

## GSV-2MSD-DI IP65



### Highlights

- Data logger with SD-card slot
- USB-interface
- for strain gauge quarter, half and full bridges
- 0...10V, potentiometric
- 24 bit resolution
- 6 sensor configurations recallable
- battery operation
- real time clock
- IP65 execution as option
- 3750Hz measuring rate



## Description

GSV-2MSD-DI is a measuring amplifier with an integrated data logger, which is used either as hand device or for the stationary application.

Due to compact dimensions GSV-2MSD-DI fits into any pocket.

The connection of sensors occurs via 15 pole Sub-D plug connector. Force sensors, torque sensors, strain gauge quarter, half and full bridges can be connected.

The measuring amplifier has an integrated bridge completion for 120 Ohm, 350 Ohm and 1000 Ohm strain gauges.

As well active sensors with 0...10V output signal and potentiometric displacement sensors can be connected.

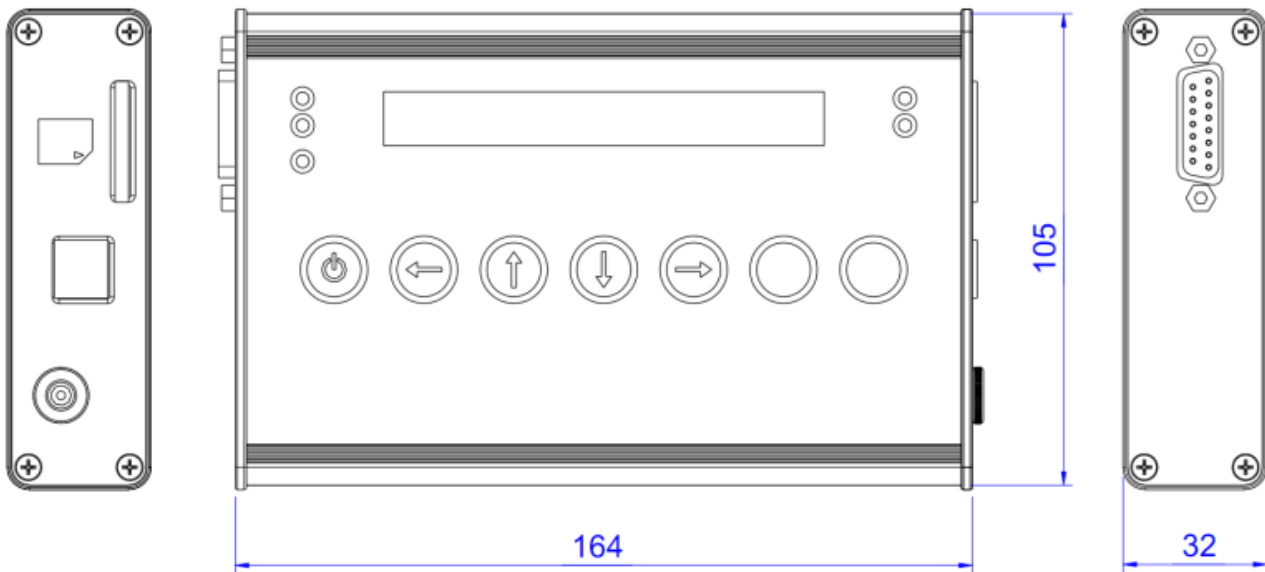
The device is also available in the protection type IP65. The SD- card slot and the USB-interface are closed with an additional covering. The Sub-D 15 sensor connection and the housing seals are strengthened for this protection type.

The measuring data is saved with a time stamp. Different operating modes, as e.g. single value query, permanent record, triggering via control cable, min-max mode and other settings are available.

The measuring rate can be set up to 3750 Hz. The record on SD-card is up to 1000 Hz possible.

Up to 6 sensor configurations can be defined and requested, e.g. for the sensor change or for the quick set of the measuring conditions.

## Dimensions





## Technical Data

### Basis Data

Housing	Aluminium
Connection	Connector
Number of channels	1-Kanal

### Eingang analog

Number of analog inputs	1
Input sensitivity-steps	1.0   2.0   3.5 mV/V
Input resistance strain-gauge-full-/half-bridge	87 ... 5000 Ohm
Input resistance strain-gauge-quarter-bridge	120   350   1000 Ohm
Input voltage to	10 V
Input resistance-voltage	56 kOhm

### Precision

Accuracy class	0,05%
Relative linearity error	0.2 %FS
Temperature effect on the zero point	0.2 %FS/10°C
Temperature effect on the measuring sensitivity	0.1 %RD/10°C
Resolution	24 Bit

### Supply

Supply voltage f	10 ... 29 V
Strain gauge bridge supply	2.5   5 V

### Interface

Type of the interface	usb
Quantity of the interface	1
Version of the interface	2.0 Fullspeed

### Zero adjustment

Type	digital   software   Regulation
Tolerance	0.01 %
Time period	1 ms
Debouncing time	4 ms



Trigger level f	3.4 ... 29 V
Trigger edge	Level

### Temperature

Rated temperature range to	50 °C
Operating temperature range f	-20 ... 70 °C
Environmental protection	IP51/IP65

### Measuring frequency

Data frequency to	1000 Hz
Limit frequency (analog)	1700 Hz

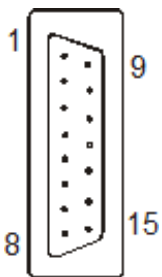
## Mounting

### Pin connection

Sensor connection, Sub-D 15

1	Shield	
2	GND <sub>A</sub>	ground analog input
7	T ara	zero set input / trigger-input
9	U <sub>E</sub>	analog input
10	U <sub>A</sub>	analog output
6	+U <sub>s</sub>	positive bridge supply
5	-U <sub>s</sub>	negative bridge supply (GND)
8	+U <sub>D</sub>	positive differential input
15	-U <sub>D</sub>	negative differential input
13	+U <sub>F</sub>	positive sensor cable
12	-U <sub>F</sub>	negative sensor cable
14	HB	selection half bridge
11	QB120 Ohm	completion resistor quarter bridge 120 Ohm
3	QB 350 Ohm	completion resistor quarter bridge 350 Ohm
4	QB 1000 Ohm	completion resistor quarter bridge 1000 Ohm

Table 1: assignment Sub-D 15 socket



For the connection of half and quarter bridges pin 14 should be bridged with pin 15.  
 Quarter bridges are connected to pin 2, pin 8 and QB (3, 11 or 4) in the three-wire technology.

## Connection plan for strain gauge bridges

full bridge	half bridge	quarter bridge
no bridge	bridge between 14 and 15	bridge between 14 and 15

Table 2: Connection of full, half and quarter bridges on 15 pole Sub D socket

### As standard accessories are provided:

- switching power supply 100..240V /18V 1,67A
- 15-pole Sub-D-mating plug connector
- USB-wire
- software-CD
- manual

### required accessory:

- SD Memory-Card, Class 10 (recommended for records with 1000Hz)