Measuring amplifier GSV-6CPU

Item number: 5837



Highlights

- 6-channel measuring amplifier
- Channel 1 for connection of Strain Gauge full bridge
- Channel 2...6 analog input for external extensions
- Analog output 0...2.5V for channel 1
- UART and CAN interface (with external extension)

GSV-6 product line provides signal processing for strain gauges on the smallest area.
The centerpiece of the GSV-6 is a printed circuit board in the dimensions of 19 x 14 mm.
This "GSV 6CPU" provides all necessary functions for the construction of a 1-6 channel of measurement amplifier is ready.
Two 18-pole pin strips in PCM 1.0 are connecting fields and functions supplements for other applications: UART, CAN bus driver, GPRS modem etc.

- Strain gauge bridge supply 3V, Max 60mA
- Strain gauge bridge input at channel 1
- Analog output 0. 2.5V for channel 1
- LED output
- TEDS input
- Digital inputs for the functions "Tare" and "Scale"
- 5 x analog input 0.. 3V
- Interfaces UART (3.3 V), CAN
- 3.6 v to 5 .5V supply voltage
- 3 x threshold switch (max. 4mA output current)
- 3, 3V voltage output
- 2.5V reference

The amplifier module GSV-6CPU is used for integration into devices with 1 to 6 channels. The integration of the GSV-6CPU is preferably via UART or CAN interface (without CANbus-transceiver).

With the TEDS interface electronic data sheets are processed. The GSV-6 CPU provides 6 input channels (without an additional extension). Channel 1 is directly suitable for measuring with straingauge sensors, there is a bridge excitation for strain gauge (3V) and an analog output signal 0 ... 2.5V. With channels 2 to 5 voltages can be measured in the range from 0 up to 3V.

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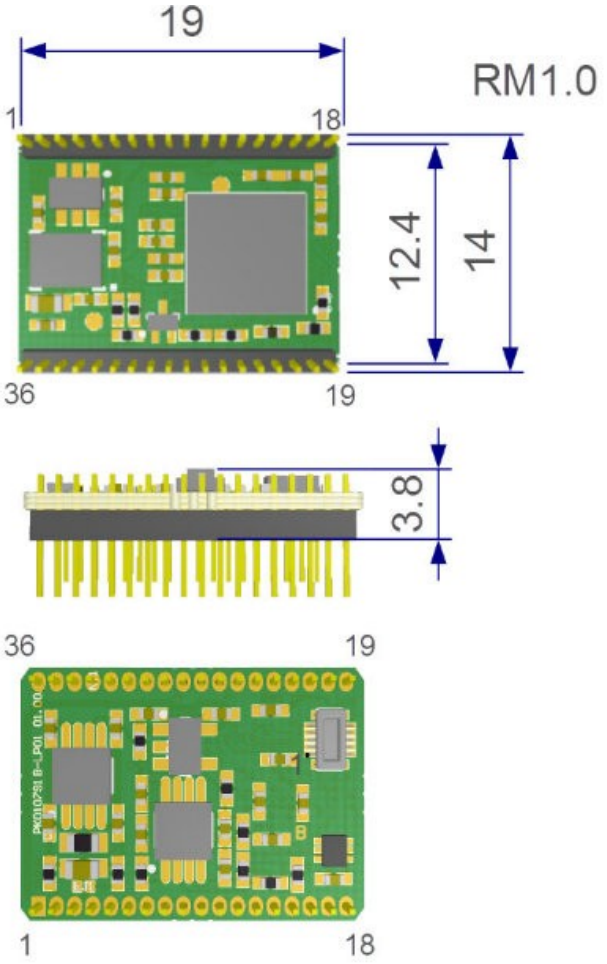
Stand: 21.04.2026

Technical Drawing



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Technical Data

Basic Data		Unit
Dimensions	19 x 14 x 4	mm³
Housing	Circuit board	
Connection	Pin header	
Number of channels	6-channel	
Interface	UART (3.3V), CAN, SPI	
Functions	Tara, Scale, Gain, TEDS	
bandbreite	1 S/s ... 25 kS/s	

Input analog		Unit
Number of analog inputs	6	
input sensitivity-stepsless from	0.1	mV/V
input sensitivity-stepsless to	8	mV/V
Input resistance strain-gauge-half- /quarter-bridge	1000 | 350	
Input voltage from	0	V
Input voltage to	3	V

Output analog		Unit
Number of analog outputs	1	
Voltage output from	0.1	V
Voltage output to	2.5	V
Output resistance - voltage output	47	Ohm
Zero adjustment to	1.25	V

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

Measuring frequency		Unit
Data frequency from	10	Hz
Data frequency to	25000	Hz
Sampling frequency	16.7	kHz

Supply		Unit
Supply voltage from	3.6	V
Supply voltage to	5.5	V
Current consumption from	33	mA
Strain gauge bridge supply	3	V

Interface		Unit
Type of the interface	TEDS | UART | CAN	
Quantity of the interface	5	

Zero Adjustment		Unit
Trigger level from	0.8	V
Trigger level to	3.3	V
Trigger edge	rising	

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Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	85	°C
Operating temperature range from	-40	°C
Operating temperature range to	125	°C
Environmental protection	IP00	

The information on data frequency and sampling frequency refer to the use of 6 channels. By using fewer channels, the data frequency can be set higher than 800/s.Zero adjustment: internal pullup resistor 10kOhm at tare input available;

Operating instructions

Note on the bridge circuit: The allowable range for + Ud and -Ud is 1.32V to 1.68V. The maximum, unbalanced series resistor (one-sided series resistance in + Us or -Us) must not exceed 26% of the bridge resistance.

The table lists the maximum possible series resistors, which may be unilaterally connected in + Us or -Us.

Strain Gauge bridge circuit	Max. Series resistor unbalanced
350 Ohms	91 Ohms
700 Ohms	182 Ohms
1000 Ohms	260 Ohms
1400 Ohms	364 Ohms

Mounting