Measuring amplifier GSV-3CAN 05-2,5/1k2/2

Item number: 1017

Highlights

- CAN Bus
- Sampling frequency 10 kHz
- Data rate to 1000 /s
- galvanic cutoff
- with connector M8 or Cabel

The GSV-3CAN measuring amplifier is suitable for networking of sensors, such as force sensors, strain sensors and weighing cells by way of the "Controller Area Network" (CAN).

With this measurement amplifier the low analog voltages of strain gages are processed close to the sensor and can be transferred interference-free and in real-time to the control room or the data logger.

Having dimensions of only 64mm x 58mm x 34mm in robust aluminum diecast housing (IP66) the GSV-3CAN combines outstanding performance for strain gage measurement technology, such as

10 kHz sampling rate,

16 bit resolution,

galvanic cutoff of the network.

In particular the many adjustment capabilities make this measurement amplifier an all-round talent in measurement data collection. The measured values can be decentrally "compacted", e.g. by selection of FIR- and mean value filters. Individual value query and transfer with adjustable, continuous data rate are just as possible as external triggering or the event-driven transfer of measurement data.

Power supply by 12 V or 24 V DC on-board power supply are just as much part of the program as e.g. up to two threshold outputs and an analog monitor output with 0...5 volts output voltage.

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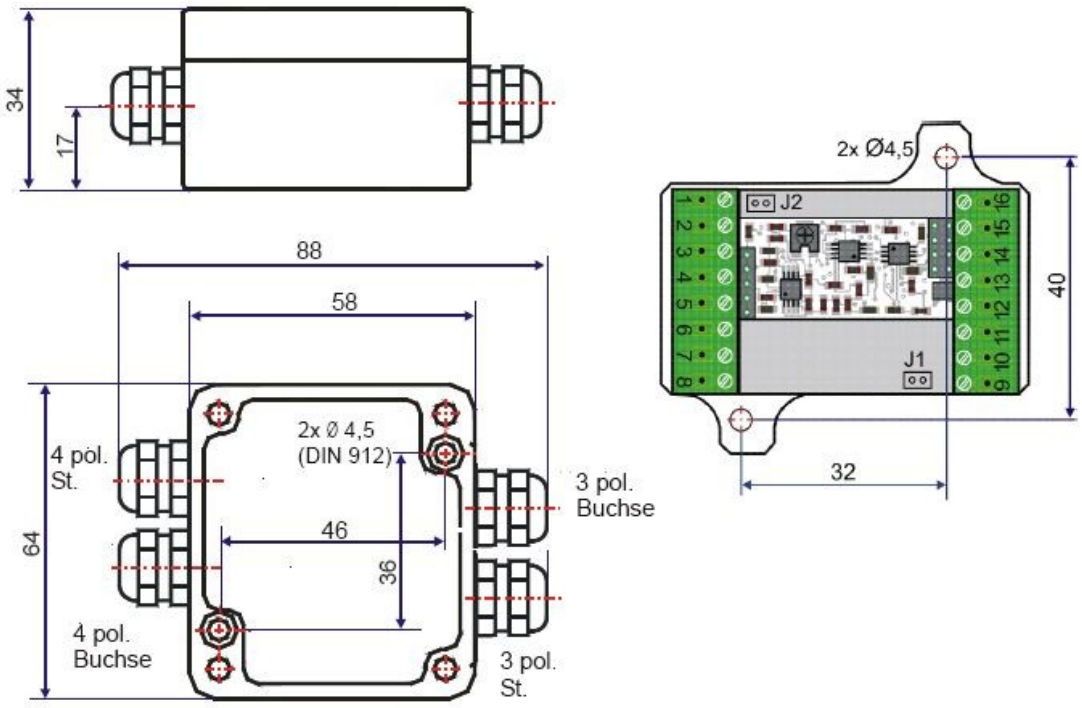
Stand: 18.02.2025

Technical Drawing



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Technical Data

Basic Data		Unit
Dimensions	57 x 64 x 35	mm³
Housing	Aluminium	
Connection	Plug connector	
Number of channels	1-channel	
Schnittstelle	CAN	

Input analog		Unit
Number of analog inputs	1	
Input sensitivity-steps	2.0 | 3.5 | 1.0	mV/V

Output analog		Unit
Number of analog outputs	1	
Voltage output from	0	v
Voltage output to	5	V
Output resistance - voltage output	0	Ohm

Accuracy data		Unit
Accuracy class	0,1%	
Relative linearity error	0.02	%FS
Temperature effect on the zero point	0.1	
Temperature effect on the measuring sensitivity	0.1	
Resolution	16	Bit

Measuring frequency		Unit
Limit frequency (analog)	1250	Hz

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Supply		Unit
Supply voltage from	12	V
Supply voltage to	29	v
Current consumption from	80	mA
Strain gauge bridge supply	5	V

Interface	Unit

Zero Adjustment		Unit
Tolerance	5	mV
Time period	90	ms
Debouncing time	4	ms
Trigger level from	3.5	V
Trigger level to	30	V
Trigger edge	falling	

Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	65	°C
Operating temperature range from	-20	°C
Operating temperature range to	80	°C
Environmental protection	IP66	

Mounting

Pin Configuration

PIN		Description

1	-UD	negative differential input
2	+UD	positive differential input
3	+US	positive bridge supply
4	-US	negative bridge supply
5	AUXin	freely usable input
6	UA	analog output 0...5 V
7	S1	switching output 1
8	T	control input "zero balance"
9	UB	supply voltage 24V DC
10	GND	ground supply voltage
11	CAN_GND	ground CAN Bus
12	CAN_L	dominant low
13	CAN_H	dominant high

14		internally occupied
15		internally occupied
16		internally occupied
J1		termination resistance 120 Ohm, if J1 is set
J2		factory Default (as on the label) for CAN bus settings is reloaded after power-on reset, if J2 is set.

Pin Configuration for 718 Plug Connector

Front view of plug connectors

4-pole built-in plug RSMF4

Pin	Function	GSV-3CAN	Wire colour
1	supply voltage 11...28 V DC	9	brown
2	Analog output 0...5V	6	white
3	GND supply voltage	10	blue

4	Tare-	8	black

4-pole built-in jack RKMF4

Pin	Function	GSV-3CAN	Wire colour
1	positive sensor supply +US	3	brown
2	negative sensor supply -US	4	white
3	positive differential input +UD	2	blue
4	negative differential input -UD	1	black

Dreipolige 3-pole built-in plug RSMF3RSMF3

Pin	Function	GSV-3CAN	Wire colour
1	transmit Data TxD / CAN_H	13	brown

3	receive data RxD / CAN_L	12	blue
4	GND	11	black

The reachable ratio signal/noise is dependant on the ambient conditions (cable length, shield), the set data rate and the optionally switched on FIR filter. The diagram shows the resolution with 1m connection cable, measurement range ±2mV/V, FIR filter switched off