

## Gas and air pressure switches type GW, UW, LGW

Pressure limiter  
type UB and NB

Dual pressure  
switches GW/GW  
for gases and air

**DUNGS**<sup>®</sup>  
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### Technique

The GW, UW, LGW pressure switch, the UB, NB pressure limiters and the GW/GW dual pressure switches are suitable for connecting, disconnecting or changing over an electric circuit, to regulate a set nominal pressure when the actual pressure is varying.

The pressure switches may be used as excess pressure switches, vacuum switches or differential pressure switches for air and non-aggressive gases as well as gases contained in the DVGW work sheet G 260. The switching point can be quickly and easily set by means of a calibrated knob, without having to use a pressure gauge. The pressure switches are tested by the DVGW in accordance with DIN 3398.

- High inlet pressure
- Easy adjustment of the nominal value using the scale
- Small switching hysteresis
- High contact load
- Contact lug for position marking



### Application

For use with gas burners, air-conditioning and filter equipment.

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## Function

### Excess pressure switch GW

The instrument reacts to positive pressure and connects, disconnects or changes over an electric circuit when the set nominal value is exceeded.

### Vacuum switch UW

The instrument reacts to a vacuum and connects, disconnects or changes over an electric circuit when the pressure exceeds or falls below the set nominal value. Vacuum: absolute value = barometer reading minus nominal value.

### Differential pressure switch LGW

The instrument reacts to the pressure differential between the two pressure chambers and connects, disconnects or changes over an electric circuit if the pressure exceeds or drops below the set nominal value. No additional sealing is required.

May also be used as a single-action pressure switch (connection via R 1/4" internal thread). The pressure switch has two completely separate pressure chambers.

### Pressure limiter

The instrument reacts to excess pressure. Shut-off occurs if the pressure exceeds or falls below the set nominal value. After the problem has been remedied the unit can only be put back into operation again by hand, by releasing the shut-off device on the pressure limiter. The operating pressure is indicated by a signal lamp.

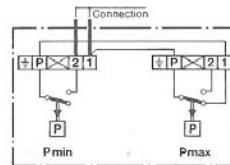
A pressure limiter for vacuum conditions is available on request, for which the above data applies.

**ÜB/1** switches and shuts off when the pressure exceeds set point.

**NB/1** switches and shuts off when the pressure falls below set point.

### Dual pressure switch Mini-Maxi

This pressure switch is a combination of two complete but independently working systems of the GW type. Adjustment of the nominal values for both systems takes place independently. Both switches are connected to a common pressure chamber.



## Technical Data

Max. operating pressure: see brief technical summary

Temperature ranges ambient temperature -15 °C to +60 °C  
Temperature of medium -15 °C to +80 °C

Materials Die cast aluminium housing for gas supply;  
Diaphragms: NBR based; Switch contacts: silver nickel  
Measuring connection: as a special feature the pressure switches can be supplied with R 1/4" + R 1/8" measuring nipples

Electrical connection to screw terminals via PG 11, voltage 250 V A.C.  
switching capacity: ohmic 5 A, inductive 3 A cos. φ 0.6  
degree of protection IP 54  
standard cable inlet:  
PG 11 with universal seal for cable φ 7 to φ 12.5 mm  
special cable inlet:  
plug and socket connection with angle connector in accordance with DIN 43650 3-pin and earthing contact

Adjusting tolerance ±15% (scale calibrated whilst pressure is increasing)

## Schematic diagram

### Switching function

Whilst pressure is increasing

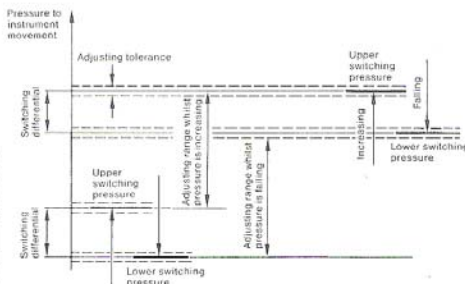
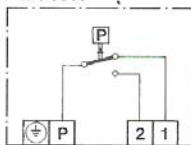
P-1 opens

P-2 closes

Whilst pressure is falling

P-1 opens

P-2 closes



## Assembly and installation instructions

### Pressure connection

R 1/4"-internal thread in accordance with DIN 2999, centrally located on the underside. Further connections, R 1/4"-internal thread on the left or right hand side, as well as an O-ring flange connection are available on special models.

### Measuring connection

A measuring connection with R 1/4" thread can be fitted if desired.

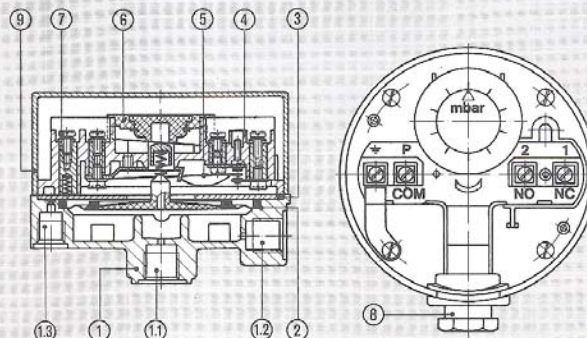
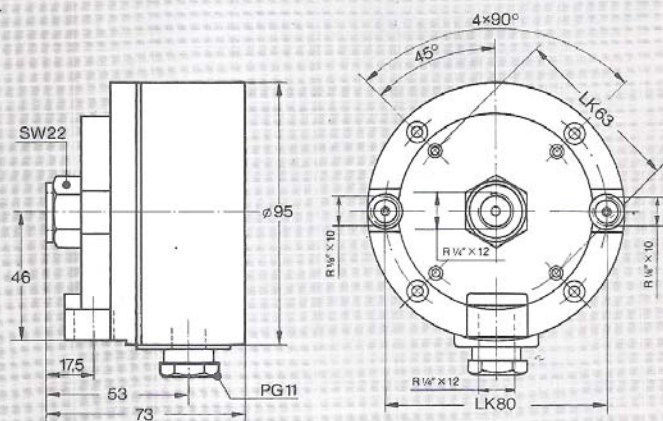
### Mounting

There are 4 symmetrically arranged holes  $\phi 3.7$  mm, in the lower section for mounting the pressure monitor on a frame or bracket using self-tapping screws.

### Installation position

- Arbitrary
- Standard: Horizontal (with the diaphragm horizontal)
  - Vertical (with the diaphragm vertical)
  - Horizontal (suspended, with the diaphragm horizontal)
  - For any intermediate positions please send installation sketches.

### Pressure switches GW, LGW, UW, NB, UB



- 1 = Lower section
- 1.1 = Gas connection R 1/4"
- 1.2 = Measuring connection
- 1.3 = Differential connection R 1/8" for LGW
- 2 = Diaphragm
- 3 = Washer
- 4 = Switch housing
- 5 = Snap-action contact spring
- 6 = Adjusting scale
- 7 = Connection terminals
- 8 = PG-11 connection
- 9 = Protective cover



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**Brief technical summary**

	Type	Ordering No.	Adjusting range (mbar)		Switching differential (mbar)		Air	Gas	Max. operating pressure (mbar)
<b>Gas and air pressure switch</b>	GW 3	030049	0.4-3		≤ 0.3		X	X	600
	GW 10	031948	1-10		≤ 0.4		X	X	600
	GW 50	031955	2.5-50		≤ 1		X	X	600
	GW 150	032086	30-150		≤ 3		X	X	600
	GW 500	059964	100-500		≤ 10		X	X	2000
	GW 1500	077222	300-1500		≤ 30		X	X	3000
	GW 6000	066555	1000-6000		≤ 300		X	X	9000
<b>Dual pressure switch</b>	GW 3/3	066605	0.4-3	0.4-3	≤ 0.3	≤ 0.3	X	X	600
	GW 3/10	066613	0.4-3	1-10	≤ 0.3	≤ 0.4	X	X	600
	GW 10/10	066621	1-10	1-10	≤ 0.4	≤ 0.4	X	X	600
	GW 10/50	066639	1-10	2.5-50	≤ 0.4	≤ 1	X	X	600
	GW 10/150	066647	1-10	30-150	≤ 0.4	≤ 3	X	X	600
	GW 50/50	066654	2.5-50	2.5-50	≤ 1	≤ 1	X	X	600
	GW 50/150	066662	2.5-50	30-150	≤ 1	≤ 3	X	X	600
	GW 150/150	066670	30-150	30-150	≤ 3	≤ 3	X	X	600
	GW 500/500	066688	100-500	100-500	≤ 10	≤ 10	X	X	2000
	<b>Differential pressure switch</b>	LGW 3	049379	0.4-3		≤ 0.3		X	X
LGW 10		053579	1-10		≤ 0.4		X	X	600
LGW 50		053587	2.5-50		≤ 1		X	X	600
LGW 150		053595	30-150		≤ 3		X	X	600
LGW 500		084260	100-500		≤ 10		X	X	2000
<b>Vacuum switch</b>	UW 3	063636	0.4-3		≤ 0.3		X	X	100
	UW 10	063644	1-10		≤ 0.4		X	X	100
	UW 50	063651	2.5-50		≤ 1		X	X	200
	UW 150	063669	30-150		≤ 3		X	X	200
	UW 500	063677	100-500		≤ 10		X	X	600
<b>Pressure limiter</b>	ÜB 50/1	108035	2.5-50				X	X	600
	ÜB 150/1	110098	30-150				X	X	600
	ÜB 500/1	110106	100-500				X	X	2000
	NB 50/1	108043	2.5-50				X	X	600
	NB 150/1	110114	30-150				X	X	600
	NB 500/1	110122	100-500				X	X	2000

**Ordering example:**

Type GW 3  
Ordering No. 030049  
Installation position horizontal  
Calibrated with **increasing** pressure

Subject to alterations, in the interest of technical advances.

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