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GSV-6K

Description

The measurement amplifier GSV-6K includes a strain gauge input via a 5-pin M12 casing bushing and an analogue output via a 5-pin M12 housing connector.

The GSV-6K is used to convert the bridge signal from force, torque or strain sensors to an analogue output signal.

The electronic data sheet of the sensor can be read via a TEDS interface. The measurement amplifier scales the output signal to the end value of the set output signal using the TEDS interface.

The output signal can be set as a voltage output or current output.

The outputs 0...10V, ±10V, 0...5V, ±5V, 4...20mA, 0...20mA can be set using the "Tare" and "Scale" control cables.

Similarly, an offset or sampling frequency can also be set.

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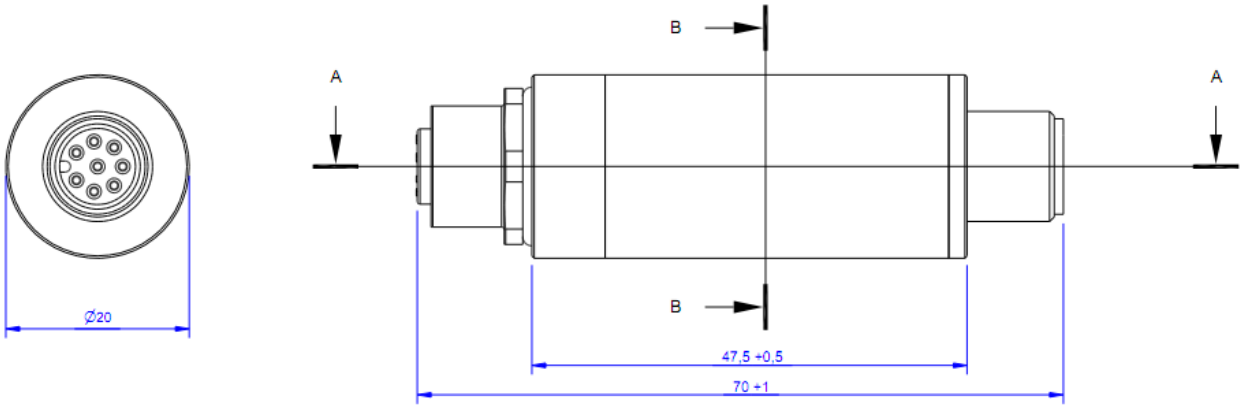
Dimensions



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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-/half-bridge	60 ... 20000	Ohm
Input voltage f	0 ... 3	V

Output analog		
Number of analog outputs	6	
Output resistance - voltage	0.12	Ohm
Current output to	10	mA

Measuring frequency		
Data frequency f	10 ... 25000	Hz
Sampling frequency	50	kHz

Supply		
Supply voltage f	9 ... 29	V
Current consumption from	22	mA
Strain gauge bridge supply	3	V

Interface		
Type of the interface	teds	
Quantity of the interface	1	

Temperature		
Rated temperature range f	-10 ... 70	°C
Operating temperature range f	-25 ... 85	°C
Environmental protection	IP66	

Basis Data		
Connection	Connector	
Number of channels	1-Kanal	

Precision		
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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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

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Mounting

Functions

The unit is factory-configured to the desired output signal and with the desired functions. The configuration can be modified using the "Tare" and "Scale" control cables.

Terminal assignment

M12 plug connector with A-coding;

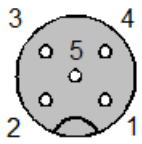

Figure 6: Contact configuration M12 socket

5-pin socket

Pin No.	Terminal assignment	ME (Type 1)	ME (Type 2)	Phoenix SAC-5P
1	$+U_S$ Positive bridge excitation	brown	red	brown
2	$-U_S$ Negative bridge excitation	white	black	white
3	$+U_D$ Positive differential input	green	green	blue
4	$-U_D$ Negative differential input	yellow	white	black
5	TEDS input	grey		grey

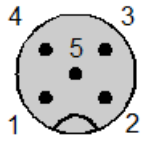

Figure 7: Contact configuration M12 plug

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5-pin plug

Pin No.	Terminal assignment	ME (Type 1)	Phoenix SAC-5P
1	Voltage supply 12V / 24V DC	brown	brown
2	Analogue output 4...20mA / ±10V	white	white
3	Ground	green	blue
4	Tare (Control input for zero adjustment)	yellow	black
5	Scale (Control input for autoscale)	grey	grey

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accessories

	Description	Description
	Configuration GSV-6	as a free service we offer the configuration for GSV-6K and GSV-6L, setting parameters are selectable
	Connector xp/f/M12/x	Sensor-/actuator cable; 4 / 5 pin;
	Connector xp/f/M12/x	Sensor-/actuator cable; 4 / 5 pin;