

Pressure limiter for multiple actuators

ÜB...A2
NB...A2

DUNGS[®]
Combustion Controls

5.07



Technical description

The pressure limiters ÜB...A2 and NB...A2 are compact pressure switches as per EN 1854 for DUNGS multiple actuators.

The pressure switches are suitable for switching a circuit on, off or over on changes in actual pressure value relative to the set reference value. The reference valve (switching point) can be set easily and quickly by means of a setting wheel provided with a scale without the use of a pressure gauge.

Application

Pressure switches for DUNGS multiple actuators GasMultiBloc and DMV double solenoid valve. Various mounting options directly on housing or by means of an adapter.

Standard mounting on valve housing on

the inlet side via threaded flange. 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 A2	CE-0085 AO 3220
NB A2	CE-0085 AO 3220

EC type test approval as per EC Pressure Equipment Directive:

ÜB A2	CE0036
NB A2	CE0036

Approvals in other important gas-consuming countries. Special designs for the North American market with U_L, FM and CSA registrations.

Functional Description

Single-acting pressure limiters in the superpressure range.

The pressure limiters work without external energy supply.

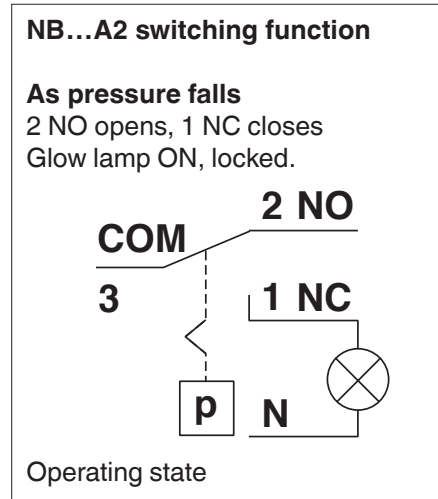
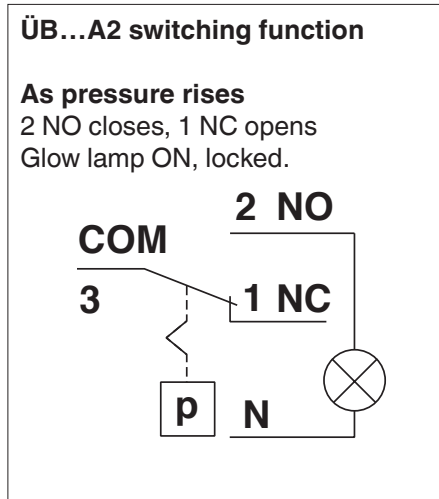
Pressure limiters ÜB...A2 / NB...A2

The switching mechanism reacts to superpressure. The system is locked if the set reference value is exceeded

or undershot. After the fault has been remedied, the system can be put into operation only manually by actuating the unlocking device on the pressure limiter. The switching state „Locked“ is indicated by a neon glow lamp.

ÜB...A2: Switches on and locks if the set pressure value is exceeded.

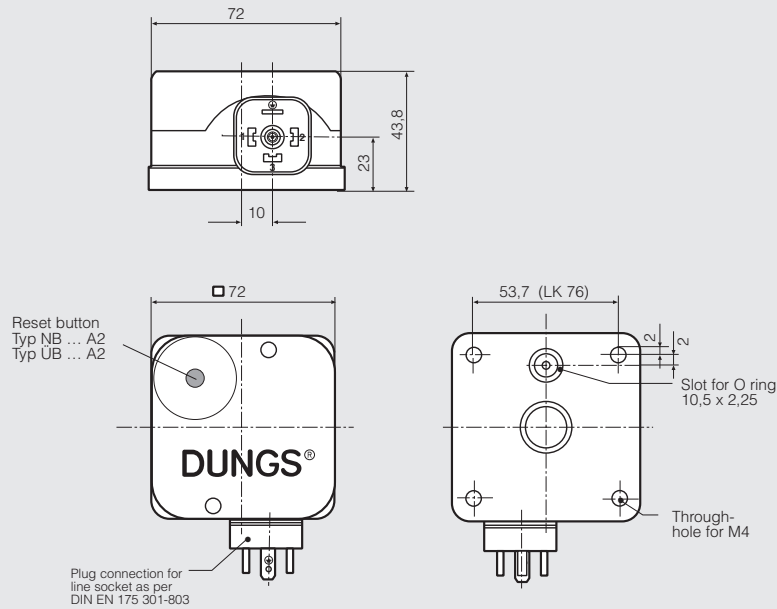
NB...A2: Switches on and locks if the pressure is lower than the set pressure value.



Specifications

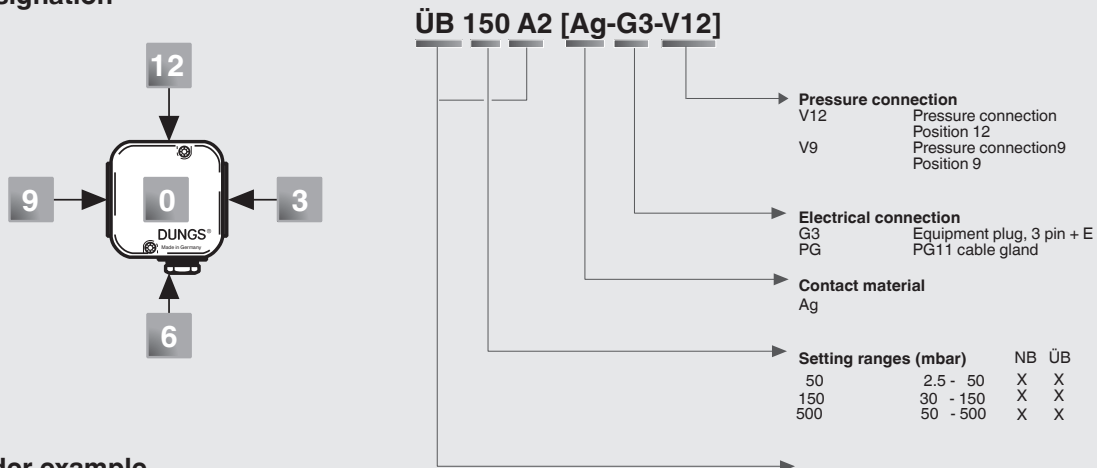
Max. operating pressure	NB...A2, ÜB...A2	500 mbar (50 kPa)	
	NB 500 A2, ÜB 500 A2	600 mbar (60 kPa)	
Pressure connection	O ring flange connection on underside of pressure switch		
Temperature range	Ambient temperature	-15 °C to +70 °C	
	Medium temperature	-15 °C to +70 °C	
	Storage temperature	-30 °C to +80 °C	
Materials	Housing	aluminium die casting	
	Switch	polycarbonate	
	Diaphragms	NBR	
	Switching contact	Ag	
Switching voltage	AC eff.	min. 10 V	max. 250 V
	DC	min. 12 V	max. 48 V
Nominal current	AC eff.	10 A	
Switching current	AC eff.	max. 6 A	at cos φ 1
	AC eff.	max. 3 A	at cos φ 0.6
	AC eff.	min. 20 mA	
	DC	min. 20 mA	max. 1 A
Electrical connection	Standard:	plug connection for line sockets as per DIN EN 175 301-803, 3-pin with protective contact	
	Special design:	at screw terminals via cable gland, PG11	
Degree of protection	IP 54 as per IEC 529 (EN 60529)		
Adjustment	In vertical installation position NB...A2: when the pressure drops ÜB...A2: when the pressure rises If the installation position is different, take the switch point change into account.		
Setting tolerance	±15% switching point deviation referred to reference value		

Dimensions [mm] NB...A2, ÜB...A2



Adapter	Order No.	For Equipment / type	Nominal diameters
Mounting kit	223 280	MB-..., DMV-...	Rp 3/8 - DN 125
Adapter p _{Br}	214 975	MB-D ... 405-420 MB-Z ... 405-420 DMV- ... 503-520/11	Rp 3/8 - Rp 2 Rp 3/8 - Rp 2 Rp 3/8 - Rp 2
Adapter on threaded flange G 1/8	221 630	MB- ... 405-412 DMV- ...	Rp 3/8 - Rp 1 1/4 Rp 3/8 - Rp 2
Adapter kit for GW ... A2 with G 1/4 connection	222 982	MB-... 415,420 DMV	Rp 1 - Rp 2 Rp 3/8 - Rp 2

Designation



Order example

Pressure switch design

ÜB pressure limiter

Setting range

30 - 150 mbar

Contact material

Ag

Electrical connection

Cable gland

Pressure connection

Position 12

ÜB 150 A2 [Ag-G3-V12]

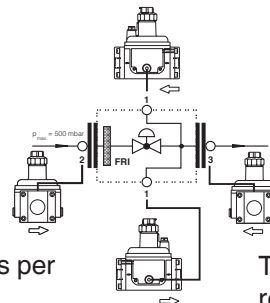
Pressure switch design

ÜB ... A2 Pressure limiter switches and locks if set reference value is exceeded.
NB ... A2 Pressure limiter switches and locks if set reference value is undershot.

NB...A2 / ÜB...A2 mounting options
FRI gas pressure regulator

Pressure tap NB...A2 / ÜB...A2 mounting possible...

1	yes
2	yes
3	yes



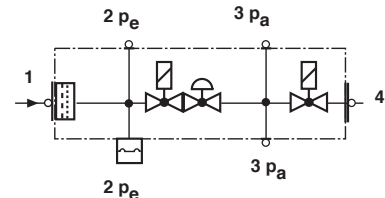
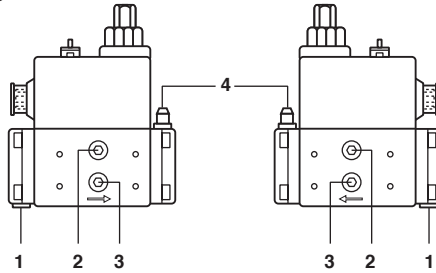
1,2,3 seal plug G 1/8 as per DIN ISO 228

The seal plugs 1 can also be replaced by an instrument gland

NB...A2 / ÜB...A2 mounting options
MB 053-403 GasMultiBloc

Pressure tap NB...A2 / ÜB...A2 mounting possible...

1	yes, with # 221 630
2	yes
3	yes
4	yes, with # 221 630

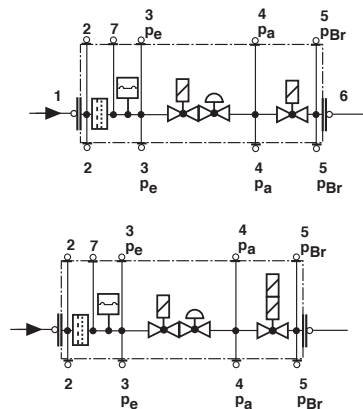
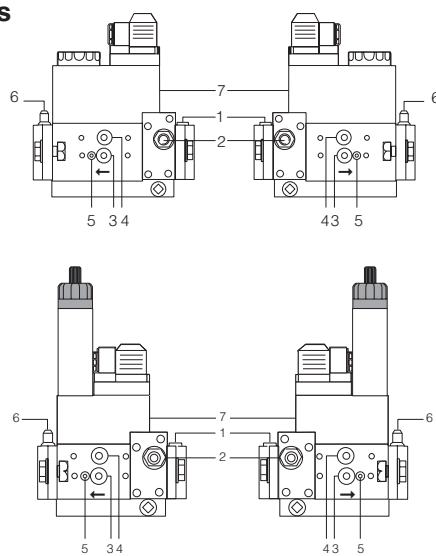


1,3 seal plug G 1/8
2 Instrument gland, optional
4 Instrument gland

NB...A2 / ÜB...A2 mounting options
MB-D; MB-Z 405-412 Gas MultiBlocs

Pressure tap NB...A2 / ÜB...A2 mounting possible...

1	alternatively to 7
2	no
3	yes
4	yes
5	yes, with # 214 975
6	yes, with # 221 630
7	yes

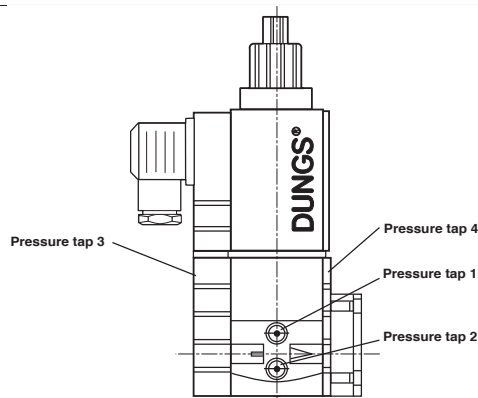


1,3,4 seal plug G 1/8
2,6 Instrument gland, optional G 1/8
5 M4 inner hex

NB...A2 / ÜB...A2 mounting options
Safety solenoid valve
SV-... 505-520

Pressure tap NB...A2 / ÜB...A2 mounting possible...

	SV 505/507	SV 510/512	SV 520
1	pe	pa	pa
2	no	pe	pe
3	no	pe ^{1,(2)}	pe ¹⁾
4	pa with 221 630 horizontal	pa ²⁾	pa



Pressure taps for 1, 2 and 4 are installed depending on the SV model.

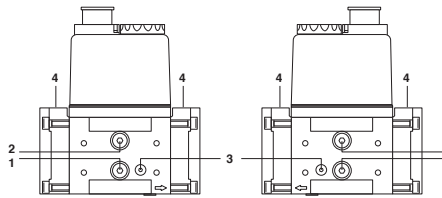
¹⁾ Not with appliance connector model

²⁾ For pressure switch assembly, pay attention to the flange attachment

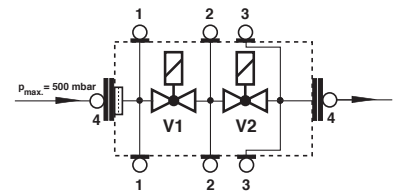
**NB...A2 / ÜB...A2 mounting options
DMV 503/11 double solenoid valve**

**Pressure tap NB...A2 / ÜB...A2
mounting possible...**

1	yes
2	yes
3	yes, with # 214 975
4	yes, (horizontal) with # 221 630 (vertical)



1,2,4
G 1/8 seal plug as per
DIN ISO 228
3
G 1/8 seal plug M4

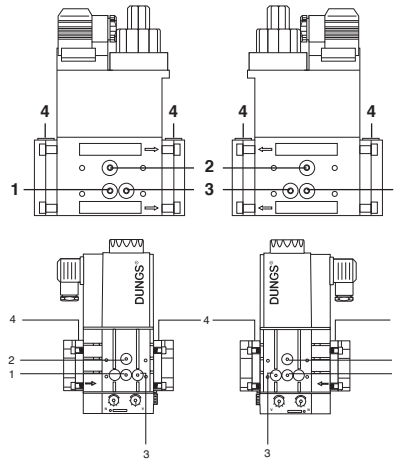


The seal plugs **1,2,4** can also be replaced by an instrument gland

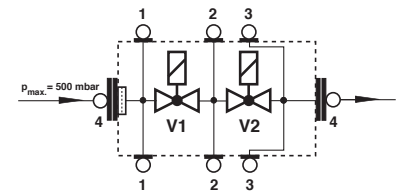
**NB...A2 / ÜB...A2 mounting options
DMV 507-520/11 double solenoid valve, MB 415-420, MBC-300/700/1200**

**Pressure tap NB...A2 / ÜB...A2
mounting possible...**

1	yes
2	yes
3	yes, with # 214 975
4	yes, (horizontal) with # 221 630 (vertical)



1,2,3,4
G 1/8 seal plug as per
DIN ISO 228

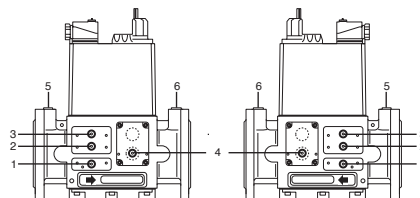


The seal plugs **1,2,3** can also be replaced by a G 1/8 instrument gland as per DIN ISO 228

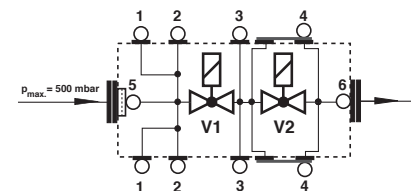
**NB...A2 / ÜB...A2 mounting options
DMV 525,5040-5125/11 double solenoid valve
DMV-1500-D, DMV...-65 - DMV...-125
MBC...-65 - MBC...-100 (pressure tap 4 no)**

**Pressure tap NB...A2 / ÜB...A2
mounting possible...**

1	yes
2	yes
3	yes
4	yes
5	no
6	no



1,2,3,4
G 1/8 seal plug as per
DIN ISO 228
5,6
G 1/4 DIN ISO 228



The seal plugs **1,2,3,4** can also be replaced by a G 1/8 instrument gland as per DIN ISO 228

**Pressure limiter for
multiple actuators**

**ÜB...A2
NB...A2**



Technical data 1 mbar = 100 Pa = 0.1 kPa ≈ 10 mm WS 1 Pa = 0.01 mbar ≈ 0.1 mm WS

Type	Version [AG-G3-V12] Neon glow lamp ~(AC) 230 V	Order No.	Setting range [mbar]	Switching difference Δp [mbar]
ÜB...A2 pressure limiter	ÜB 50 A2	215 242	2.5 - 50	--
	UB 150 A2	215 245	30 - 150	--
	ÜB 500 A2	215 246	100 - 500	--
NB...A2 pressure limiter	NB 50 A2	215 237	2.5 - 50	--
	NB 150 A2	215 240	30 - 150	--
	NB 500 A2	215 241	50 - 500	--

Accessories for pressure switch NB...A2, ÜB...A2	Order No.
Neon glow lamp with protective resistor (50 x) ~(AC) 220 V (Spare part NB, ÜB)	231 766
Neon glow lamp with protective resistor (50 x) ~(AC) 120 V (Spare part NB, ÜB)	231 768
Signal lamp 24 V AC/DC (50 x)	231 771
Line sockets, 3-pin + E, grey GDMW	210 318

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

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