

# LIMIT MONITORING FOR 2 OR 4 MEASURING SYSTEMS



The GWZ-S2 and GWZ-S4 Limit Monitors are programmable, self-monitoring and equipped with a rolling, alphanumeric display. They evaluate the signal measured by the measuring systems to which they are connected, (for example: toxic or explosive gases; Oxygen, Carbon Monoxide, Carbon Dioxide, etc.). When the values exceed or fall below a defined limit value, they emit an alarm or trigger other downstream functions, such as ventilation, in two stages.

A maximum of two (part no. 2112BGWZ-S2) or four (part no. 2112BGWZ-S4) different measuring systems can be connected to one Limit Monitor via 4-20mA interfaces. Thus, one Limit Monitor can monitor different types of gases simultaneously.

The power supply required is 230V ac. The Limit Monitor supplies the necessary voltage to the connected measuring systems through a cable. The signals are emitted via four relays:

- One relay is reserved for controlling the alarm horn.
- Since the limit monitor determines any cable break, short circuit or power failure, a second relay provides any fault messages.
- The other two relays are freely programmable allowing the limit warning to be in two stages.



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The following parameters and settings can be programmed individually and freely for each measuring system connected to the Limit Monitor (using push buttons or the RS232 interface and a laptop):

- Limit values.
- Upper limit of effective range: full scale (FS).
- Measuring unit: LEL, ppm, Vol. %, etc.
- The alarm can be emitted either when the measured values exceed or fall below the limit value.
- Optionally, the alarm can be saved, not saved or is emitted as a pulse.

The electronics are located in a waterproof housing that can be mounted on a wall. The cables are led in through the bottom side of the device with a maximum of four cable glands. The operating elements (one push button for Reset and two for Function), five (GWZ-S2) or seven (GWZ-S4) LEDs, as well as alphanumeric display, are provided on the front side of the housing, which is protected by a transparent cover.

The Limit Monitors monitor the concentration of flammable, toxic and other gases and vapours. The Monitors control such devices as solenoid valves, ventilators, optical and acoustic signal transmitters via output relays. The Monitors, however, must not be used in areas where explosive or flammable gases and vapours may arise.

The operator should determine whether the Limit Monitor is suitable by conducting corresponding tests under the given conditions.



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## SPECIFICATION

<b>Power supply:</b>	via terminal screws supply voltage: 230 V a.c.
<b>Nominal wattage:</b>	without measuring systems approx. 3 W
<b>Ambient temperature:</b>	-10°C to +50°C
<b>Air pressure:</b>	900 hPa to 1,100 hPa
<b>Permissible humidity:</b>	15-95% relative humidity
<b>Housing:</b>	Plastic, grey, wall mounting
<b>Housing protection:</b>	IP 54
<b>Weight:</b>	approx. 1,500g
<b>Dimensions:</b>	166 x 105 x 160 mm (Width x Length x Height)

## CONNECTIONS

<b>Channel A (measuring system 1):</b>	Terminal 1	24 V d.c. $\pm$ 5%
	Terminal 2	4-20mA; max. load 500 $\Omega$
	Terminal 3	0V
<b>Channel B (measuring system 2):</b>	Terminal 4	24 V d.c. $\pm$ 5%
	Terminal 5	4-20mA; max. load 500 $\Omega$
	Terminal 6	0V
<b>Channel C (measuring system 3): GWZ-S4 only</b>	Terminal 19	24 V d.c. $\pm$ 5%
	Terminal 20	4-20mA; max. load 500 $\Omega$
	Terminal 21	0V
<b>Channel D (measuring system 4): GWZ-S4 only</b>	Terminal 22	24 V d.c. $\pm$ 5%
	Terminal 23	4-20mA; max. load 500 $\Omega$
	Terminal 24	0V
<b>Relay Fault:</b>	Terminal 7	NO contact
	Terminal 8	Two-way switch
	Terminal 9	NC contact
	Idle state	Fault
<b>Relay Alarm 2:</b>	Terminal 10	NO contact
	Terminal 11	Two-way switch
	Terminal 12	NC contact
	Idle state	Alarm 2



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<b>Relay Alarm 1:</b>	Terminal 13	NO contact
	Terminal 14	Two-way switch
	Terminal 15	NC contact
	Idle state	Alarm 1
<b>Relay Alarm Horn:</b>	Terminal 16	NO contact
	Terminal 17	Two-way switch
	Terminal 18	NC contact
	Idle state	Alarm horn off
<b>Power supply:</b>	terminal N, PE, L	
<b>Relay:</b>	floating contacts: load 250 V ac, 1 A plant shut off: all relays in idle state	

## OPTICAL DISPLAY

<b>Yellow LED error:</b>	fault message
<b>Green LED power:</b>	operation
<b>Red LED Alarm Horn:</b>	acoustic alarm
<b>Red LEDs A,B,C,D:</b>	alarm of Channel A,B,C,D (Channel C,D GWZ-S4 only)

## OPERATING ELEMENTS

<b>Push buttons F1 and F2:</b>	function keys
<b>Push button reset:</b>	reset alarm horn: reset alarm

## ALPHANUMERIC DISPLAY

<b>Measuring level:</b>	concentration, status, fault, limit value exceeded
<b>Parameter level:</b>	setting the measuring ranges, limit values, alarm groups
<b>Service level:</b>	checking the limit values, functions of the relays

