Compact pressure switches for gas and air GW...A6 GW...A6/1

DUNGS®

Double pressure switch GW... / ...A6

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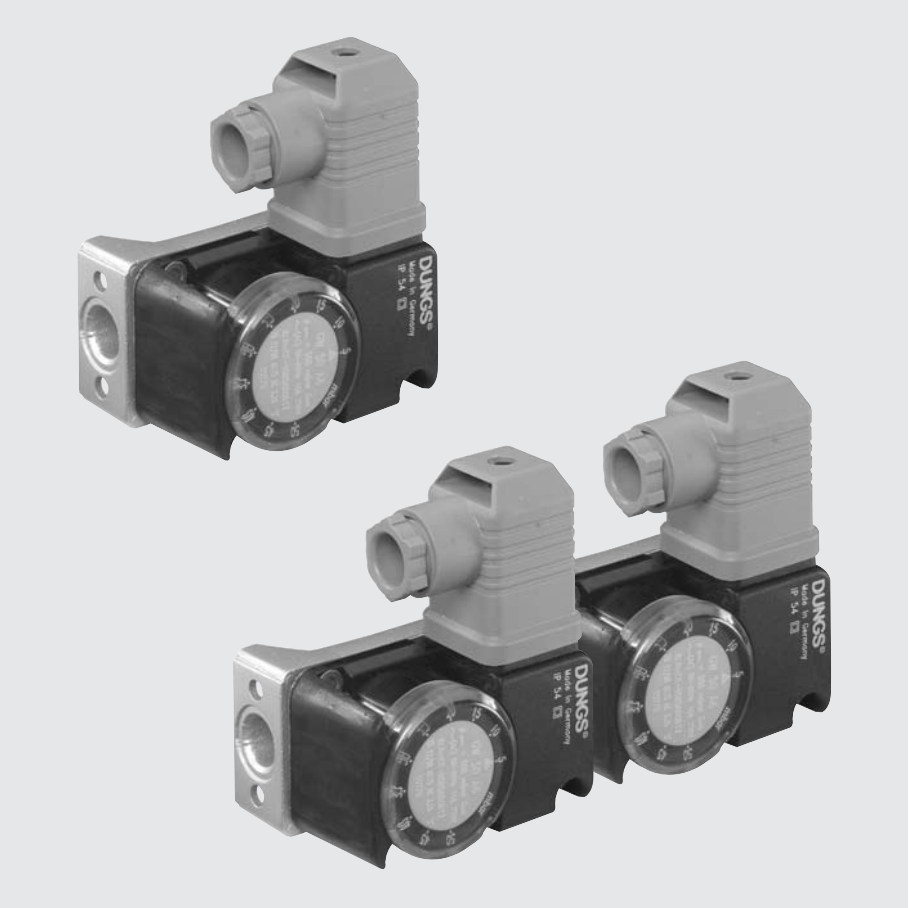

Technical description

The pressure switch GW…A6 and the double pressure switch GW…/…A6 are adjustable compact pressure switches for firing systems.
They are suited for switching a circuit on, off or over if the actual pressure value changes compared to the setpoint.
The setpoint (switching point) is set on an adjusting wheel with scale. A test nipple is integrated in the metal housing as standard.

Application

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

Approvals

EC type test approval as per EC Gas Appliance Directive:

GW...A6	CE-0085 AO 3220

EC type test approval as per EC Pressure Appliance Directive:

GW...A6	CE0036

Approvals in other important gas-consuming countries.

TÜV (German Technical Inspectorate) test as pressure switch; special construction type as per TRD 604 and VdTÜV leaflet, Edition 100/1, as well as Class „S“ as per EN 1854.

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Functional description
Single-acting pressure switch in overpressure range.
The pressure switches operate without any power supply.

Switching response
GW...A6
Short response time during pressure fluctuations.

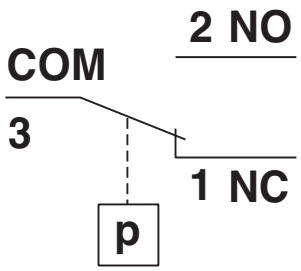
GW...A6/1
Slow response time during short-term pressure fluctuations by additional damping nozzle.

GW...A6 pressure switch
The control unit responds to pressure. If the setpoint is exceeded or undershot, the circuit is switched on, off or over.

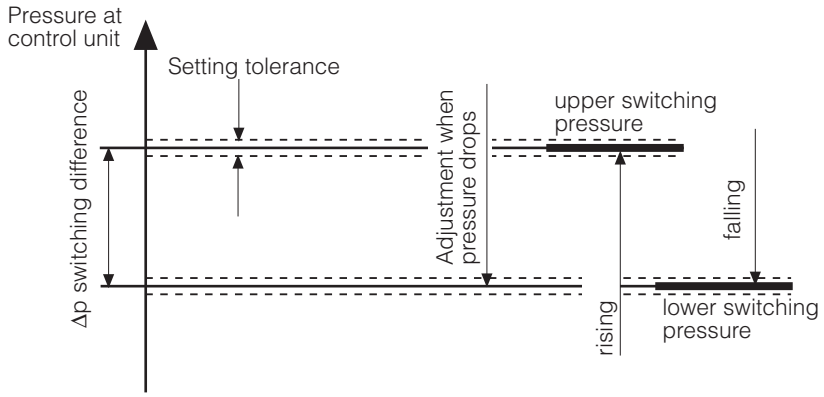
GW... / ...A6 double pressure switch
Combination of two flanged GW...A6 single pressure switches. The two setpoints are set separately and independently. A combination of different setpoint ranges is therefore possible. The two control units are fed from the same medium at the medium's pressure.

Switching function

If pressure increases:
1 NC opens, 2 NO closes.
If pressure drops:
1 NC closes, 2 NO opens.



Definition of Δp switching difference
The Δp switching difference is the pressure difference between the upper and lower switching pressure.



Specifications

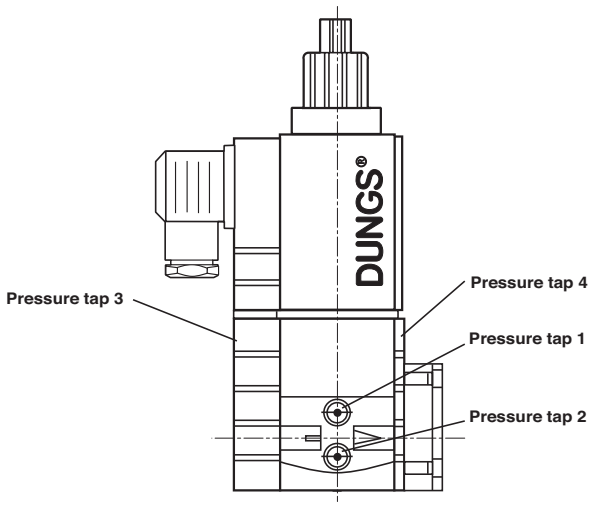
Max. operating pressure	GW 3 A6 - GW 150 A6	500 mbar	(50 kPa)
	GW 500 A6	600 mbar	(60 kPa)
Pressure connection	Standard:	centrally on housing bottom, G 1/4 inner thread as per ISO 228	
	Special design:	additionally G 1/4 inner thread (side right)	
Measuring connection	Test nipple integrated in metal housing ø9		
Temperature range	Ambient temperature	-15 °C to +70 °C	
	Medium temperatue	-15 °C to +70 °C	
	Storage temperature	-30 °C to +80 °C	
Materials	Housing:	Aluminium die cast	
	Switch part:	Polyamide	
	Diaphragms:	NBR	
	Switching contact:	Ag	
Switching voltage	AC eff. min. 24 V	max. 250 V	
	DC min. 24 V	max. 48 V	

Nominal current	**GW 10...500 A6**		**GW 3 A6**	
	AC eff. max.10 A		AC eff. max. 6 A	
Switching current	AC eff. max.6 A	at cos φ 1	AC eff. max. 4 A	at cos φ 1
	AC eff. max.3 A	at cos φ 0,6	AC eff. max. 2 A	at cos φ 0,6
	AC eff.	min. 20 mA	AC eff.	min. 20 mA
	DC	min. 20 mA	DC	min. 20 mA
	DC	max. 1 A	DC	max. 1 A

Electrical connection	Terminal connection for line sockets as per DIN EN 175 301-803, 3-pin, protection-insulated without ground connection
Degree of protection	IP 54 as per IEC 529 (EN 60529)
Setting tolerance	± 15% switch point deviation referred to setpoint, adjusted for **dropping** pressure, vertical diaphragm position

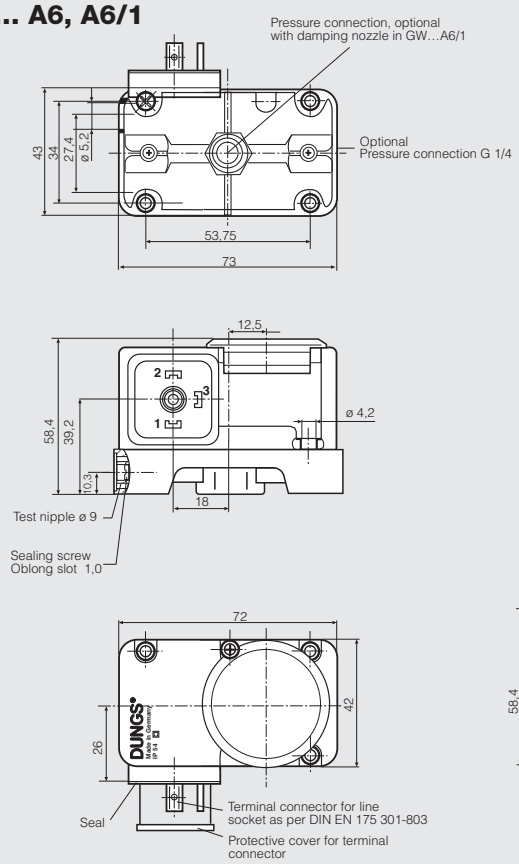
Mounting options GW...A6
Safety solenoid valve
SV-... 505-520

Pressure tap	GW...A6 mounting possible ...
1	**no**
2	**no**
3	**pe (p_1)**
4	**pa (p_2)**

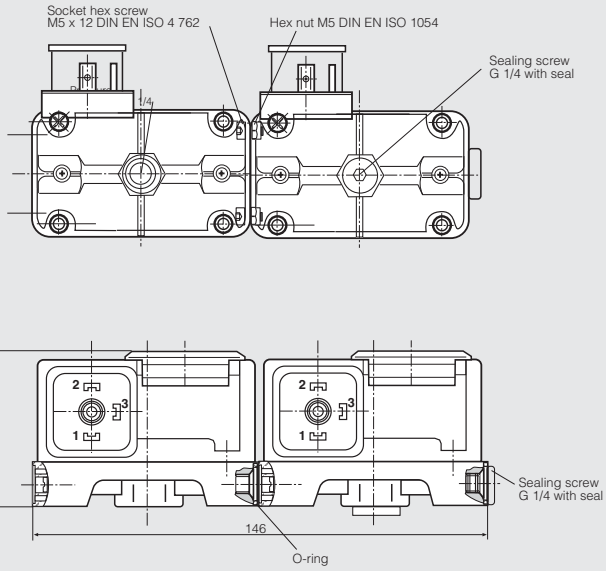


Dimensions [mm]

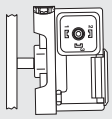
GW ... A6, A6/1



GW ... / ... A6



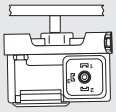
Installation position



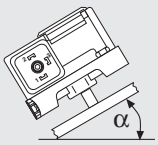
Standard installation position; if a different installation position is used, pay attention to the changed operating points:

GW 3...50 A6	**approx. ± 0,6 mbar**
GW 150 A6	**approx. ± 1 mbar**
GW 500 A6	**approx. ± 3 mbar**

When installed horizontally, the pressure switch switches at a pressure higher.

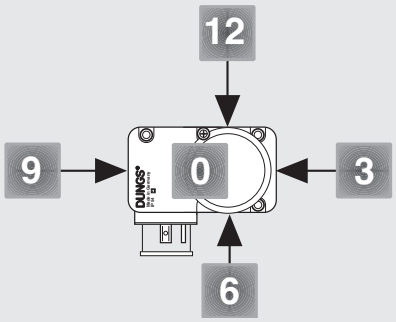


When installed horizontally overhead, the pressure switch switches at a pressure lower.



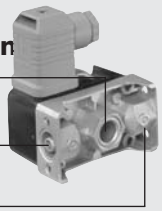
When installed in an intermediate installation position, the pressure switch switches at pressure deviating from the set reference value.

Designation



Order example

Pressure switch design
Setting range
5 - 150 mbar
Contact material
Ag
Electrical connection
Equipment connector
Pressure connection
G 1/4 at position 0
Test nipple
MS 9
Sealing screw
At position 3



GW 150 A6 [Ag-G3-MS9-V0-VS3]

GW 150 A6 [Ag-G3-MS9-V0-VS3]

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

Sealing screw
VS0 Sealing screw at position 0
VS3 Sealing screw at position 3

Test nipple
MS9 Test nipple at position 9

Electrical connection
G3 Equipment connector, 3-pin, protection-insulated, w/o grounding

Contact material
Ag

Setting ranges [mbar]

3	0,7 - 3
10	2 - 10
50	5 - 50
150	5 - 150
500	100 - 500

Pressure switch design
GW … A6 Pressure switch switches when the setpoint is exceeded or undershot.
GW … A6/1 Pressure switch with damping nozzle switches if the set value is exceeded or undershot

Accessories for GW A6 pressure switch	
Line sockets, 3-pin + grounding, grey GDMW	210 318
Test nipple G 1/4 with sealing ring	230 398
Sealing screw G 1/4 with sealing ring	230 396
Mounting kit for double pressure switch	213 910
Mounting bracket, metal	230 288
Mounting kit GW…A6 (for fitting to SV)	242 771

Compact pressure switches
for gas and air
GW...A6
GW...A6/1

Double pressure switch
GW... / ...A6

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Short technical overview 1 mbar = 100 Pa = 0,1 kPa ≈ 10 mm WS 1 Pa = 0,01 mbar ≈ 0,1 mm WS

Type	Design [Ag-G3-MS9-V0]	Order number	Setting range [mbar]		Switching difference Δp [mbar]
GW...A6 pressure switch	GW 3 A6	228 723	0,7 - 3		≤ 0,7
	GW 10 A6	228 724	2 - 10		≤ 1
	GW 50 A6	228 725	5 - 50		≤ 2,5
	GW 150 A6	228 726	5 - 150		≤ 5
	GW 500 A6	228 727	100 - 500		≤ 15
Supplied in collective packaging					

Type	Design [Ag-G3-MS9-V0-VS3]	Order number	Setting range [mbar]		Switching difference Δp [mbar]
GW...A6 pressure switch	GW 3 A6	231 111	0,7 - 3		≤ 0,7
	GW 10 A6	231 112	2 - 10		≤ 1
	GW 50 A6	231 113	5 - 50		≤ 2,5
	GW 150 A6	231 114	5 - 150		≤ 5
	GW 500 A6	231 115	100 - 500		≤ 15
Supplied in separate packaging, including line socket					

Type	Design [Ag-G3-MS9-V0-VS3]	Order number	Setting range [mbar]		Switching difference Δp [mbar]	
GW A6 min. /	GW 3 / 3 A6	229 235	0,7 - 3		≤ 0,7	≤ 0,7
GW A6 max.	GW 3 / 10 A6	229 236	0,7 - 3	2 - 10	≤ 0,7	≤ 1
double pressure switch	GW 10 / 10 A6	229 237	2 - 10		≤ 1	≤ 1
	GW 10 / 50 A6	229 238	2 - 10	5 - 50	≤ 1	≤ 2,5
	GW 10 / 150 A6	229 239	2 - 10	5 - 150	≤ 1	≤ 5
	GW 50 / 50 A6	229 240	5 - 50		≤ 2,5	≤ 2,5
	GW 50 / 150 A6	229 241	5 - 50	5 - 150	≤ 2,5	≤ 5
	GW 150 / 150 A6	229 242	5 - 150		≤ 5	≤ 5
	GW 500 / 500 A6	229 243	100 - 500		≤ 15	≤ 15

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

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