

# 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 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.

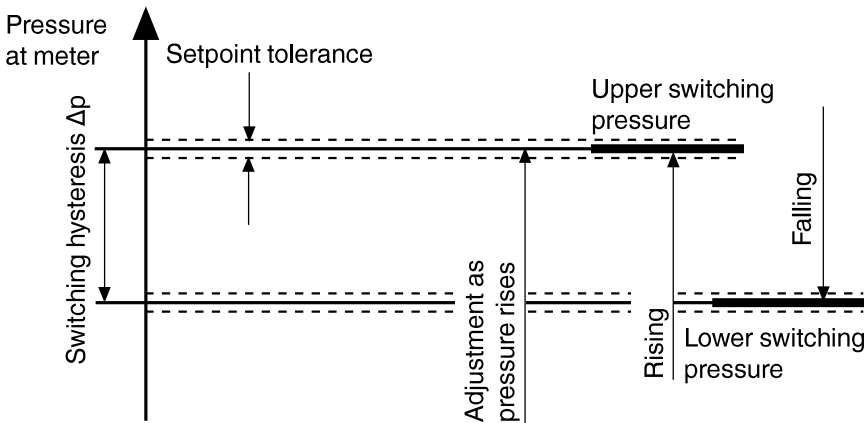
**AA-A1 ... SPDT differential pressure switch in pressure and vacuum ranges.** The differential pressure acts via the diaphragm against the force of the setting spring on the micro-switch. The pressure switch operates without any auxiliary power.

**Specifications**

|                         |   |                  |                                      |
|-------------------------|---|------------------|--------------------------------------|
| Max. operating pressure | 1.5 PSI (103 mbar)  |                  |                                      |
| Pressure connection     | 0.16" (4 mm) diameter hose connection   |                  |                                      |
| Temperature range       | Ambient / Medium:   | UL, FM           | -40 °F to +150 °F (-40 °C to +66 °C) |
|                         |   | CSA              | -40 °F to +104 °F (-40 °C to +40 °C) |
|                         | Storage:  |                  | -40 °F to +150 °F (-40 °C to +66 °C) |
| Materials               | Housing:  | Polycarbonate    |                                      |
|                         | Switch:   | Polycarbonate    |                                      |
|                         | Diaphragm:  | NBR-based rubber |                                      |
|                         | Switching contact:  | Silver (Ag)      |                                      |
| Electrical ratings      | AC eff. min.  | 24 V             | max. 240 V                           |
|                         | DC min.   | 12 V             | max. 48 V                            |
| Current ratings         | AC 5 A resistive @ 240 VAC  |                  |                                      |
|                         | AC 3 A inductive @ 240 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)  |                  |                                      |
|                         | IP 20 with 262045 protection  |                  |                                      |
| Setting tolerance       | Tolerance as per specification  |                  |                                      |
| Installation position   | Any, as per specification. The setting point changes by approx. ±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.



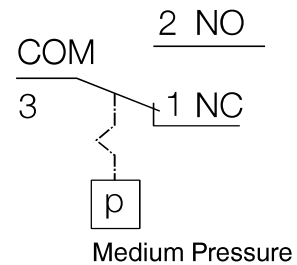
**AA-A1... switching function**

**As pressure rises:**

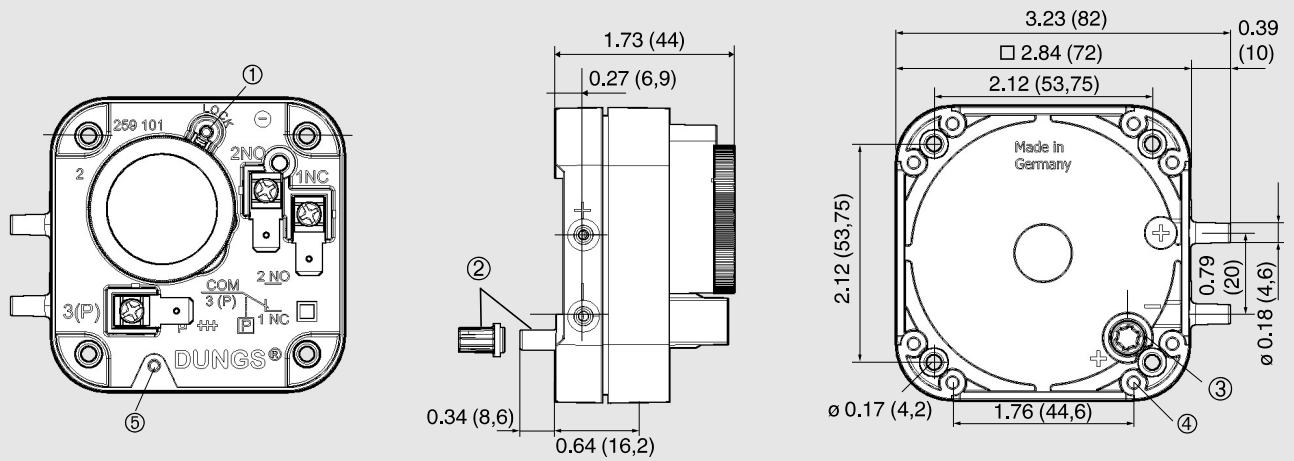
1 NC opens, 2 NO closes

**As pressure falls:**

1 NC closes, 2 NO opens



## Dimensions inch (mm)



Height with cover: 1.73 (44 mm)

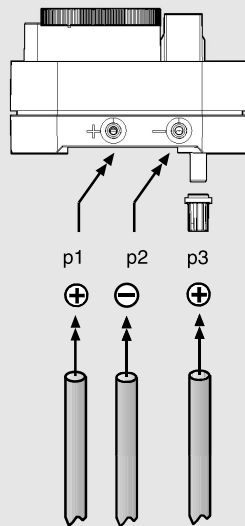
- ① optional switching point lock cheese head screw  $\varnothing 3 \times 0.55$  (14 mm)
- ② optional sealing cap and connection p 3,  $\varnothing 0.18$  (4,6 mm)
- ③ Sealing face area for O-ring  $\varnothing 0.19$  (4,87 mm) x 0.07 (1,8 mm) to DIN 3371
- ④ Blind hole 8 x  $\varnothing 0.15$  (3,8 mm) deep
- ⑤ optionally Mounting of contact protection for cheese head screw  $\varnothing 3 \times 0.55$  (14 mm)

## Pressure connection

**Connection p1 (+)**  
= higher pressure

**Connection p2 (-)**  
= lower pressure

**Optional**  
**Connection p3 (+)**  
= higher pressure



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for air, flue and exhaust gases**

**AA-A1...**



| Type        | Version   | Description | Order No.<br>(1 piece) | Order No.<br>(multi, 60 pieces) | Factory setting<br>range in. W.C. | Switching<br>hysteresis<br>in. W.C. |
|-------------|-----------|-------------|------------------------|---------------------------------|-----------------------------------|-------------------------------------|
| AA-A1-0-... | AA-A1-0-2 | No cover    | 277329                 | 279935                          | 0.16 - 1.20                       | ≤ 0.14                              |
|             | AA-A1-0-3 | No cover    | 277328                 |                                 | 0.40 - 4.00                       | ≤ 0.20                              |

**Accessories for pressure switch      Order No.**

IP 20 Cover (1 pcs)

262045



Mounting plate (1 pcs)

230301



Screw ø 3 x 14 (2 pcs)

266045

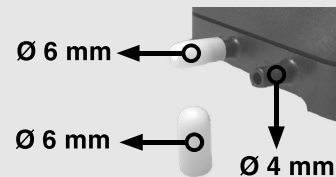
Klima-Set (Duct mounting kit)

258247



Adapter ø 4/6 (2 pcs)

266037



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

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