

# LIMIT MONITORING FOR 6 MEASURING SYSTEMS



The GWZ-S6 Limit Monitor is programmable, self-monitoring and equipped with a rolling, alphanumeric display. It evaluates the signal measured by the measuring systems to which it is connected, (for example: toxic or explosive gases; Oxygen, Carbon Monoxide, Carbon Dioxide, etc.). When the values exceed or fall below a defined limit value, it emits an alarm or triggers other downstream functions, such as ventilation, in four stages.

A maximum of six 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 24V dc. The Limit Monitor supplies the necessary voltage to the connected measuring systems through a cable. The signals are emitted via six 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 four relays are freely programmable allowing the limit warning to be in a maximum of four 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.

Alarms can be grouped:

Alarm threshold	Measuring system	Alarm group
1	6	4
2	6	2
3	6	1
4	6	1

The electronics are located in plastic housing that can be mounted on a rail. The operating elements (one push button for Reset and two for Function), nine LEDs, as well as alphanumeric display, are provided on the front side of the housing.

The Limit Monitor monitors 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 Monitor, 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: 24 V d.c. $\pm$ 5%
<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, rail
<b>Housing protection:</b>	IP 20
<b>Weight:</b>	approx. 350g
<b>Dimensions:</b>	105 x 90 x 71 mm (Width x Length x Height)

## CONNECTIONS

<b>Channel A (measuring system 1):</b>	Terminal 18	24 V d.c. $\pm$ 5%
	Terminal 19	4-20mA; max. load 500 $\Omega$
	Terminal 20	0V
<b>Channel B (measuring system 2):</b>	Terminal 21	24 V d.c. $\pm$ 5%
	Terminal 22	4-20mA; max. load 500 $\Omega$
	Terminal 23	0V
<b>Channel C (measuring system 3):</b>	Terminal 24	24 V d.c. $\pm$ 5%
	Terminal 25	4-20mA; max. load 500 $\Omega$
	Terminal 26	0V
<b>Channel D (measuring system 4):</b>	Terminal 27	24 V d.c. $\pm$ 5%
	Terminal 28	4-20mA; max. load 500 $\Omega$
	Terminal 29	0V
<b>Channel E (measuring system 5):</b>	Terminal 30	24 V d.c. $\pm$ 5%
	Terminal 31	4-20mA; max. load 500 $\Omega$
	Terminal 32	0V
<b>Channel F (measuring system 6):</b>	Terminal 33	24 V d.c. $\pm$ 5%
	Terminal 34	4-20mA; max. load 500 $\Omega$
	Terminal 35	0V
<b>Relay Fault:</b>	Terminal 6	Two-way switch
	Terminal 7	NC contact
	Idle state	Fault



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<b>Relay Alarm 1:</b>	Terminal 8	Two-way switch
	Terminal 9	NC contact
	Idle state	Alarm 1
<b>Relay Alarm 2:</b>	Terminal 10	Two-way switch
	Terminal 11	NC contact
	Idle state	Alarm 2
<b>Relay Alarm 3:</b>	Terminal 12	Two-way switch
	Terminal 13	NC contact
	Idle state	Alarm 3
<b>Relay Alarm 4:</b>	Terminal 14	Two-way switch
	Terminal 15	NC contact
	Idle state	Alarm 4
<b>Relay Alarm Horn:</b>	Terminal 16	Two-way switch
	Terminal 17	NC contact
	Idle state	Alarm horn off
<b>External Power supply:</b>	Terminal 1	+24 V d.c. $\pm$ 5%
	Terminal 1	0V
<b>Relay:</b>	floating contacts: load 250 V a.c., 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,E,F:</b>	alarm of Channel A,B,C,D,E,F

## 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

