

Double Limit Monitor – Level Generator – Level Monitor **GW4**

Characteristics:

- Switchable input V/I
- Digital switching hysteresis
- Digital switching threshold
- Wire breakage message at 4...20mA
- Malfunction message output
- Additional sensor supply
- Invert function
- Supply 20...253VUC
- 3-way separation
- Mountable on 35mm cap rail TS35
- Clear terminal labeling
- Shape 22,5mm
- High reliability, 5 years warranty



Description:

The devices of the double limit monitor of the series GW4 have been developed for monitoring norm signals and are able, by usage of a corresponding sensor, to record fill levels in vessels. They also can be used as a temperature limit monitor or temperature controller by using a Pt100/Pt1000 sensor and, for example, a transducer series PT3 (LEG).

For the user there is one voltage- or current input at disposal. While using the current input 4...20mA it is additionally monitored for wire breakage or short-circuit. The accurate function is indicated by a malfunction message output. The switch conditions of the relays are signaled by each one LED in the front panel. The switch performance may be configured via DIP switch S5. Switch delay, hysteresis and inverted switching are separately selectable for each channel. For the supply of the required sensor there is an auxiliary power of 24V / 20mA at disposal. The modules are mountable on cap rail TS35, they have a wide range power supply so that a supply in the range of 20...253V_{uc} is possible.

Double limit monitor switch:

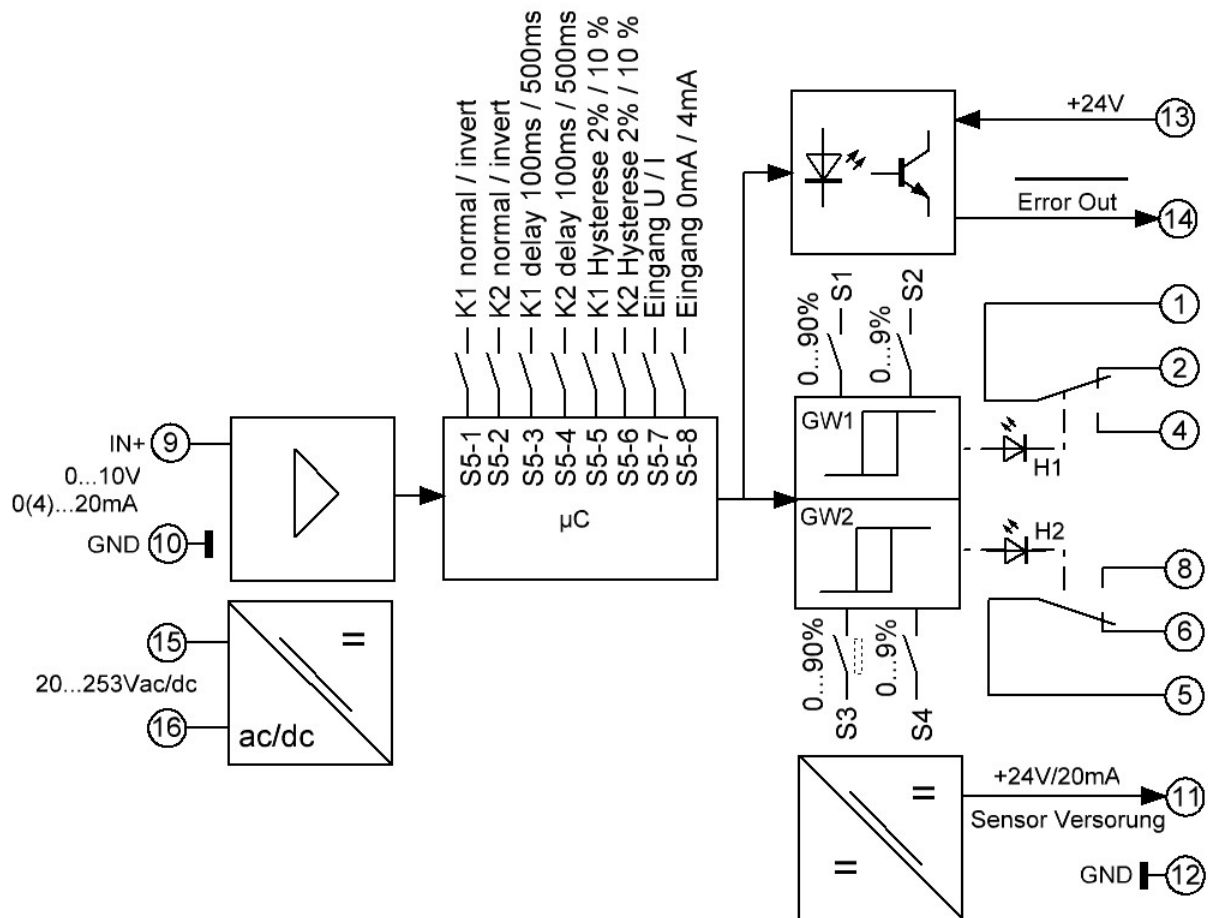
Upper and lower switching points are separated from each other, each can be set by using 2 decade switches (1...99%). The switch position "00" serves for testing purposes, the respective relay stays, separately from the set value input, permanently energized. When reaching the adjusted set value the respective relay gets activated, decreases the limit value by the via switch hysteresis set value, the relay deenergizes. The hysteresis is set with 2% resp. 10% from the adjusted limit value. Is the function inverted switching selected, the relay is permanently energized and deenergizes when reaching the limit value. When falling below the adjusted hysteresis it energizes.

Order No.:

Function

GW4-1

Double limit monitor

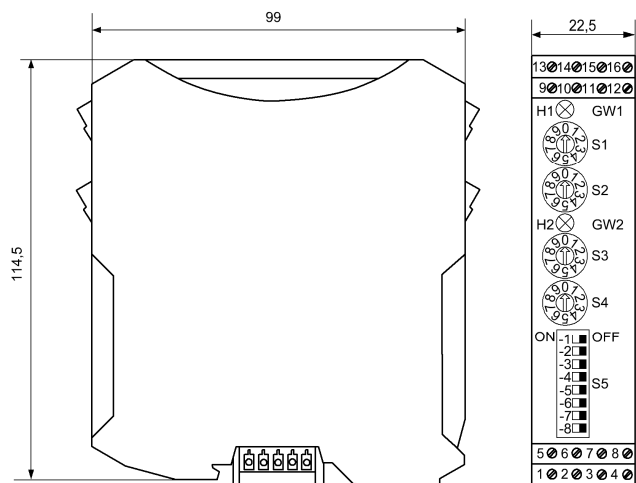


Notice:

The function switching with S5 is only possible in a power free condition of the module; otherwise the adjustment will not be accepted.

Switch S5	OFF*	ON
-1	K1 non invert	K1 invert
-2	K2 non invert	K2 invert
-3	K1 delay time 100ms	K1 delay time 500ms
-4	K2 delay time 100ms	K2 delay time 500ms
-5	K1 hysteresis 2% of limit value	K1 hysteresis 10% of limit value
-6	K2 hysteresis 2% of limit value	K2 hysteresis 10% of limit value
-7	voltage input 0...10V	current input, 0...20mA or 4...20mA cf. switch S5 - 8
-8	input 4...20mA	Input 0...20mA

* delivery condition



Technical Data

Auxiliary power:

Supply voltage	:	20..253VAC/DC
Power consumption	:	1W...2,5VA

Inputs:

Voltage input	:	0...10V* / 150kΩ / overload max. 30V
Current input	:	0(4)...20mA / load resistor 100Ω / overload. 40mA
		*delivery condition

Limit value preset:

Threshold 1	:	1...99% (S1, S2)
Threshold 2	:	1...99% (S3, S4)
Hysteresis 1 / 2	:	2%* / 10% (S5)
		*delivery condition

Outputs:

Malfunction message-output	:	Plus switching +24V / 50mA
Relay min. / max.	:	Each 1 changeover 230VAC / 3A / 24VDC / 1,5A
Switch delay time	:	100ms* / 500ms (S5)
Switch action	:	Non invert*, invert
Sensor supply	:	24V / 20mA
		*delivery condition

Accuracy:

Measurement accuracy	:	12 bit conforms to $\pm 2,5\text{mV}$ or. $\pm 5\mu\text{A}$
Adjustment accuracy	:	1%
Linearity error	:	< 0, 05%
Temperature coefficient	:	< 0, 02% / K

General data:

Operating temperature	:	0...50°C
Storage temperature	:	-25...+85°C, condensation before putting into operation is not allowed
CE conformity	:	EN 61326-1, EN 61000-4-2/3*/4/5/6*, EN 61000-6-4
		* during measurements are small deviations possible

Body:

Dimension	:	See drawing, 22,5mm adjoin body, 22,5x114,5x104,5mm (with terminals)
Material	:	PA / V0
Protection category	:	IP20
Connection	:	M3-screw-type terminal 0, 14 - 2,5mm ² , flexible or inflexible
Fixing	:	Snap-on mounting for norm rail TS35
Weight	:	120g
Mounting position	:	As you like

Note on safety:



Disconnect the power supply before attempting to open the unit.

During the operation of this module it is possible that parts of the module, even there is extra-low voltage, (for example shunt measurement) are under dangerous voltage! Therefore a non-observance of this caution may cause damage of property or physical injury.

Only trained qualified personnel should install or operate the unit. Before installation the qualified personnel should read the documentation and should familiarize themselves with the unit.

If there is visible damage to the body of the unit it should be immediately replaced and not put into operation.



Please ensure that there is a sufficient prevention against electrostatic discharge during installation of the unit.

Installation Information:

Pay attention and make sure the unit is far away from mounted sources that may disturb the device such as magnetic coils, transformers, frequency converters etc.

Wiring advice:

Use only shielded cables. The shield is to be connected extensively to ground. Do not mix power- and signal-wires/cables in the same cable tray.

Limited warranty:

The LEG Industrie-Elektronik GmbH warranted that the product does not have any material or processing defects in a period of 5 years after date of delivery.

It is up to the choice of LEG to repair or to exchange an inoperative unit.

Subsequent damages or any claim for indemnification above the functionality of the unit are excluded.

This limited warranty is only valid if ...

1. the product was installed and put into operation according to the LEG operation documentation;
2. the technical configuration of the power supply was abided;
3. the product was not used for unintended purposes;
4. there were no unauthorized modifications or manipulations, misuse or repairs without previous agreement from LEG .

Our Terms of Trade are based on the "General Conditions for the supply of products and services of the Electrical and Electronics Industry" including the "Complementary Clause: Extended Reservation of Property" of the ZVEI e.V. (German Association of Electrical Manufacturers).

Miscellaneous:

We expressly reserve the right, without previous notice, to correct errors contained in any data of this information brochure, and to make alterations to the program and technical modifications.