Measuring amplifier GSV-11H 010/20/2

Item number: 1416

Highlights

- Taring function via control cable
- 20 Hz filter in the standard design
- 100Hz filter optional
- Amplification configurable
- 4...20mA output signal
- 0V...5V output optional
- 0V ...10V output optional
- 5V ±5V output optional
- 2.5V ±2.5V output optional
- Power consumption <40 mA

The GSV-11H is a measuring amplifier with analogue output for strain gauge full bridges.

In addition to the current output 4...20mA, voltage outputs 0.0...10.0V or 0.0V...5.0 volt are also available as an option.

The particular features of GSV-11H are

- the automatic zero adjustment across 2 mV/V (100% of the largest) of measuring range
- the low current consumption of just 38mA (plus output current),
- the optional amplification levels via jumpers, and
- the option to set the amplification in a continuously variable manner.

The zero adjustment is triggered by means of a control signal from the PLC or via a microswitch on the printed circuit board. The control level at the “tare” taring input should lie in the range of 10 volt to 30 volt.

The zero adjustment is triggered with the falling edge of a control level of at least 4ms at the tare input.

The GSV-11H is also available in another version as a printed circuit board (GSV.11L).

Even for a high input sensitivity of 0.5 mV/V, the range for the zero adjustment is a full 2mV/V so that even the smallest load changes are shown for a preload of e.g. 80% (magnify function).

The GSV-11H can supply up to 4 parallel weighing cells with a 350 ohm bridge resistance each and is therefore also perfectly suitable for applications in weighing technology.

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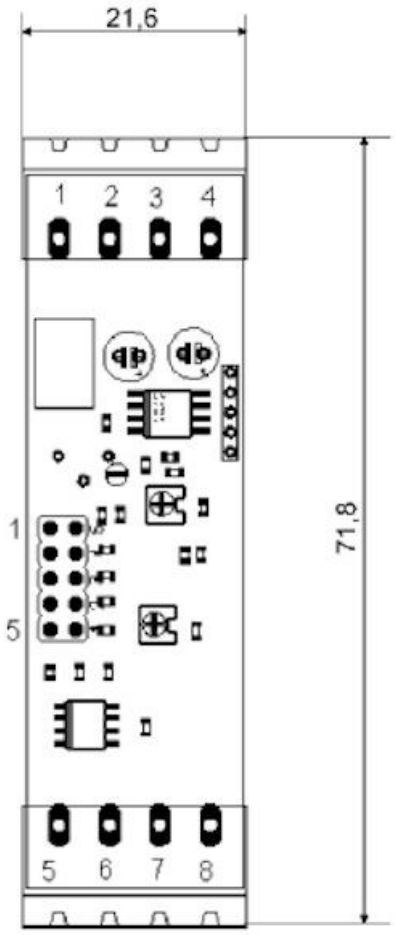
Stand: 18.02.2025

Technical Drawing



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Technical Data

Basic Data		Unit
Dimensions	75 x 25 x 53	mm³
Housing	Din rail	
Connection	Screw terminal	
Number of channels	1-channel	
Functions	Tara, Range	

Input analog		Unit
Input sensitivity-steps	2.0 | 1.0 | 0.5 | 0.2	mV/V

Output analog		Unit
Number of analog outputs	1	
Voltage output from	0	V
Voltage output to	10	V

Accuracy data		Unit
Accuracy class	0,1%	
Relative linearity error	0.02	%FS
Temperature effect on the zero point	0.1	%FS/10°C
Temperature effect on the measuring sensitivity	0.05	%RD/10°C

Measuring frequency		Unit
Limit frequency (analog)	20	Hz

Supply		Unit
Supply voltage from	21	V
Supply voltage to	28	V
Strain gauge bridge supply	5	V

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Interface	Unit

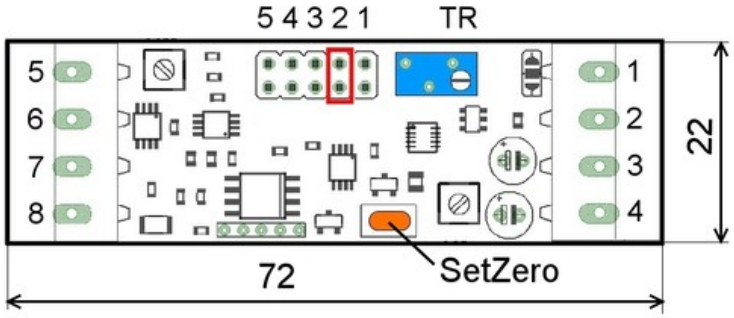
Zero Adjustment		Unit
Type	regulation	
Tolerance	1	%FS
Time period	250	ms
Debouncing time	4	ms
Trigger level from	10.5	V
Trigger edge	falling	

Filter		Unit
Type	low-pass	
Limit frequency (analog) from	20	Hz
Order	3	
Algorithm	Bessel	

Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	65	°C
Operating temperature range from	-40	°C
Operating temperature range to	85	°C
Environmental protection	IP40	

Mounting

Amplification levels



Position	Amplification factor	Input sensitivity in mV/V
1	1...10	2...0,2
2	1	2
3	2	1
4	4	0,5
5	10	0,2

Terminal assignment

Terminal	Designation	
1	Ub (24V DC)	Supply voltage
2	GND	Ground supply voltage and signal
3	Ua (4...20mA / 0...10V)	Signal 4...20mA (order option 0...10V)
4	Tara	Control input for zero adjustment
5	-Ud	- Differential input (-sensor signal)
6	+Ud	+ Differential input (+sensor signal)
7	+Us	+ Sensor supply (+excitation)
8	-Us	- Sensor supply (-excitation)

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