Measuring amplifier GSV-6L

Item number: 5894

The GSV-6L amplifier supplements the GSV-6CPU with a configurable one analog output. The GSV-6L is designed for integration in sensors and in the Integration in housings with the smallest possible dimensions, such as connector housing, type "GSV-6K". Even after potting, all properties of the GSV-6L can be achieved over two Completely configure control line "Tare" and "Scale". Via TEDS input, the calibration data is taken from the electronic data sheet the sensor is taken over automatically. The analog output will then open automatically the slope stored in the TEDS is adjusted.

Read more about TEDS

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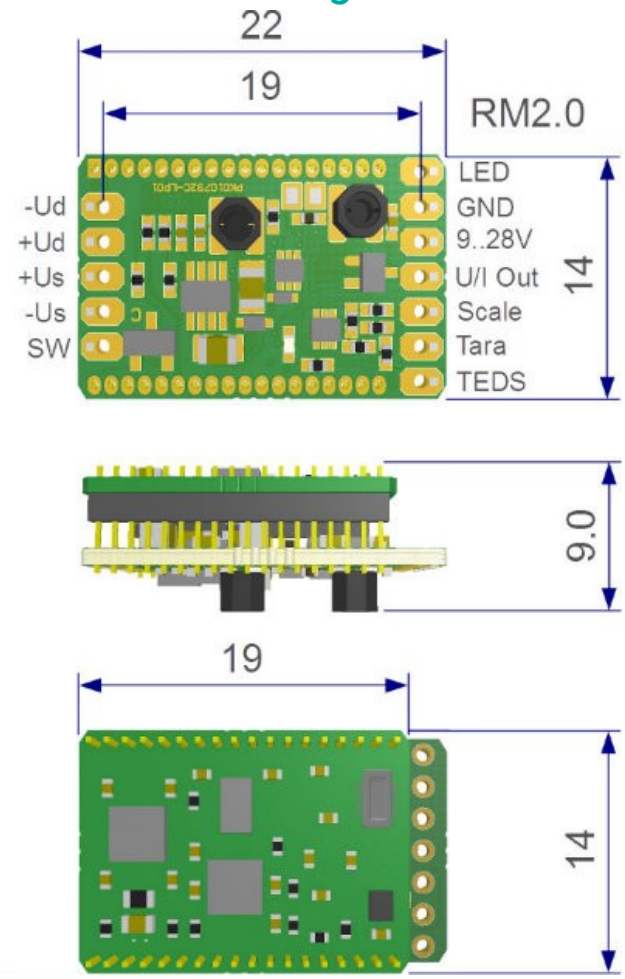
Stand: 17.06.2024

Technical Drawing



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Technical Data

Basic Data		Unit
Dimensions	22 mm x 14 mm x 9 mm	
Housing	Leiterplatte	
Connection	Soldering connection	
Number of channels	1-channel	

Input analog		Unit
Number of analog inputs	1	
input sensitivity-stepsless from	0.1	mV/V
input sensitivity-stepsless to	8	mV/V
Input voltage from	0	V
Input voltage to	3	V

Output analog		Unit
Voltage output from	-10	V
Voltage output to	10	V
Output resistance - voltage output	0.12	Ohm
Current output from	0	mA
Current output to	20	mA

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

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Measuring frequency		Unit
Data frequency from	1	Hz
Data frequency to	25000	Hz
Sampling frequency	50	kHz

Supply		Unit
Supply voltage from	9	V
Supply voltage to	29	V
Current consumption from	22	mA
Strain gauge bridge supply	3	V

Interface		Unit
Type of the interface	TEDS	
Quantity of the interface	1	

Zero Adjustment		Unit
Tolerance	0.1	%FS
Time period	1	ms
Debouncing time	1	s
Trigger level from	9	V
Trigger level to	28	V
Trigger edge	rising	

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Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	70	°C
Operating temperature range from	-25	°C
Operating temperature range to	85	°C
Environmental protection	IP00/IP66	
MTTFd	92,7	Jahre
PFHd	1,25 * 10E-6	
PerformanceLevel	C	

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

Terminal assignment

5-pin terminal strip

Designation	Function	Comment
Us+ (V_DMS)	positive bridge supply 3 V	60 mA, short-circuit proof

Ud-	negative bridge output	
Ud+	positive bridge output	
Us- (AGND)	negative bridge supply (AGND)	
SW	threshold value output, OpenDrain 200mA, 30V	

7-pin terminal strip

Designation	Function	Comment
LED	connection for LED	max. 4mA, 200 Ohm serie
GND	ground, supply voltage	
9...28V	supply voltage	with polarity reversal prote 9...28V or 2V over the max output signal;
U/I Out	analog output	voltage ±10V, current 4...2
Scale	control cable for Scale or "ENTER"	High Active; duration as fo 6CPU
Tara	control cable for "Tara" or "UP"	High Active; duration as fo 6CPU
TEDS	input for TEDS	as GSV-6CPU

Functions

The functions can be adjusted using the "Tare" and "Scale" control cables.

A simulator to configure the GSV-6 via control cables is also available via

http://www.me-systeme.de/click/click.php

Function	Settings
Analog output "type"	0...10V, ±10V, 0...5V, ±5V, 4...20mA, 0...20mA
Analog output "Offset"	0%, 10%, 12.5%, 20%, 25%, 30%, 37.5%, 40%, 5 Example: an offset of 50% with an analogue c 0...10V shifts the zero point at 0 mV/V to 5V. V output of 4...20mA, the zero point is shifted to with an offset of 50%. The input sensitivity is all times on the remaining "End Value - Offset
Data frequency in Hz (Updating of measurement values at the analogue output or interface)	1, 2, 10, 20, 50, 100, 200, 500, 1k, 2k, 5k, 10k, 2 The smallest data frequency at the output is levels below 10Hz, a second-order IIR filter is

input sensitivity in mV/V	0.1, 0.2, 0.3. 0.4, 0.5, 1, 2, 3, 4, 5, 8 (standard m 0.1, 0.2, 0.3, 0.4, 0.5, 1, 2, 3, 4, 5, 8 (high-res. m In high-res. mode the physical measuring ran restricted, which means there is less "reserve for a zero adjustment with the Tare function. Available physical measuring ranges: 8 mV/V, mV/V, 1 mV/V The input sensitivity can also be set to 5-digit using the Tare and Scale cables in the ClickR menu ("seamless").
Adjust autoscale level	The autoscale level allows the output signal t defined as a % of the end value, which is shov implementing "Scale" with the current weight Default setting: 100% (a weight limit of 100% expected). The autoscale level can be adjusted in stages within the range 0 to 100%. When "0%" is set, autoscale function is deactivated.
Level for threshold value indicator "On"	The switch-on threshold of the threshold valu can be adjusted in steps of 5% within the rang 100%. When 0% is set, the threshold value ind deactivated.
Level for threshold value indicator "Off"	The switch-off threshold of the threshold valu can be adjusted in steps of 5% within the rang 98%. The switch-off threshold should be set l the switch-on threshold. If "0%" is set, the swi threshold is deactivated.
Operating mode	"Actual value display" (Default), Maximum val Inversion of the display, Non-volatile Tare sett (default) or volatile when switched off, "Gradie

	(special function, not included in the standard configuration), TEDS activated (default) / dea
Load pre-setting	Selecting this menu option loads the default s included on delivery. ±10V, 2 mV/V, 100Hz, Actual value display, TE Non-inverted display,