

Measuring amplifier GSV-13q 010-5/1000/2

Item number: 9798



Highlights

- Analog output 0-10 volts
- Supply voltage 14V ... 28V DC
- Solder pads for strain gauge connection
- automatic zero adjustment to 5V 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.

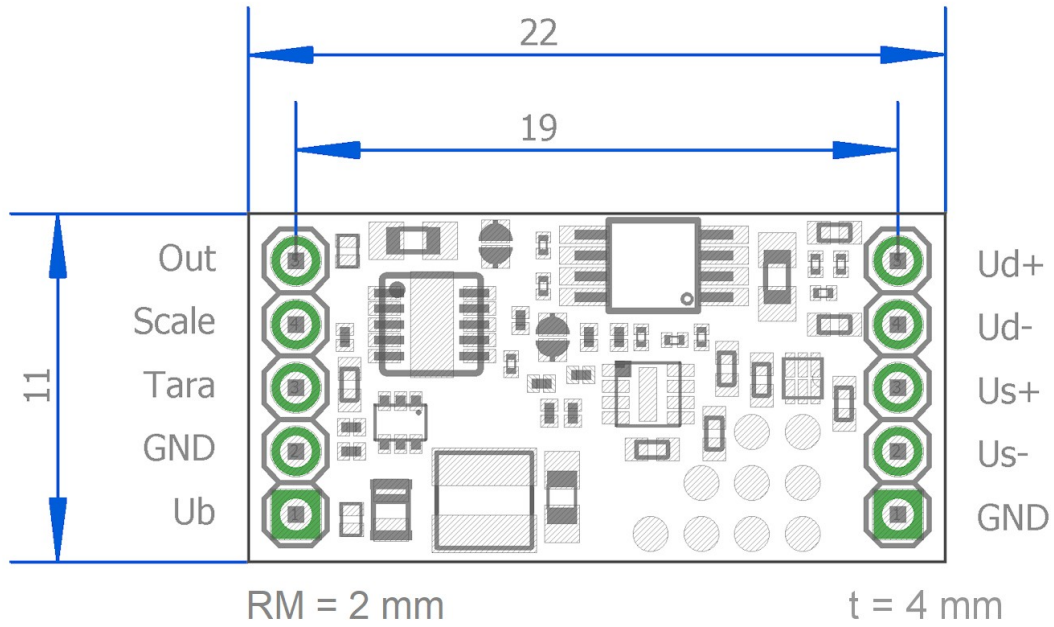
Noise Amplitude

- Noise amplitude about 2 $\mu\text{V/V}$ Pk-Pk bei 10 Hz Bandwidth
- Noise amplitude about 20 $\mu\text{V/V}$ Pk-Pk bei 1 kHz Bandwidth

Similar products:

- GSV-13i: Dimensions \varnothing 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-14I: dimensions 13 mm x 27 mm x 5 mm, 1.5 volts; Stroke \pm 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 \pm 1V, configurable from 10Hz to 25kHz

Technical Drawing



Technical Data

| Basic Data | | Unit |
|--------------------|----------------------|------|
| Dimensions | 22 x 11 x 4 | mm |
| Housing | Leiterplatte | |
| Connection | Soldering connection | |
| Number of channels | 1-channel | |

| Input analog | | Unit |
|----------------------------------|-----|------|
| Number of analog 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 of analog outputs | 1 | |
| Voltage output from | 0.05 | V |
| Voltage output to | 10 | V |
| Output resistance - voltage output | 50 | Ohm |

| Accuracy data | | Unit |
|---|------|----------|
| Accuracy class | 0,1% | |
| Relative linearity error | 0.01 | % |
| Temperature effect on the zero point | 0.1 | %FS/10°C |
| Temperature effect on the measuring sensitivity | 0.05 | %RD/10°C |
| Resolution | 16 | Bit |

| Measuring frequency | | Unit |
|---------------------|------|------|
| Data frequency from | 1000 | Hz |

| Supply | | Unit |
|----------------------------|----|-------------|
| Supply voltage from | 14 | V |
| Supply voltage to | 28 | V |
| Current consumption from | 20 | mA |
| Strain 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 |
|----------------------------------|------|-------------|
| Rated temperature range from | -10 | °C |
| Rated temperature range to | 70 | °C |
| Operating temperature range from | -40 | °C |
| Operating temperature range to | 85 | °C |
| Environmental protection | IP00 | |