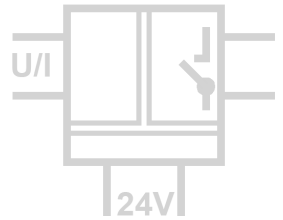


Limit Value Monitor DG 3101

Economical Monitoring of Standard Signals
with one Relay Output



The Limit Value Monitor DG 3101 is used to monitor measured values in 0(4) ... 20 mA and 0 ... 10 V standard signal circuits. A transmitter supply +Us is provided for the operation of 2-wire transmitters.

The switching output can be configured with the analog control electronics as MIN or MAX alarm in open-circuit or closed-circuit operation.

All setting elements are located behind the openable front cover and can also be operated when the unit is mounted. The switching point and the switching hysteresis can be adjusted with potentiometers. The monitoring state is indicated by a yellow LED.

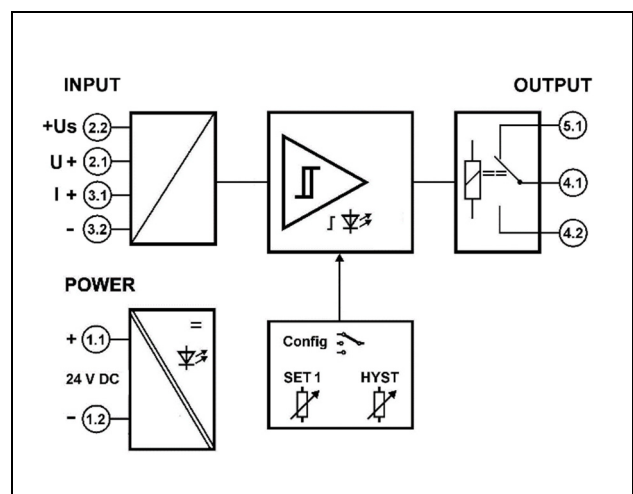
The relay changeover contact switches high power loads up to 6 A.

The Protective Separation and the 24 V DC power supply makes the DG 3101 universally applicable for all measurement and industrial applications, as well as for building automation.

- **Easy configuration on front panel**
Operating mode switchable via DIP switch, switch point and hysteresis adjustable with potentiometer
- **Status indication by LED**
Easy monitoring and switching point adjustment
- **True 4-port separation**
Protection against erroneous measurements due to parasitic voltages or ground loops
- **Protective Separation acc. to EN 61010**
Protects service personnel and downstream devices against impermissibly high voltage
- **High reliability and noise immunity**
No microprocessor, no integrated software
- **Extremely slim design**
12.5 mm slim housing for a simple and space saving DIN rail mounting
- **5 Years Warranty**
Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant



Block diagram



Technical Data

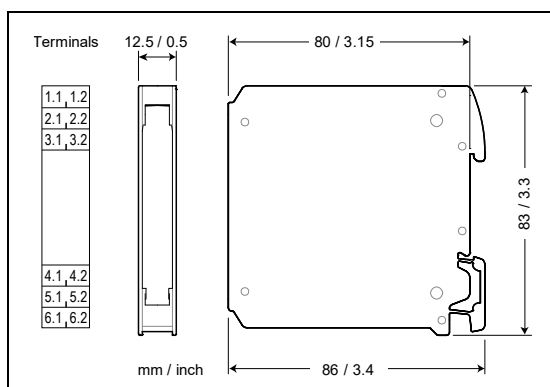
Input		
Input ranges	0(4) ... 20 mA	0 ... 10 V
Input resistance	Current input approx. 5 Ω	Voltage input approx. 120 kΩ
Overload max.	Current input 200 mA	Voltage input 300 V
Transmitter supply +Us	16 V at U _{Power} = 24 V, (13 V ... 22 V depending on the supply voltage) current limited ≤ 30 mA	
Switch point setting	0 to 110 % with 12-turn potentiometer	
Hysteresis setting	0 to 6 % or 0 to 60 % of measuring range switchable, adjustable with potentiometer	
Output		
Contact type	1 changeover relay (SPDT)	
Switching capability AC max.	250 V / 6 A	1500 VA
Switching capability DC max.	250 V / 0.2 A	115 V / 0.3 A 30 V / 6 A
	Recommended minimum load 300 mW / 5 V / 5 mA	
Status indication	yellow LED	
Response time	approx. 20 ms	
General Data		
Switch error	< 0.2 % full scale	
Temperature coefficient ¹⁾	< 150 ppm/K	
Test voltage	4 kV AC, 50 Hz, 1 min. input against power supply against switching output	
Working voltage (Basic Insulation) ²⁾	1000 V AC/DC for overvoltage category II and 600 V AC/DC for overvoltage category III according to DIN EN 61010 with pollution degree 2 between input, power supply and switching output.	
Protection against electrical shock ²⁾	Protective separation according to DIN EN 61140 by reinforced insulation according to DIN EN 61010 up to 600 V AC/DC at overvoltage category II and 300 V AC/DC at overvoltage category III at pollution degree 2 between input, power supply and switching output.	
Power supply	24 V DC, ± 15 %, approx. 0.8 W	
Ambient temperature	Operation	- 20 °C to + 60 °C (–4 to + 140 °F)
	Transport and storage	- 35 °C to + 85 °C (–31 to + 185 °F)
EMC ³⁾	EN 61326-1	
MTBF (acc. to EN 61709 / SN 29500)	575.4 years (T _{amb.} 40 °C, FIT 198)	

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C

2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

Dimensions



Subject to change!

Construction

12.5 mm (0.5") housing, protection class IP 20
mounting on 35 mm DIN rail acc. to EN 60715
Weight 70 g

Connection

Captive plus-minus clamp screws
Wire cross-section max. 2.5 mm² / AWG 14
Stripped length 6 ... 8 mm / 0.28 in
Screw terminal torque 0.8 Nm / 7 lbf in

Product line

Device	Order No.
Limit Value Monitor with relay contact	DG 3101