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GSV-1A8

Highlights

- 8x strain gauge input,
- Zero adjustment across 100% of the measuring range,
- Integrated bridge completion 120, 350, 1000 ohm can be activated through solder bridges,
- Analogue filter 2.5kHz, optional 250Hz or 10kHz

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Description

The measuring amplifier GSV-1A8 is a DC voltage measuring amplifier with analog output.
The analogue input signals from the strain gauges are amplified by 8 precision
measuring amplifiers GSV-1L to ± 5 volt and digitalised by the integrated A/D card with
USB interface.
(± 2 mV / V corresponds to ± 5 volts at the output). The total usable input range is ± 4 mV / V at the input, corresponding to ± 10 V at the output.
A bridge completition for quarter- and half bridges 120, 350 ohm and 1000 ohm is
included in the GSV-1A8 and can be activated via solder bridges within the SubD15 plug.
The benefit of the GSV-1A8 measuring amplifier used is the low-noise amplification and
automatic analogue zero adjustment.
The zero adjustment is triggered via a button or via external signal.
The zero point is stored internally and is available again after a voltage interruption.
Due to the automatic zero adjustment, the low-noise amplifier and the optimally adjusted
Bessel filter, high input amplifications can also be set for the A/D digital converter in order
to record the smallest signals.
The supply voltage is 12...24V DC and is supplied via a plug-in power supply provided.

Advantages:

- compact dimensions and low weight,
- simple connection of strain gauge full, half and quarter bridges viaSub-D15 plug connectors,
- simple connection of strain gauge fullbridges M12 plug connectors,
- automatic zero adjustment with tare switch across 100% of the measuring range (2 mV/V),
- high limit frequencies up to 10kHz per channel as an order option (2.5kHz standard)
- low-noise input stage for high measurement resolution,
- high amplification of the output signal possible through automatic zero adjustment,
- low current consumption and supply with car supply voltage,
- stable strain gauge supply for up to 4 parallel 350 ohm full bridges per channel.

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Technical Data

Basis Data

Housing	Aluminium	
Connection	Connector	
Connection type	Sub-D15 / M12 Typ 763/ für K6D / für K3D	
Number of channels	8-Kanal	

Input analog

Input sensitivity-steps	2.0	mV/V
Input resistance strain-gauge-full-/half-bridge	70 ... 50000	Ohm

Precision

Accuracy class	0,1%	
Temperature effect on the zero point	0.05	%FS/10°C
Temperature effect on the measuring sensitivity	0.1	%RD/10°C
Resolution	16	Bit

Supply

Supply voltage f	11 ... 28	V
Current consumption from	300	mA
Strain gauge bridge supply	5	V

Zero adjustment

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

Temperature

Rated temperature range f	-10 ... 65	°C
Operating temperature range f	-20 ... 65	°C
Environmental protection	IP40	

Measuring frequency

Sampling frequency	200	kHz
Limit frequency (analog)	2.5	kHz

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accessories

	Description	Description
	Mounting-FEET-200	Mounting plates for GSV-1A8 / GSV-1A8USB / GSV-8DS

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Orderoptions

Type	Description
GSV-1A8 K3D	K3D sensor connection
GSV-1A8 K6D/M16	K6D sensor connection
GSV-1A8 M12	Sensor connection with round plug connector M12
GSV-1A8 SubD15	Sensor connection with plug connector Subd15