

## GSV-1A



### Description

The measuring amplifier GSV-1A is ideal for assembly near the sensor, because the aluminum housing (protection class: IP66) is very compact.

The high limiting frequency of 2.5 kHz is suitable for the detection of static and dynamic signals from sensors with strain gauges.

The automatic zero adjustment store settings permanently in the nonvolatile memory also by voltage interruption.

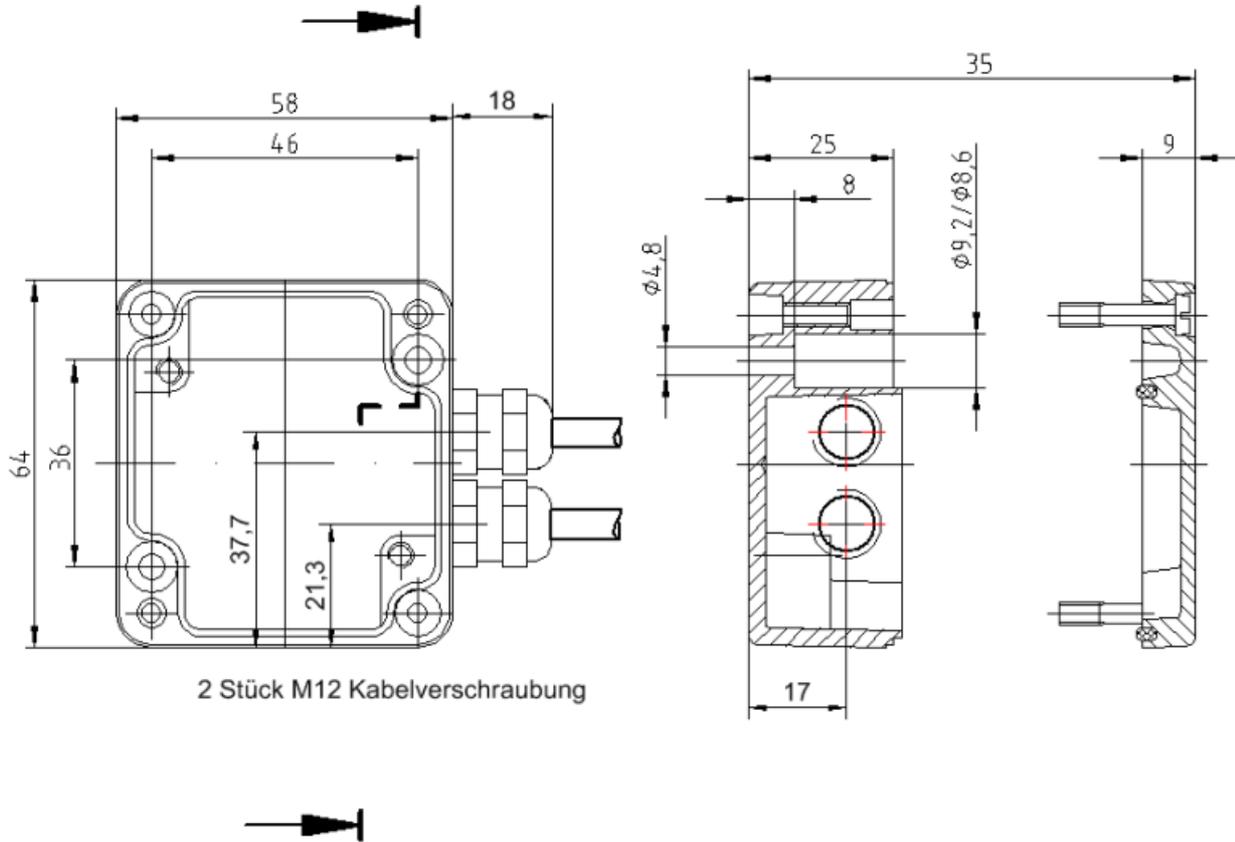
The force sensor is connected to the terminals 1 to 4.

The power supply (11-30 volts) is connected to terminals 7 and 5 (ground).

For zero adjustment, the terminal 8 connected to the power supply or a control signal is set between 5 volts and 24 volts.

The amplification can be switched via plug-in jumpers 1-2-4-10-fold.

### Dimensions



## Technical Data

### Input analog

Input sensitivity-steps	0.2   0.5   1.0   2.0	mV/V
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### Output analog

Number of analog outputs	1
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### Supply

Supply voltage f	11 ... 29	V
Current consumption f	55 ... 75	mA
Strain gauge bridge supply	5	V

### Interface

Type of the interface	Analog
Quantity of the interface	1

### Zero adjustment

Type	digital	
Tolerance	5	mV
Time period	90	ms
Debouncing time	4	ms
Trigger level f	3.5 ... 30	V
Trigger edge	falling	

### Environmental data

Rated temperature range f	-10 ... 65	°C
Operating temperature range f	-40 ... 85	°C
Environmental protection	IP66	

### Basic Data

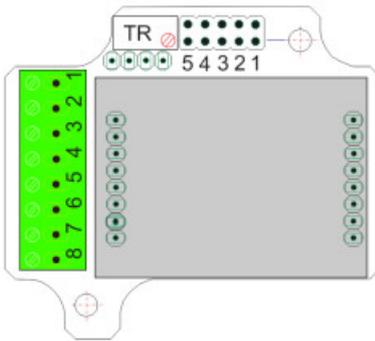
Housing	Aluminium
Connection	screw terminal
Number of channels	1-Kanal

### Precision data

Accuracy class	0,1%	
Relative linearity error	0.02	%FS
Temperature effect on the zero point	0.01	%FS/10°C
Temperature effect on the measuring sensitivity	0.1	%RD/10°C

## Mounting

## Pin configuration



The GSV-1A measurement amplifier can also optionally be delivered with type 763 plug connectors.

Terminal		Series 763 (M12) socket		Series 763 (M12) pins	
1	-U <sub>D</sub> Negative differential input	4	black		
2	+U <sub>D</sub> Positive differential input	3	blue		
3	+U <sub>S</sub> : Positive bridge excitation (5V)	1	brown		
4	-U <sub>S</sub> : Negative bridge excitation (GND)	2	white		
5	GND: Ground			3+5	blue+grey
6	+U <sub>A</sub> : Analogue output			2	white
7	+U <sub>B</sub> Voltage supply (12V or 24V)			1	brown
8	T: Control input zero adjustment (with +U <sub>B</sub> )			4	black

## Adjustment of the input range

The input sensitivity can be adjusted by moving the jumper. The input sensitivity for position 1 is indicated in the type designation. In position 5, the amplification can be set in a continuously variable manner using the "TR" trimmer.



Position	Amplification Factor	Input sensitivity in mV/V for GSV-1A with 2 mV/V	Input sensitivity in mV/V for GSV-1A with 3.5 mV/V
1	1	2	3.5
2	2	1	1.75
3	4	0.5	0.85
4	10	0.2	0.35
5	1...10	2 ... 0.2	3.5 ... 0.35

For an amplification factor 1, the complete output signal is reached at a modulation of 100%.

For an amplification factor of 2, the complete output signal is already reached at a modulation of 50%.

Various versions are available, e.g. with voltage output +5V, with voltage output +10V, with current output 4...20mA, and with various input sensitivities +-2mV/V and +-3.5mV/V.

## accessories

Description	Description
	Configuration 5p/m/M12
	Connector Type Coninvers, 5 pin, pins (male), terminated on cable

## Order options

Type	Description
GSV-1A 010/250/2	Output -10 ... 10 V, 250 Hz, input $\pm 2$ mV/V (standard type)
GSV-1A 010/250/2/M12	Output -10 ... 10 V, 250 Hz, input $\pm 2$ mV/V, round plug connector m12
GSV-1A 010/250/3.5	Output -10 ... 10 V, 250 Hz, input $\pm 3.5$ mV/V
GSV-1A 010/2k5/2	Output -10 ... 10 V, 2.5 kHz, input $\pm 2$ mV / V
GSV-1A 010/2k5/2/M12	Output -10 ... 10 V, 2.5 kHz, input $\pm 2$ mV / V, round plug connector m12
GSV-1A 010/10khz/2	Output -10 ... 10 V, 10 kHz, input $\pm 2$ mV / V
GSV-1A 4-20/250/2	Output 4 ... 20 mA, 250 Hz, input $\pm 2$ mV/V
GSV-1A 4-20/250/2/M12	Output 4 ... 20 mA, 250 Hz, input $\pm 2$ mV/V, round plug connector m12
GSV-1A 4-20/250/3.5	Output 4 ... 20 mA, 250 Hz, input $\pm 3.5$ mV/V
GSV-1A 4-20-12/250/2/M12	Output 12 $\pm 8$ mA, 250 Hz, input $\pm 2$ mV/V, round plug connector m12