420HF

Type	Signal		Flow (m ³ /h) at 20 mA-signal by meter type							
	4mA	20mA	HGP20	HGP35	HGP65	HGP90	HGP150	HGP250	HGP400	HGP600
1	q_i	67% x q_p	13.4	23.5	43.6	60.3	100.5	167.5	268.0	402.0
2	q_i	75% x q_p	15.0	26.3	48.8	67.5	112.5	187.5	300.0	450.0
3	q_i	80% x q_p	16.0	28.0	52.0	72.0	120.0	200.0	320.0	480.0
4	q_i	83% x q_p	16.6	29.1	54.0	74.7	124.5	207.5	332.0	498.0
5*	q_i	100% x q_p	20.0	35.0	65.0	90.0	150.0	250.0	400.0	600.0

*Type 5 is the standard version