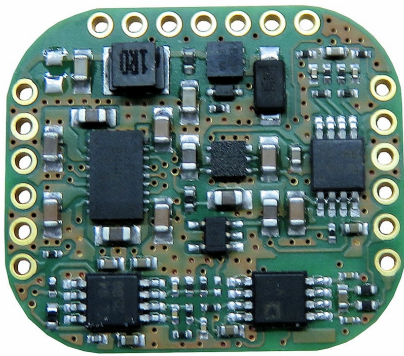


GSV-5



Highlights

- Miniature measuring amplifier with 6-wire technology
- High frequency range from 250 Hz to 10 kHz
- The new model instead of old GSV-1L
- Trier function via control line
- purely analog measuring distance for the best possible signal-to-noise ratio
- Improved long-term stability and temperature drift by avoiding mechanical balancing components
- Noise Amplitude <math>< 150 \text{ nV/V Pk-Pk}</math> bei 10 Hz Bandwidth
- Noise Amplitude <math>< 1 \text{ } \mu\text{V/V Pk-Pk}</math> bei 2.5kHz Bandwidth

Description

The miniature measuring amplifier GSV-5 measures only 23mm x 20mm x 6mm and can therefore be perfectly integrated into sensors. Solder pads are provided for wiring, it can be easily integrated into larger pcbs with optionally available pin strips.

Due to a high cut-off frequency up to 10 kHz, it is suitable for detecting static and dynamic signals from sensors with strain gauges. The purely analog measuring distance guarantees the best possible signal-to-noise ratio.

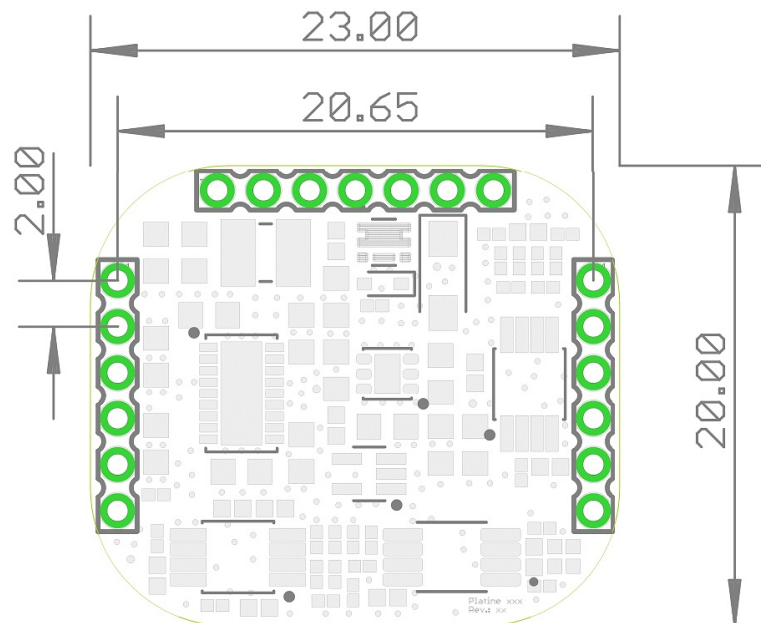
Variants with voltage output -10V to +10V and -5V to +5V are available. These are suitable for tensile-compressive measurement or for measuring torque turning right and left.

The input sensitivity in the standard version of GSV-5 is 2 mV/V. Other input sensitivity levels (0.5mV/V, 1mV/V, 2mV/V and 4mV/V) are factory-adjustable on request.

The automatic zero setting function stores the setting in non-volatile memory even in case of voltage underbilling.

In addition, we offer calibration of measuring electronics and system calibration in conjunction with a sensor.

Dimensions



Technical Data - Sortie +/- 10V - Filtre passe-bas : 250 Hz

Input analog

Input sensitivity-steps	2.0	mV/V
Input resistance strain-gauge-full-bridge	120 ... 5000	Ohm

Output analog

Number of analog outputs	1	
Voltage output f	-10 ... 10	V
Output resistance - voltage	47	Ohm

Measuring frequency

Limit frequency (analog)	250	Hz
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Supply

Supply voltage f	10 ... 28	V
Strain gauge bridge supply	5	V

Interface

Type of the interface	Analog	
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Zero adjustment

Tolerance	1	mV
Time period	50	ms
Debouncing time	2	s
Trigger level f	3 ... 24	V
Trigger edge	falling	

Temperature

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

Basis Data

Dimensions	23 x 20 x 6	mm
Housing	PCB	
Connection	Solder connection	
Number of channels	1-Kanal	

Precision

Accuracy class	0,1%	
Relative linearity error	0.02	%FS
Temperature effect on the zero point	0.2	%FS/10°C
Temperature effect on the measuring sensitivity	0.1	%RD/10°C

Technical Data - Sortie +/- 10V - Filtre passe-bas : 2,5 kHz

Input analog

Input sensitivity-steps	2.0	mV/V
Input resistance strain-gauge-full-bridge	120 ... 5000	Ohm

Output analog

Number of analog outputs	1	
Voltage output f	-10 ... 10	V
Output resistance - voltage	47	Ohm

Measuring frequency

Limit frequency (analog)	2.5	kHz
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Supply

Supply voltage f	10 ... 28	V
Strain gauge bridge supply	5	V

Interface

Type of the interface	Analog	
-----------------------	--------	--

Zero adjustment

Tolerance	1	mV
Time period	50	ms
Debouncing time	2	s
Trigger level f	3 ... 24	V
Trigger edge	falling	

Temperature

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

Basis Data

Dimensions	23 x 20 x 6	mm
Housing	PCB	
Connection	Solder connection	
Number of channels	1-Kanal	

Precision

Accuracy class	0,1%	
Relative linearity error	0.02	%FS
Temperature effect on the zero point	0.2	%FS/10°C
Temperature effect on the measuring sensitivity	0.1	%RD/10°C

Technical Data - Sortie +/- 10V - Filtre passe-bas : 10 kHz

Input analog

Input sensitivity-steps	2.0	mV/V
Input resistance strain-gauge-full-bridge	120 ... 5000	Ohm

Output analog

Number of analog outputs	1	
Voltage output f	-10 ... 10	V
Output resistance - voltage	47	Ohm

Measuring frequency

Limit frequency (analog)	10	kHz
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Supply

Supply voltage f	10 ... 28	V
Strain gauge bridge supply	5	V

Interface

Type of the interface	Analogue	
-----------------------	----------	--

Zero adjustment

Tolerance	1	mV
Time period	50	ms
Debouncing time	2	s
Trigger level f	3 ... 24	V
Trigger edge	falling	

Temperature

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

Basis Data

Dimensions	23 x 20 x 6	mm
Housing	PCB	
Connection	Solder connection	
Number of channels	1-Kanal	

Precision

Accuracy class	0,1%	
Relative linearity error	0.02	%FS
Temperature effect on the zero point	0.2	%FS/10°C
Temperature effect on the measuring sensitivity	0.1	%RD/10°C

Technical Data - Sortie 0-10V - Offset : 5V - Filtre passe-bas : 250 Hz**Input analog**

Input sensitivity-steps	2.0	mV/V
Input resistance strain-gauge-full-bridge	120 ... 5000	Ohm

Output analog

Number of analog outputs	1	
Voltage output f	0 ... 10	V
Output resistance - voltage	47	Ohm
Zero adjustment to	5	V

Measuring frequency

Limit frequency (analog)	250	Hz
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Supply

Supply voltage f	10 ... 28	V
Strain gauge bridge supply	5	V

Interface

Type of the interface	Analog	
-----------------------	--------	--

Zero adjustment

Tolerance	1	mV
Time period	50	ms
Debouncing time	2	s
Trigger level f	3 ... 24	V
Trigger edge	falling	

Temperature

Rated temperature range f	-10 ... 65	°C
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Dimensions	23 x 20 x 6	mm
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Relative linearity error	0.02	%FS
Temperature effect on the zero point	0.2	%FS/10°C
Temperature effect on the measuring sensitivity	0.1	%RD/10°C

Technical Data - Sortie 0-10V - Offset : 5V - Filtre passe-bas : 2,5 kHz**Input analog**

Input sensitivity-steps	2.0	mV/V
Input resistance strain-gauge-full-bridge	120 ... 5000	Ohm

Output analog

Number of analog outputs	1	
Voltage output f	0 ... 10	V
Output resistance - voltage	47	Ohm
Zero adjustment to	5	V

Measuring frequency

Limit frequency (analog)	2.5	kHz
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Supply

Supply voltage f	10 ... 28	V
Strain gauge bridge supply	5	V

Interface

Type of the interface	Analogue	
-----------------------	----------	--

Zero adjustment

Tolerance	1	mV
Time period	50	ms
Debouncing time	2	s
Trigger level f	3 ... 24	V
Trigger edge	falling	

Temperature

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

Basis Data

Dimensions	23 x 20 x 6	mm
Housing	PCB	
Connection	Solder connection	
Number of channels	1-Kanal	

Precision

Accuracy class	0,1%	
Relative linearity error	0.02	%FS
Temperature effect on the zero point	0.2	%FS/10°C
Temperature effect on the measuring sensitivity	0.1	%RD/10°C

Technical Data - Sortie 0-10V - Offset : 5V - Filtre passe-bas : 10 kHz**Input analog**

Input sensitivity-steps	2.0	mV/V
Input resistance strain-gauge-full-bridge	120 ... 5000	Ohm

Output analog

Number of analog outputs	1	
Voltage output f	0 ... 10	V
Output resistance - voltage	47	Ohm
Zero adjustment to	5	V

Measuring frequency

Limit frequency (analog)	10	kHz
--------------------------	----	-----

Supply

Supply voltage f	10 ... 28	V
Strain gauge bridge supply	5	V

Interface

Type of the interface	Analog	
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Zero adjustment

Tolerance	1	mV
Time period	50	ms
Debouncing time	2	s
Trigger level f	3 ... 24	V
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Accuracy class	0,1%	
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Mounting

for Pin configuration



X 1		X 2	
1	VDD: Power supply 12-24V	1	UF+: positive sensor line
2	GND : Mass	2	US+: positive bridge supply
3	Tara: Zero balance to 5V output sp.	3	US-: negative bridge supply
4	F-UA: external sensor line TARA	4	UF-: negative sensor line
5	GND : Mass	5	UD+: positive bridge signal
6	Uout: Analog output	6	UD-: negative bridge signal

TARE range of +/- 100% input sensitivity.

A short (<2s) high level >3V (max. 24V) at the tare input sets the analog output to 0 or 5V, depending on the variant.

Order options

Type	Description
GSV-5 010-5/250/2	Output 0...10 V, zero adjustment: 5V, 250 Hz, input ± 2 mV/V
GSV-5 010-5/2k5/2	Output 0...10 V, zero adjustment: 5V, 2.5 kHz, input ± 2 mV/V
GSV-5 010-5/10k/2	Output 0...10 V, zero adjustment: 5V, 10 kHz, input ± 2 mV/V
GSV-5 010/250/2	Output -10...10 V, zero adjustment: 0V, 250 Hz, input ± 2 mV/V
GSV-5 010/2k5/2	Output -10...10 V, zero adjustment: 0V, 2.5 kHz, input ± 2 mV/V
GSV-5 010/10k/2	Output -10...10 V, zero adjustment: 0V, 10 kHz, input ± 2 mV/V