

# Pressure limiter ÜB...A4 and NB...A4

5.06

# DUNGS®



## Technical description

The pressure limiters ÜB...A4 and NB...A4 are adjustable pressure switches for automatic burner controls. They are suitable for switching a circuit on, off or over on changes in actual pressure value relative to the set reference value.

The reference value (switching point) is adjusted on a setting wheel provided with a scale. Test nipple integrated in metal housing as standard.

## Application

Pressure monitoring in firing, ventilation and air-conditioning systems. Suitable for gases of families 1,2,3 and other neutral gaseous media.

## Approvals

EC type test approval as per EC Gas Appliance Directive:

ÜB...A4	CE-0085 AO 3220
NB...A4	CE-0085 AO 3220

EC type test approval as per EC Pressure Equipment Directive:

ÜB...A4	CE0036
NB...A4	CE0036

Approvals in other important gas-consuming countries. Special designs for the North American market with U<sub>L</sub>, FM and CSA registrations.

### Functional description

Single-acting pressure limiter in pressure range.

The pressure limiters work without using any auxiliary power.

### ÜB...A4, NB...A4 pressure limiters

The control unit responds to pressure. Interlock is performed when the set reference value is exceeded or undershot.

The "Locked" switching state is indicated by a glow lamp.

Restart is only possible by activating the reset button on the setting wheel of the pressure limiter after the operating pressure is attained.

**ÜB...A4:** Switches and locks when the set pressure is exceeded.

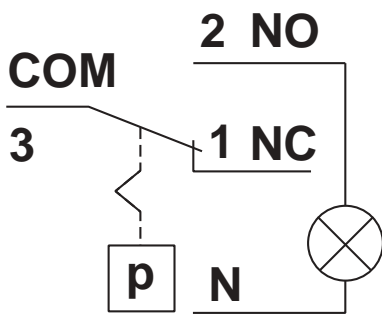
**NB...A4:** Switches and locks when the set pressure is undershot.

#### ÜB...A4 switching function

##### As pressure rises

2 NO closes, 1 NC opens

Glow lamp ON, locked.

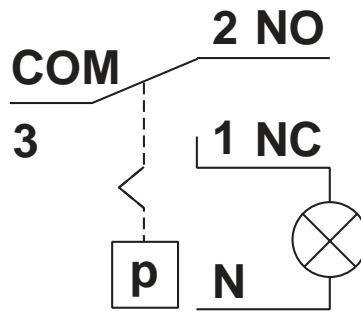


#### NB...A4 switching function

##### As pressure falls

2 NO opens, 1 NC closes

Glow lamp ON, locked.



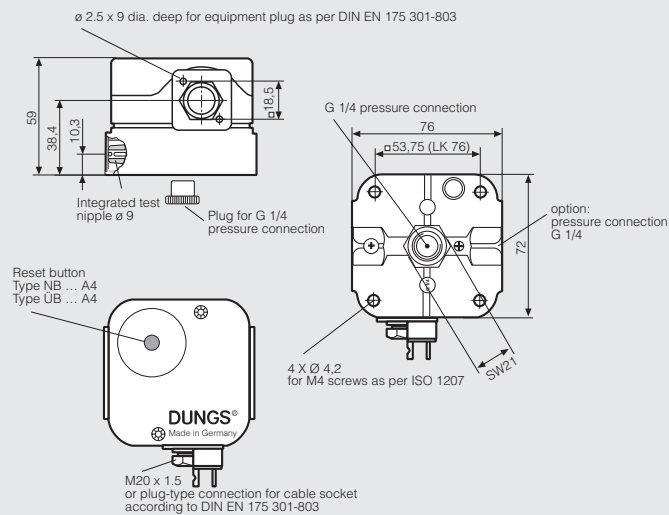
Operating state

## Specifications

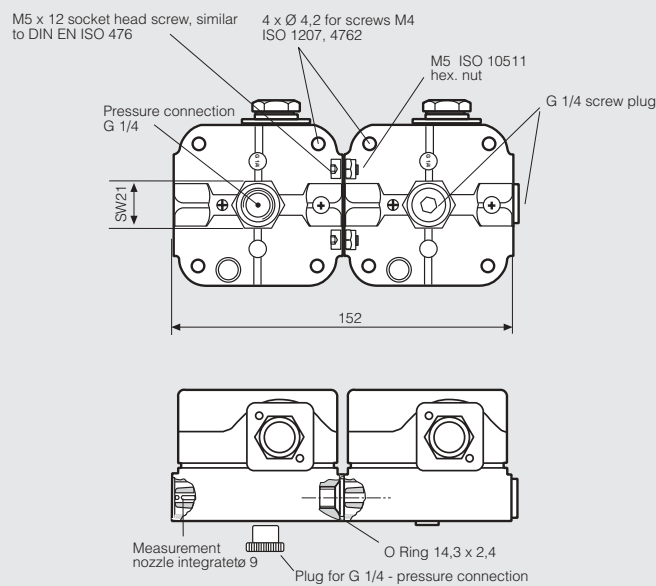
Max. operating pressure	NB, ÜB 50-150 A4 NB, ÜB 500 A4	500 mbar (50 kPa) 600 mbar (60 kPa)
Pressure connection	Standard: Optional:	G 1/4 female thread on centre of housing underside as per ISO 228 additionally G 1/4 female thread on opposite measuring connection side
Measuring connection	Test nipple integrated in metal housing, $\varnothing$ 9	
Temperature range	Ambient temperature Medium temperature Storage temperature	-15 °C to +60 °C -15 °C to +60 °C -30 °C to +80 °C
Materials	Housing Switch Diaphragms Switching contact	aluminium die casting polycarbonate NBR Ag, fine silver
Switching voltage	AC eff. min. 10 V DC min. 12 V	max. 250 V max. 48 V
Nominal current	AC eff. 10 A	
Switching current	AC eff. min. 20 mA AC eff. min. 20 mA DC min. 20 mA	max. 6 A at $\cos \varphi$ 1 max. 3 A at $\cos \varphi$ 0,6 max. 1 A
Electrical connection	Standard: Special design:	at screw terminals via M20 x 1,5 cable gland plug connection for line sockets as per DIN EN 175 301-803, 3-pin with protective contact
Degree of protection	IP 54 as per IEC 529 (EN 60529)	
Adjustment	In a vertical position NB...A4: As pressure falls ÜB...A4: As pressure rises If installation position deviates, note change in switch point	
Setting tolerance	$\pm$ 15% switching point deviation based on the setpoint and with unit installed in a vertical position	

## Dimensions [mm]

### ÜB ... A4, NB ... A4

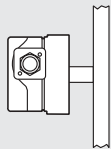


### ÜB, NB ... A4/ÜB, NB ... A4

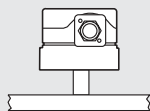


SW = Wrench width

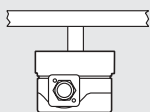
## Installation position



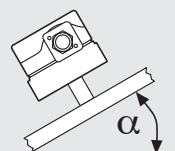
### Standard installation position



When installed horizontally, the pressure switch switches at a pressure higher by approx. 0.5 mbar.

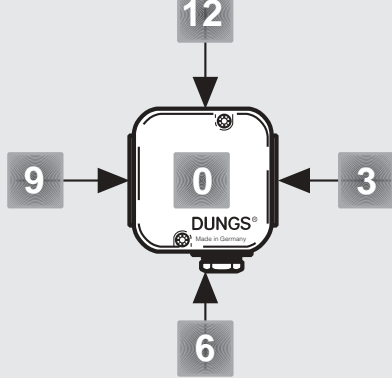


When installed horizontally overhead, the pressure switch switches at a pressure lower by approx. 0.5 mbar.



When installed in an intermediate installation position, the pressure switch switches at pressure deviating from the set reference value by max.  $\pm 0.5$  mbar.

## Designation



## Order example

### Pressure switch design

ÜB pressure limiter

### Setting range

30 - 150 mbar

### Contact material

Ag fine silver

### Electrical connection

Cable gland M20 x 1,5

### Test nipple

MS 9

### Pressure connection G1/4

V0-VS3: an Position 0 and Position 3  
with screw plug

## ÜB 150 A4 [Ag-M-MS9-V0-VS3]

## ÜB 150 A4 [Ag-M-MS9-V0-VS3]

► **Pressure connection**  
V0 Pressure connection G 1/4  
Position 0  
V3 Pressure connection G 1/4  
Position 3

► **Screw plug**  
VS0 Screw plug at  
position 0  
VS3 Screw plug at  
position 3

► **Instrument gland**  
MS3 Test nipple at position 3  
MS9 Test nipple at position 9

► **Electrical connection**  
M M20 x 1.5 cable gland  
G3 Equipment plug, 3 pin + E

► **Contact material**  
Ag Fine silver (standard)

► **Setting ranges (mbar)**

		NB	ÜB
50	2.5 - 50	X	X
150	30 - 150	X	X
500	100 - 500	X	X

► **Pressure switch design**  
ÜB ... A4 Pressure limiter switches and  
locks if set reference value is  
exceeded.  
NB ... A4 Pressure limiter switches and  
locks if set reference value is  
undershot.

## Accessories for pressure switches NB...A4, ÜB...A4

## Order No.

Kit: G3 equipment plug, 3-pin + E, NB/ÜB A2/A4

227 644

Glow lamp and series resistor (50 x)  
230 V AC (spare part requirement NB, ÜB)

231 766

Glow lamp and series resistor (50 x)  
120 V AC (spare part requirement NB, ÜB)

231 768

Pilot lamp 24 V AC/DC (50 x)

231 771

Line socket, 3-pin + E  
grey GDMW

210 318

G 1/4 test nipple  
and seal ring (5 x)

230 398

G 1/4 screw plug  
and seal ring (5 x)

230 396

Metal mounting bracket

230 288

Mounting Kit Double Pressure Switch

213 910



**Pressure limiter  
ÜB...A4 and NB...A4**

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**Technical data**

1 mbar = 100 Pa = 0.1 kPa ≈ 10 mm WS

1 Pa = 0.01 mbar ≈ 0.1 mm WS

Type	Version [Ag-M-MS9-V0] Glowlamp ~ (AC) 230 V	Order No.	Setting range [mbar]		Switching difference $\Delta p$ [mbar]
<b>ÜB...A4</b> pressure limiter	ÜB 50 A4	210 537	2.5 - 50		--
	ÜB 150 A4	138 630	30 - 150		--
	ÜB 500 A4	210 970	100 - 500		--
<b>NB...A4</b> pressure limiter	NB 50 A4	210 534	2.5 - 50		--
	NB 150 A4	210 931	30 - 150		--
	NB 500 A4	210 971	100 - 500		--

We reserve the right to make any changes in the interest of technical progress.

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