Measuring amplifier GSV-13q 05-2.5/1000/2

Highlights

- Analog output 0-5 volts
- Supply voltage 9V ... 28V DC
- Solder pads for strain gauge
- connection
- automatic zero adjustment to 2.5 volts via control input "Tare" automatic scaling via control input "Scale"

The measuring amplifier GSV-13q is suitable for installation in sensors with strain gages, for example in force sensors, torque sensors, load cells.

The measuring amplifier is characterized by very small dimensions of only 22 mm in length and 4 mm in thickness. The fixing can be done with the help of 2 fixing straps and M2 screws.

The measuring amplifier GSV-13q has an automatic zero adjustment via control line "Tare" and an automatic scaling function "Scale". To set the characteristic, "Tare" is triggered in the unloaded state. In the loaded condition with 100% load, the gain is adjusted via the control line "Scale".

These functions allow zero calibration, calibration and adjustment to be performed in one set-up on the finished product. In contrast to the predecessor model GSV-13L, no strain gauge resistors have to be exchanged for zero point and gain adjustment.

The measured values at the analog output are updated with a frequency of 1 kHz.

To trigger the functions "Tare" and "Scale", the corresponding inputs "Ta" and "Sc" are connected to the operating voltage (14V ... 28V) for a period of 3s. The functions are executed on the falling edge. The "automotive" variant GSV-13q 05-2.5 / 1000/2 works safely from a supply voltage of 9V to 28V.

The functions "Tare" and "Scale" can be deactivated independently of each other, so that e.g. only the "Tare" function can be executed or that both functions are activated or deactivated.

The variants with voltage output 0 ... 10V, zero adjustment to 5V and 4 ... 20mA, zero adjustment to 12mA, are order options. Other variants, e.g. with zero adjustment to 4mA or zero adjustment to 0.5V we are happy to deliver as customer-specific version.

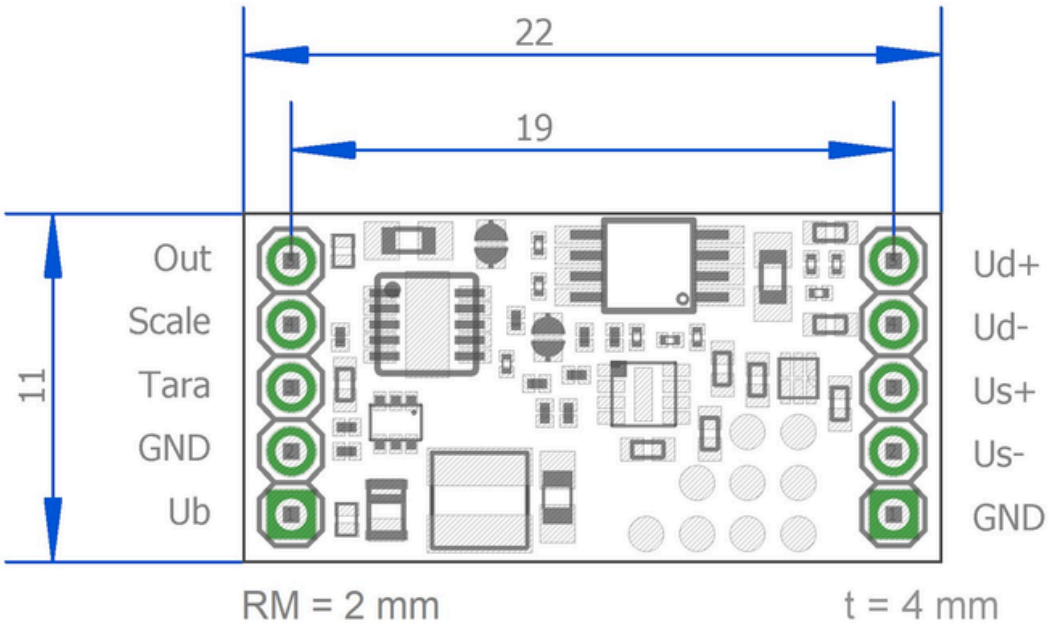
Noise Amplitude

- Noise amplitude about 2 µV/V Pk-Pk bei 10 Hz Bandwidth
- Noise amplitude about 20 µV/V Pk-Pk bei 1 kHz Bandwidth

Similar products:

- GSV-13i: Dimensions Ø 18 mm, height 4 mm, technically largely identical to GSV-13q
- GSV-15L: Dimensions 16mm x 33mm x 5mm, readings at analogue output are updated at 105Hz
- GSV-5L: Dimensions 23 mm x 20 mm x 6 mm, Measuring amplifier with "real analog output" (time and value continuous) and best signal-to-noise ratio
- GSV-6L: Dimensions 22mm x 14mm x 9mm, configurable from 10Hz to 25kHz, current / voltage / offset
- GSV-14l: dimensions 13 mm x 27 mm x 5 mm, 1.5 volts; Stroke ± 1.25 volts, adjustment via SMD resistors, for battery operation, with enable input; Operating voltage 3.4V ... 10V;
- GSV-6CPU: Dimensions 19mm x 14mm x 4mm, UART interface, analog output 1.5V ± 1V, configurable from 10Hz to 25kHz

Technical Drawing



GSV-13q

Module d'acquisition CAN bus et USB pour capteurs de force 1 ou 3 axes

Technical Data

Basic Data		Unit
Dimensions	22 x 11 x 4	mm³
Housing Connection	Circuit board	
Number of channels	Soldering connection	
Schnittstelle	1-channel	
Functions	5V±5V, 2.5V±2.5V, 12mA±8mA	
bandbreite	Tara, Scale, Lock	
	1kS/s	

Input analog		Unit
Numberofanalog inputs	1	
Input sensitivity-steps	2.0	mV/V
input sensitivity-stepsless from	0.1	mV/V
input sensitivity-stepsless to	3	mV/V

Output analog		Unit
Number ofanalog outputs	1	
Voltage output from	0.05	V
Voltage output to	5	V
Output resistance - voltage output	50	Ohm
Zero adjustment to	2.5	V

Accuracy data	Unit

Measuring frequency		Unit
Data frequency from	1000	Hz

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Supply		Unit
Supply voltage from	9	V
Supply voltage to Current	28	V
consumption from Strain	20	mA
gauge bridge supply	3	V

Interface		Unit
Type of the interface	Analog	

Zero Adjustment		Unit
Type	Digital	
Debouncing time	2	s
Trigger level from	9	V
Trigger level to	24	V
Trigger edge	falling	

Environmental Data	Unit