

# Differential pressure switch for air, flue and exhaust gases

AA-A1...

**DUNGS**<sup>®</sup>  
Combustion Controls



## Approvals

### UL Recognized

- UL 353
- File # MH 16628

### CSA Certified

- CSA C22.2 No. 14
- File # 201527

### FM Approved

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

### Commonwealth of Massachusetts Approved Product

- Approval code G3-0106-191
- Air pressure switch for differential, vacuum or pressure

### Codes and Standards

This product is recommended for installations covered by but not limited to NFPA 85, NFPA 86, UL 795, CSD-1, ANSI Z83.4, ANSI Z83.18, ANSI Z21.13, CSA B149.1, CSA B149.3 and CSA B149.6.

**DUNGS is an ISO 9001  
manufacturing facility.**



## Description

AA-A1... differential pressure switches are factory set, compact pressure switches for automatic burner controls. Available with hose connections.

AA-A1... differential pressure switches are suitable for making and/or breaking a circuit when the medium pressure changes relative to the set point.

## Application

Differential pressure monitoring in firing, ventilation and air-conditioning systems. The AA-A1... can be used as a pressure, vacuum or differential pressure switch for air and non-aggressive gases. Not suitable for natural gas, propane, butane and other combustible gases.

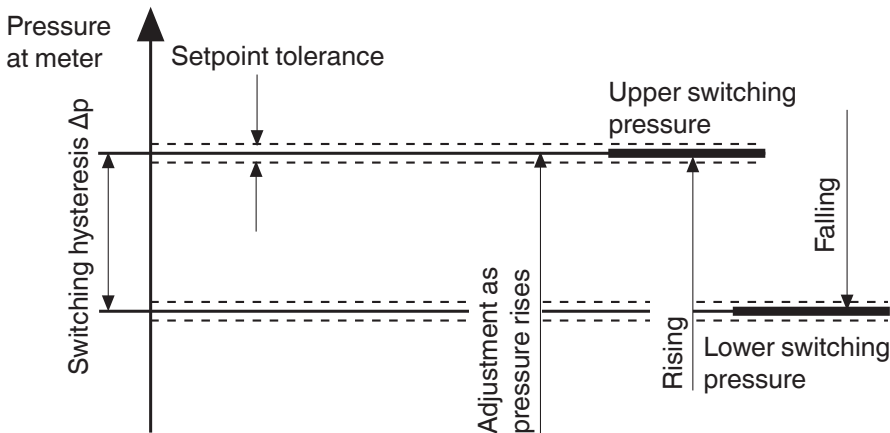
**AA-A1... SPDT differential pressure switch in pressure and vacuum ranges.** The differential pressure acts via the diaphragm against the force of the setting spring on the micro-switch. The pressure switch operates without any auxiliary power.

### Specifications

Max. operating pressure	1.5 PSI (103 mbar)		
Pressure connection	0.16" (4 mm) diameter hose connection		
Temperature range	Ambient temperature	-40 °F to +140 °F (-40 °C to +60 °C)	
	Medium temperature	-40 °F to +140 °F (-40 °C to +60 °C)	
Materials	Housing:	Polycarbonate	
	Switch:	Polycarbonate	
	Diaphragm:	NBR-based rubber	
	Switching contact:	Silver (Ag)	
Electrical ratings	AC eff. min.	24 V	max. 250 V
	DC min.	24 V	max. 48 V
Current ratings	AC 5 A resistive @ 120 VAC		
	AC 2.5 A inductive @ 120 VAC		
	DC min. 20 mA @ 24 VDC		
	DC max. 1 A @ 12 - 48 VDC		
Electrical connection	1/4 x 1/32" (6.3 x 0.8 mm) flat male terminals		
Enclosure rating	Standard: No NEMA Type rating (no cover)		
	NEMA Type 1 with 230-216 cover		
	NEMA Type 12 with 225-816 cover		
Setting tolerance	Tolerance as per specification		
Installation position	Any, as per specification. The setting point changes by approx. $\pm 0.2$ in. W.C. if the mounting position is different than the setting position		

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

The pressure difference between the upper and lower switching pressures.



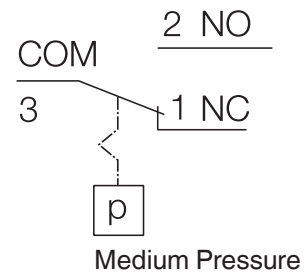
### AA-A1... switching function

**As pressure rises:**

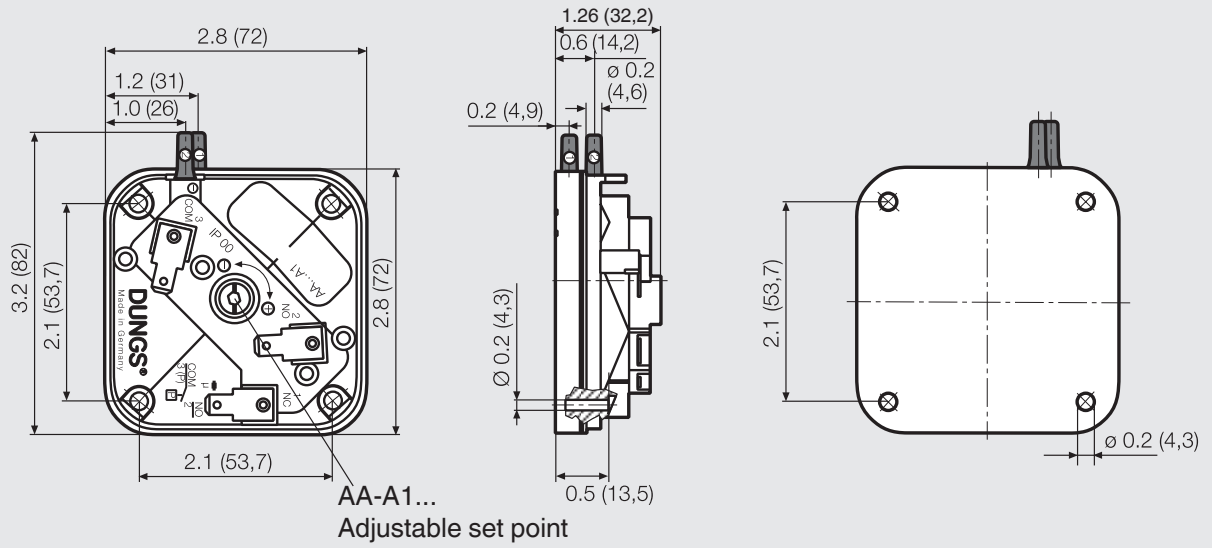
1 NC opens, 2 NO closes

**As pressure falls:**

1 NC closes, 2 NO opens



**Dimensions inch (mm)**

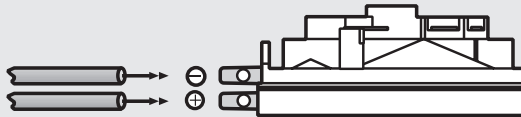


**Height with NEMA Type 1 cover: 1.33 (34,2)**  
**Height with NEMA Type 12 cover: 1.80 (45,6)**

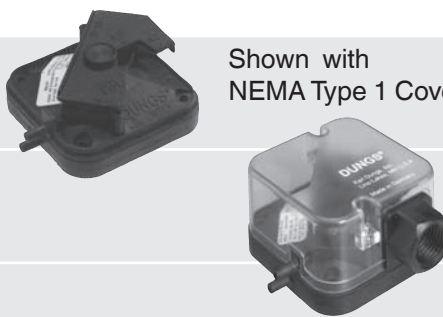
**Pressure connection**

- 1 Pressure connection (+)
- 2 Pressure connection (-)

**Connection p2 (-) = lower pressure**  
**Connection p1 (+) = higher pressure**



Type	Version	Description	Order No.	Factory setting range in. W.C.	Switching hysteresis in. W.C.
<b>AA-A1-0-...</b>	AA-A1-0-2	No cover	216-788A	0.16 - 1.20	≤ 0.14
	AA-A1-0-3	No cover	216-752A	0.40 - 4.00	≤ 0.20
	AA-A1-0-4	No cover	216-867A	1.00 - 20.00	≤ 0.40
<b>AA-A1-3-...</b>	AA-A1-3-2	Includes NEMA Type 12 cover and 1/2 NPT conduit connection	216-788CA	0.16 - 1.20	≤ 0.14
	AA-A1-3-3	Includes NEMA Type 12 cover and 1/2 NPT conduit connection	216-752CA	0.40 - 4.00	≤ 0.20
	AA-A1-3-4	Includes NEMA Type 12 cover and 1/2 NPT conduit connection	216-867CA	1.00 - 20.00	≤ 0.40

Accessories for pressure switch	Order No.		
NEMA Type 1 Cover	230-216		Shown with NEMA Type 1 Cover
NEMA Type 12 cover with 1/2 NPT conduit connection	225-816		Shown with NEMA Type 12 Cover
Mounting plate (flat plastic)	230-301		

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