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GSV-6LTE

Highlights

- 6-channel strain gauge amplifier with LTE, UMTS and GPRS;
- Data transmission via GSM;
- permanent measurement and measurement at intervals;
- configurable input for strain gauge full, half, quarter bridges, voltages;
- Measuring frequency up to 300Hz;
- digital inputs / outputs;
- Inputs individually configurable: 0.1 ... 8 mV / V, 1.5V + -1V;
- Supply: 7V ... 26V;
- integrated charging circuit for Li-Ion and Li-Po battery, 1000mA charging current;
- Resolution: 16Bit ADC,
- Protection class: IP66

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Description

The strain gage GSV-6LTE is suitable for data acquisition of 6 analog signals with 16-bit resolution at data frequencies up to 300Hz.
The analog inputs are configurable: channels 1 - 6 for strain gauge full, half, quarter bridges; Channel 2 - 6 for voltage inputs ±1.25 V ... ±10V.

Data is transmitted wirelessly via LTE or UMTS or GPRS via the GSM network.
The configuration, recording, analysis and monitoring of the measured data is conveniently carried out in a user software "GSV-6GPRS-Manager".
For easy remote monitoring, users receive the e-mail logs. In case of emergency, the alarm is triggered by e-mail or by mobile phone.

The measuring intervals can be set arbitrarily. The measured values are recorded simultaneously for all 6 channels.

The electronic components are housed in a robust housing with protection class IP66.
In addition, 4x refractory Li-Ion Trustfire batteries with a capacity of 10Ah and with the PCB protection are integrated in the GSV housing.

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Technical Data

Input analog		
Number of analog inputs	6	
Input sensitivity-stepsless f	0.1 ... 8	mV/V
Input resistance strain-gauge-full-bridge	120 ... 5000	Ohm
Input resistance strain-gauge-half- /quarter-bridge	120 | 350 | 1000	Ohm
Input voltage f	-10 ... 10	V

Measuring frequency		
Data frequency f	1 ... 300	Hz

Supply		
Supply voltage f	7 ... 24	V
Current consumption f	50 ... 250	mA

Interface		
Type of the interface	LTE | UMTS | GPRS | ethernet | Wi-Fi | usb	
Quantity of the interface	3	
Version of the interface	GPRS Class 12, bis 85 kbps	

Temperature		
Rated temperature range f	0 ... 45	°C
Operating temperature range f	-20 ... 60	°C
Environmental protection	IP66	

Basis Data		
Dimensions	180 x 140 x 76,5	mm
Connection	Connector	
Connection type	M12 round plug connector	
Number of channels	6-channel	

Precision		
Accuracy class	0,1%	
Relative linearity error	0.01	%FS
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

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Manual

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