

## Pressure switch for dual modular valves

**GAO A2**  
**GMH A2**  
**GML A2**

**DUNGS®**



### UL Listed

- UL 353
- File # MH 16628

### CSA Certified

- CSA C22.2 No. LR 53222
- Certification # 201527

### FM Approved

- Class 3510, 3530
- File # J.I. 1T7A8.AF



European models tested to EN 1854 per Gas Appliance Directive 90/396/EEC.

DUNGS is an ISO 9001 manufacturing facility.

### Description

The GAO, GMH, and GML A2 pressure switches are compact pressure switches for DUNGS modular valve train components.

A2 pressure switches are suitable for making and/or breaking a circuit when the medium pressure changes relative to the set point. The set point can be set in the field by an adjustable dial with an integrated scale.

### Application

The DUNGS GAO, GMH, and GML A2 pressure switches are recommended for industrial and commercial heating applications with DUNGS DMV dual modular valves and DUNGS FRI modular pressure regulators. Various mounting options allow direct mounting on the housing.

The GAO, GMH, and GML A2 pressure switches are suitable for natural gas, propane, butane, air and other inert gases.

**GAO A2** SPDT pressure switch that requires no auxiliary power. The GAO A2 is suitable for making and/or breaking a circuit when the set point is exceeded or undershot. A tripped switch is indicated by a neon light after set point is exceeded or undershot. **Automatic reset** when pressure returns below or above set point.

**GMH A2** SPDT pressure switch that requires no auxiliary power. The GMH A2 is suitable for making and/or breaking a circuit when the set point is exceeded. A tripped switch is indicated by a neon light after set point is exceeded. **Manual reset** is required to reset the switch.

**GML A2** SPDT pressure switch that requires no auxiliary power. The GML A2 is suitable for making and/or breaking a circuit when the set point is undershot. A tripped switch is indicated by a neon light after set point is undershot. **Manual reset** is required to reset the switch.

## Specifications

Max. operating pressure	GAO A2-4-2,3,5,6 GMH and GML A2-4-4,6 GAO, GMH and GML A2-4-8	7 PSI (500mbar) 7 PSI (500mbar) 14 PSI (1000 mbar)
Pressure connection	O ring flange connection on underside of pressure switch	
Temperature range GAO, GMH and GML	Ambient temperature Medium temperature	-40 °F to +140 °F (-40 °C to +60 °C) -40 °F to +140 °F (-40 °C to +60 °C)
GAO, GMH and GML A2 -8	Ambient temperature Medium temperature	-22 °F to +140 °F (-10 °C to +60 °C) -22 °F to +140 °F (-10 °C to +60 °C)
Materials	Housing Switch Diaphragms Switching contact	Aluminium Polycarbonate NBR-based rubber Silver Or Gold
Electrical ratings	AC eff. min. 24 V max. 240 V DC min. 24 V max. 48 V	
Nominal current	Silver (Ag) contact ratings AC 10A resistive @ 120 Vac AC 8A inductive @ 120 Vac DC min. 20 mA @ 24 Vdc DC max. 1 A @ 48 Vdc	Gold (Au) contact ratings DC min. 5 mA @ 5 Vdc DC max. 10m A @ 24 Vdc
Electrical connection	Screw terminals via 1/2" NPT conduit connection	
Enclosure rating	NEMA 4	
Setting tolerance	±15% switching point deviation referred to set point. Adjusted as pressure rises, or as pressure falls, vertical diaphragm position.	

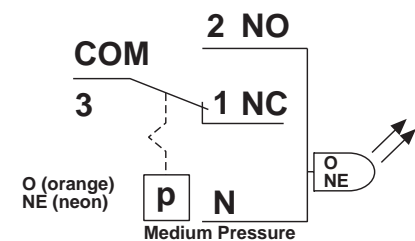
### GAO switching function (upper)

#### As pressure rises:

1 NC opens, 2 NO closes

#### As pressure falls:

1 NC closes, 2 NO opens

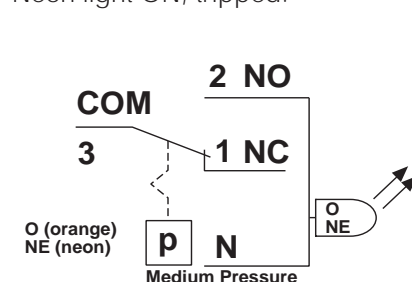


### GMH switching function

#### As pressure rises

2 NO closes, 1 NC opens

Neon light ON, tripped.



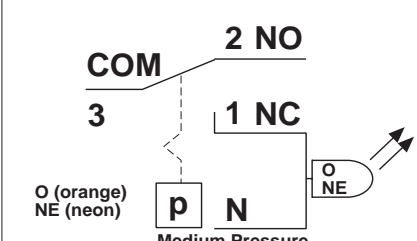
### GML switching function

#### shown in Operating state.

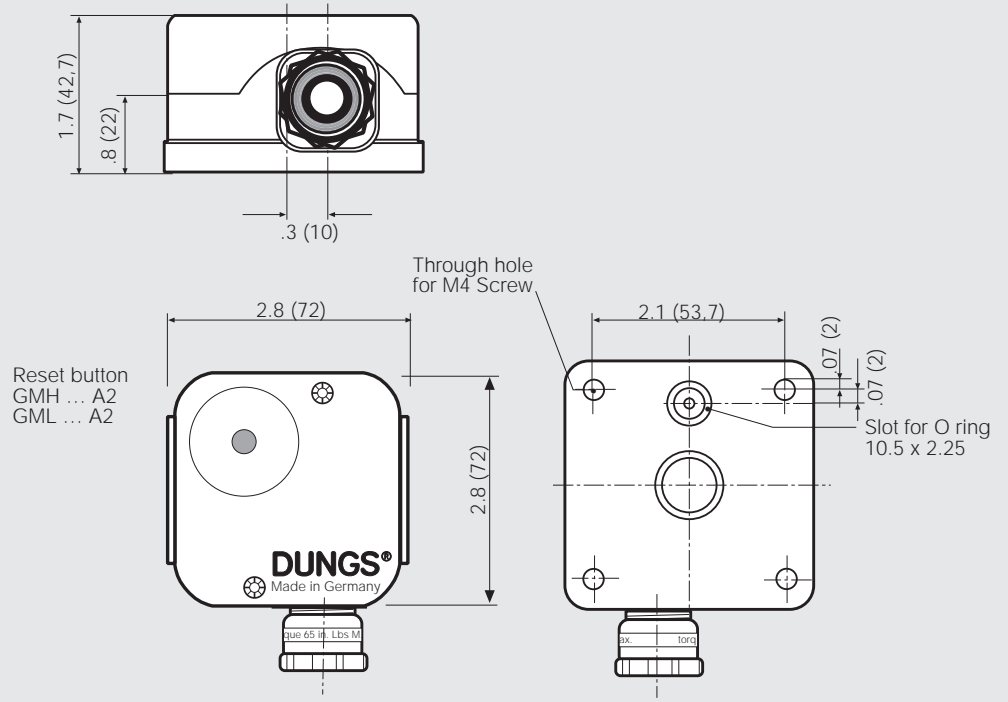
#### As pressure falls

2 NO opens, 1 NC closes

Neon light ON, tripped.



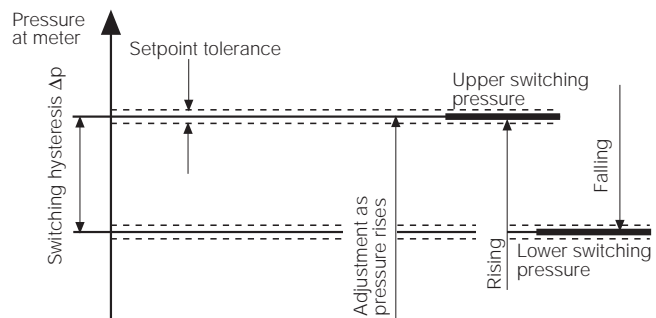
**Dimensions inch (mm)  
GAO, GMH, GML ...A2**



Adapters / replacement parts / Accessories	Order No.	For equipment	Notes
A2 Mounting Kit (included)	D226 188	GAO, GMH, & GML	M4 Screw, 10.5x 2.25 O-ring
DMV Port 3 Adapter (DMV side mount for high pressure switch)	D214 975	DMV- D(LE)701 - 703/6	NPT 1/2" - NPT 2"
Replacement Cover	D223 798	GAO, GMH, & GML	NEMA 4
Replacement Conduit Adapter	46000-14	GAO, GMH, & GML	1/2" NPT
Replacement Neon Light	46000-7	GAO, GMH, & GML	120 Vac, Red bulb
Replacement Neon Light	D231 771	GAO, GMH, & GML Gold contact versions	24 Vac / Vdc, Red bulb
Electrical Plug for A2 (For use with D210318)	D219 659	GAO	N/A
Electrical Plug for A2 (For use with D210318)	D227 664	GMH & GML	N/A
Din Connector for A2 (For use with D210659 & D227 664)	D210 318	GAO, GMH, & GML	N/A

**Definition of switching hysteresis  $\Delta p$**

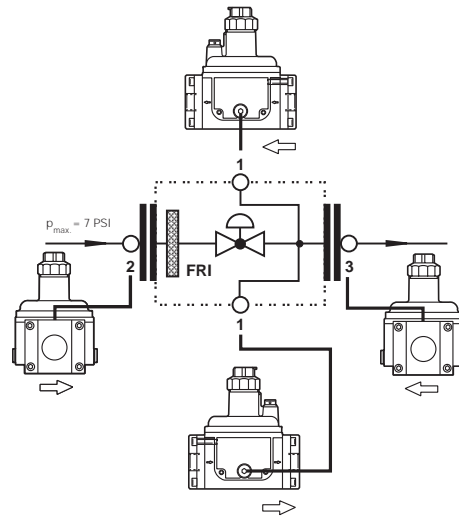
The pressure difference between the upper and lower switching pressures



**A2 mounting options**  
**FRI gas pressure regulator**

**Pressure tap**  
 mounting possible...

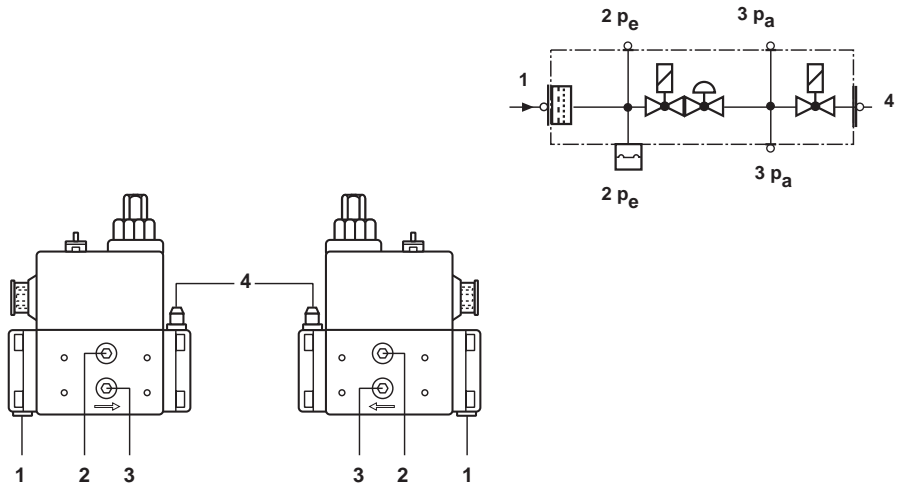
1	yes
2	yes
3	yes



**A2 mounting options**  
**MB 053-403 GasMultiBloc**

**Pressure tap**  
 mounting possible...

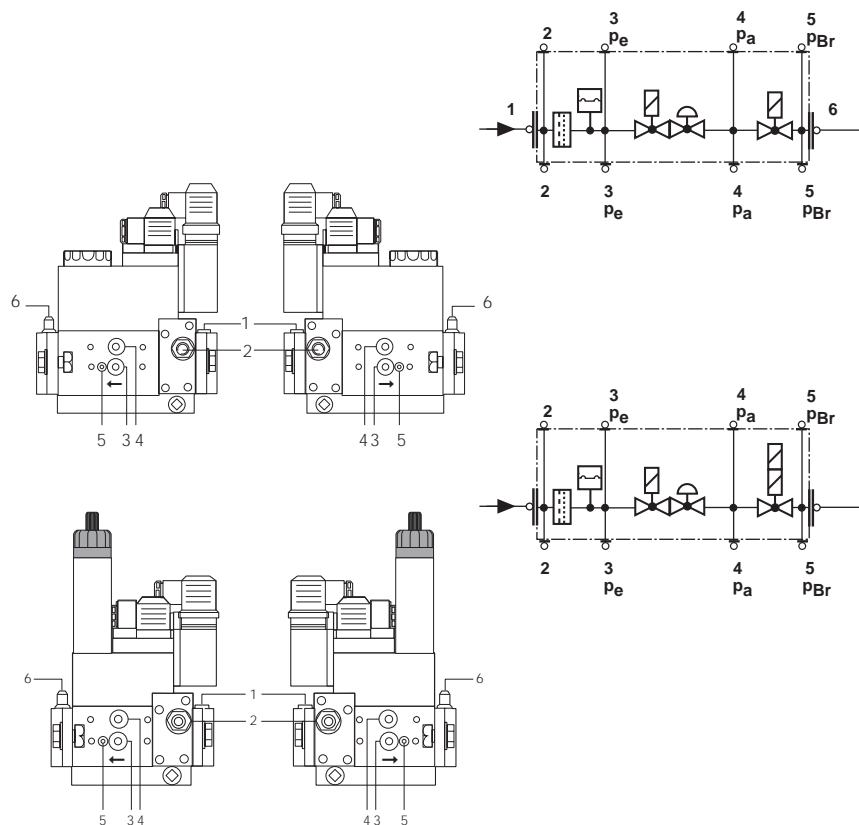
1	yes, with #D221 630
2	yes
3	yes
4	yes, with #D221 630



**A2 mounting options**  
**MB-D GasMultiBloc; MB-Z 405-412**

**Pressure tap**  
 mounting possible...

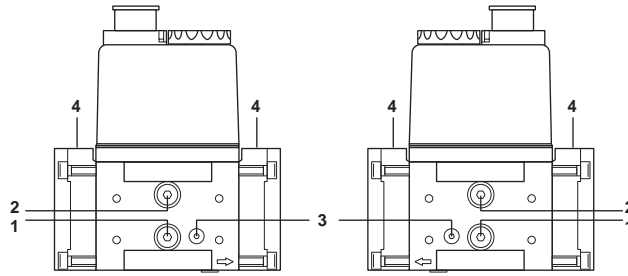
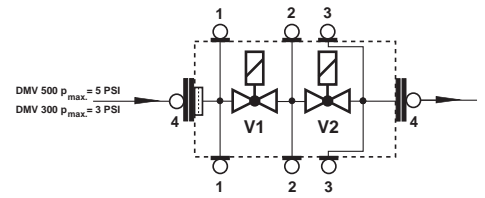
1	no
2	no
3	yes
4	yes
5	yes, with #D214975
6	yes, with #D221 630



**A2 mounting options  
DMV 300/500 Dual modular valve**

**Pressure tap** mounting possible...

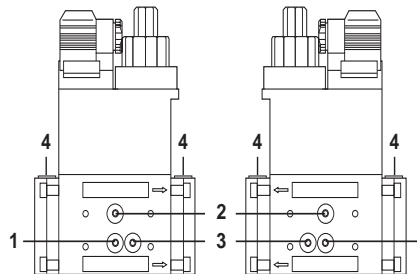
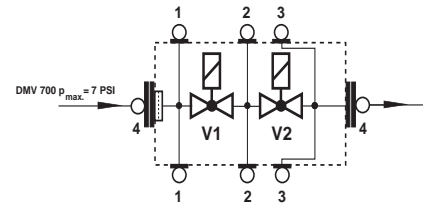
1	yes
2	yes
3	yes, with # D214 975
4	yes, horizontal yes, with # D221 630



**A2 mounting options  
DMV 701-703/6 Dual modular valve**

**Pressure tap** mounting possible...

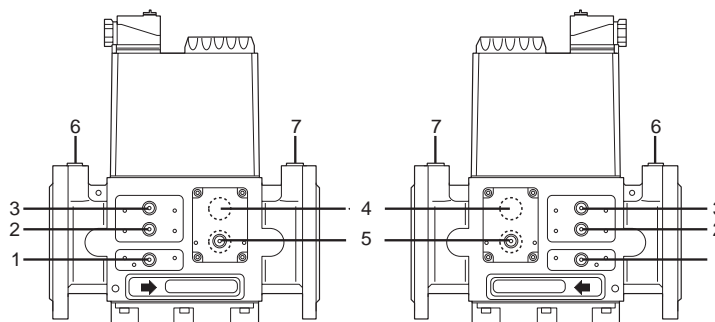
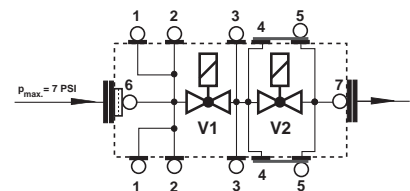
1	yes
2	yes
3	yes, with # D214 975
4	yes, horizontal yes, with # D221 630



**A2 mounting options  
DMV 525,5040-5125/11 Dual modular valve**

**Pressure tap** GW ... A2 mounting possible...

1	yes
2	yes
3	yes
4	no
5	yes
6	G 1/4 (525, yes)
7	G 1/4 (525, yes)



## Pressure switch




**GAO A2**

**GMH A2**

**GML A2**

**DUNGS®**

### Technical data

Type	Version	Order No.	Setting range In. W.C	Switching hysteresis $\Delta p$ In. W.C (calibrated at)	
<b>GAO A2 pressure switch</b>	GAO A2-4-2	D217 085	0.16 - 1.20"	$\leq 0.12"$	
	GAO A2-4-3	D217 086	0.40 - 4.00"	$\leq 0.20"$	
	GAO A2-4-5	D217 087	2.00 - 20.00"	$\leq 0.40"$	
	GAO A2-4-6	D217 088	12.0 - 60.00"	$\leq 1.20"$	
	GAO A2-4-8	D217 089	40.00 - 200.00"	$\leq 4.00"$	
<b>GMH A2 pressure switch</b>	GMH A2-4-4	D217 323	1.00 - 20.00"	--	
	GMH A2-4-6	D217 324	12.00 - 60.00"	--	
	GMH A2-4-8	D217 325	40.00 - 200.00"	--	
<b>GML A2 pressure switch</b>	GML A2-4-4	D217 337	1.00 - 20.00"	--	
	GML A2-4-6	D217 338	12.00 - 60.00"	--	
	GML A2-4-8	D217 339	40.00 - 200.00"	--	

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

**Karl Dungs Inc.**  
524 Apollo Drive Suite 10  
Lino Lakes, MN 55014, U.S.A.  
Phone 651 792-8912  
Fax 651 792-8919  
e-mail [info@karldungsusa.com](mailto:info@karldungsusa.com)  
Internet <http://www.dungs.com/usa>

**Karl Dungs GmbH & Co.**  
P.O. Box 12 29  
D-73602 Schorndorf, Germany  
Phone +49 (0)7181-804-0  
Fax +49 (0)7181-804-166  
e-mail [info@dungs.com](mailto:info@dungs.com)  
Internet <http://www.dungs.com>