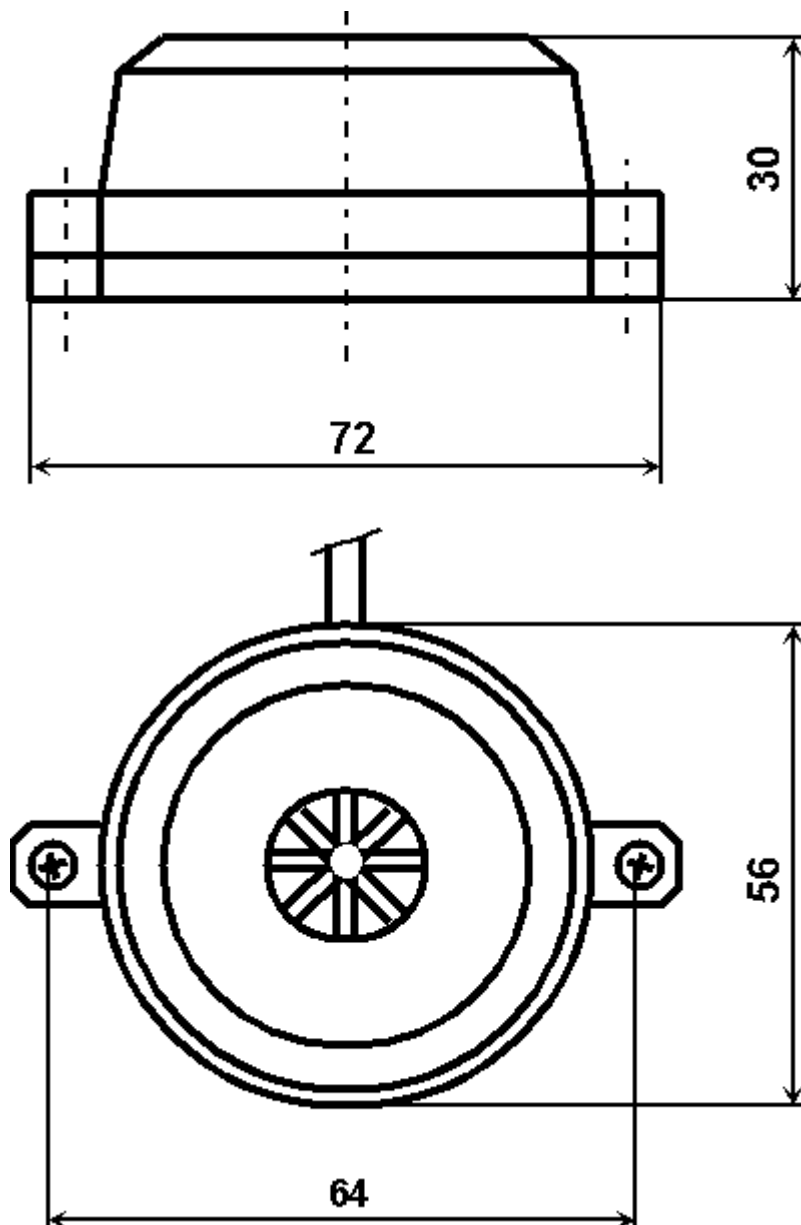


GSU2 - specifications and user guide

GSU2 sensor is electronic device for sensing of carbon monoxide concentration in air. The sensor is usually located in places such as parking structures, garages, technologic plants, engine repair shop, boiler rooms etc. where continual CO measuring is necessary. GSU2 output signal is industrial standard current loop 4 - 20 mA. Sensors GSU2 are designed for control systems (PLC control, automation system etc.). Analog output signal is proportional to CO concentration. Sensor connection is very easy with 2 wires. There are 2 trimmers on the board for setting zero concentration output current and maximum output current.

Device is built in plastic box ready to mount on the wall with 2 screws.



Specifications

Detected gas	carbon monoxide (CO)
Standard detection range	0 - 300 ppm
Output current	4 - 20 mA
Repeatability	5 %
Stability:	+/- 20 ppm / 3 months
Warming up time	max 60 sec
Response time T90	max 60 sec
Recovery time	max 60 sec
Connection	2 wires
Working area	non hazardous area
Temperature range	-5 - 40 °C
Humidity range	20 - 90% RH
Protection	IP20
Weight	cca 100 g
Dimensions without clamps	ø56 x 30 mm
Power supply	12 Vdc - 30 Vdc
Storage temperature	10 - 30 °C/ non condensing
Max. storage time:	1 year
Connection	2 wire cable, shielded type recommended for length > 5 m
Designed according:	ČSN EN 45544
Tested in the laboratory	AZL č. 1025

Description

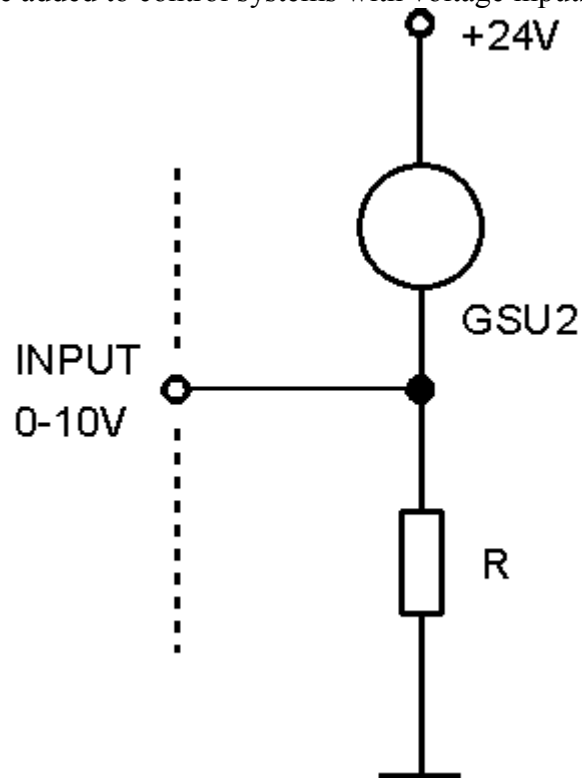
The GSU2 transmitter is based on electrochemical sensor. The loop current is 4 mA when GSU2 is placed in clean air. The loop current will increase if carbon monoxide is contented in air. Current is proportional to gas concentration. Control system usually drives room ventilation according to current received from particular sensors.

Sensor response is not immediate. Carbon monoxide must sink into sensor electrolyte for steady output signal.

GSU2 connection

Sensor is connected to system the same way like standard 2wire 4-20 mA converter. Most of control systems accept 4-20 mA loop directly.

The appropriate resistor can be added to control systems with voltage inputs only.



Calculate resistor value with help of Ohm's law. For 0 - 10 V input will fit resistor 500 Ohm e.g. (Parallel combination of 2 pcs 1 kOhm). Don't forget that voltage drop is on the resistor in this case.

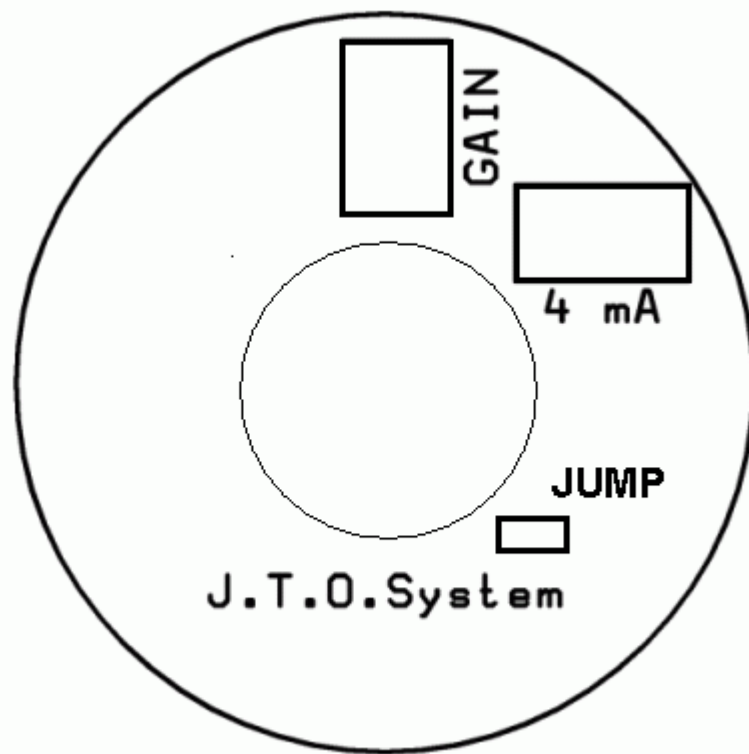
Outputs and supply

Polarity is not specified for sensor connection. Positive terminal can be connected on whatever of both terminals.

Check supply voltage before connecting to control system. Overvoltage can cause output current rise or device damage.

Device adjustment

There are setting components on the board.



Trimmer "4 mA"	Set output current in clean air.
Trimmer "GAIN"	Set corresponding output current for CO calibration gas concentration.
Outlet "JUMP"	Jumper for output current test. Connect mA-meter on the pins of jumper.

Sensor location

Sensor must be placed in the position with consideration the purpose. The best height is 1.5 - 1.8 m (breathing height) for protection of people health.

Gas concentration

Maximum gas concentration exceeding will cause current limitation approximately 30 mA. Return to "clean state" will take longer time after high gas concentration. Gas must ventilate from sensor electrolyte.

Some special gases have influence to sensor. Cross sensitivity is principally for hydrogen and acetylene (slight sensitivity for ethanol and nitrogen oxide as well).

Sensor restrictions

GSU2 sensor is intended for CO detection in normal air. Very high or very low oxygen concentration brings sensor malfunction. Some special chemical substances can "poison" sensor electrolyte. Please consult sensor application in the chemical industry with manufacturer.

Sensor is designed for normal non corrosive environment.

Accessories

- Plastic wall plug Ø6 - 2 pcs
- Wood screw 3x25 - 2 pcs

Service

For service or technical help contact:

J.T.O. System, s.r.o., 1. máje 823, 756 61 Rožnov pod Radhoštěm, CZ, tel. +420 571 843 343

Please, use ecology way to discard old devices.