

# Differential pressure switch for air, flue and exhaust gases

AA-C2...

**DUNGS®**



**UL Listed**  
• File # MH 16628

**CSA Certified**  
• Certification # 201527 (LR 53222)

**FM Approved**  
• 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

AA-C2... differential pressure switches are field adjustable, compact pressure switches for automatic burner controls.

AA-C2... differential 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

Differential pressure monitoring in firing, ventilation and air-conditioning systems. The AA-C2... 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.

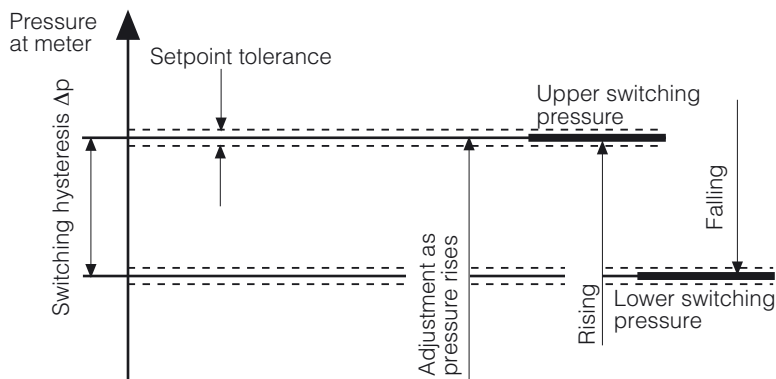
**AA-C2...** SPDT differential pressure switch in pressure and vacuum ranges. The differential pressure acts via the diaphragm against the force of the setting spring on the microswitch. The pressure switch operates without any auxiliary power.

## Specifications

Max. operating pressure	20 In W.C. (50 mbar)		
Pressure connection	0.16" (4 mm) diameter hose connection 0.24" (6 mm) diameter hose connection		
Temperature range	Ambient temperature	+5 °F to +140 °F (-15 °C to +60 °C)	
	Medium temperature	+5 °F to +140 °F (-15 °C to +60 °C)	
Materials	Housing:	Polycarbonate	
	Switch:	Polycarbonate	
	Diaphragms:	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 DC max. 1 A		
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, vertical diaphragm position		
Installation position	Multipoised; the setting point changes by approx. ±0.08 In. W.C. if the mounting position is different than the vertical position.		

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

The pressure difference between the upper and lower switching pressures.



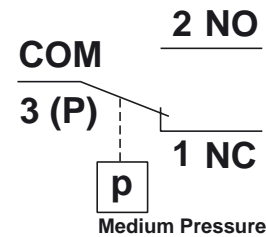
### AA-C2... switching function

#### As pressure rises:

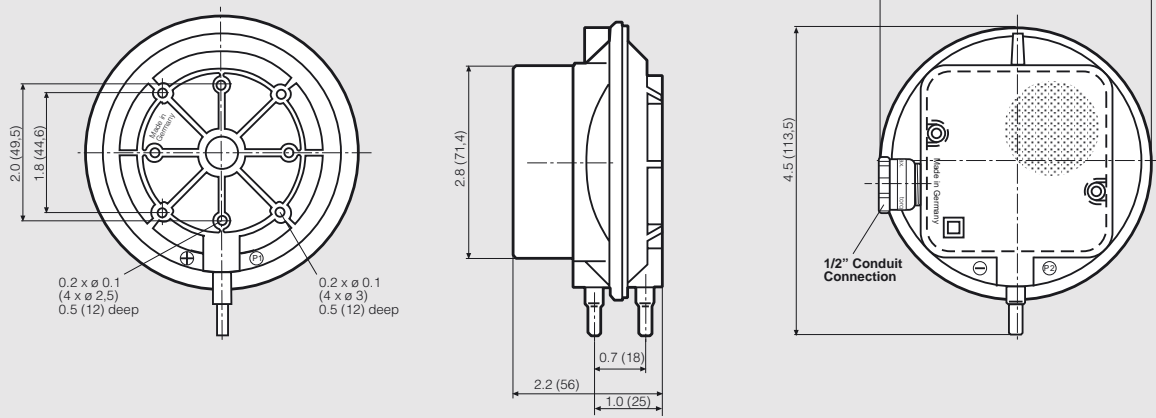
1 NC opens, 2 NO closes

#### As pressure falls:

1 NC closes, 2 NO opens



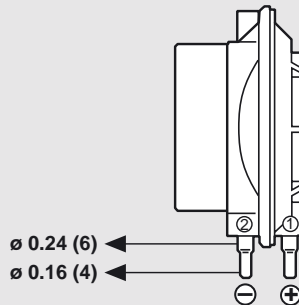
## Dimensions inch (mm)



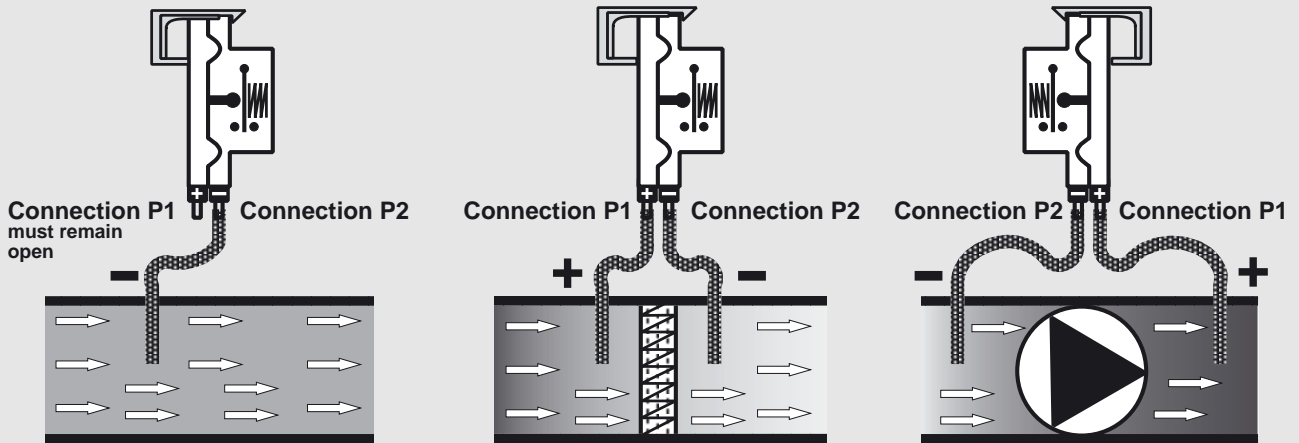
## Pressure connection

Pressure connection  
0.16" dia. (4 mm) and  
0.24" dia. (6 mm)

p1...(+)  
p2...(-)



## Application and connection examples



### System vacuum monitor

AA-C2... is connected to the air duct with the p2 (-) connection. p1 (+) is not connected with the air duct. Do not seal the p1 (+) connection; it must be open to the atmosphere.

Caution: Prevent dirt from entering into the device through connection p1(+).

### Filter monitoring

To monitor a filter, the AA-C2... can be connected as shown above.

### Blower monitoring

For blower monitoring, connect connection p1 (+) to the air duct on the downstream side of the blower and connection p2 (-) to the air duct upstream of the blower.

**Always connect higher pressure to connection p1 (+).**

**Always connect higher vacuum to connection p2 (-).**

### Example of pressure connections

higher pressure:  
e.g. 3.5 in W.C.: connection p1 (+)  
lower pressure:  
e.g. 3 in W.C.: connection p2 (-)

### Example of vacuum connections

lower vacuum:  
e.g. -1 in W.C.: connection p1 (+)  
higher vacuum:  
e.g. -3 in W.C.: connection p2 (-)

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<b>Type</b>	<b>Version</b>	<b>Order No.</b>	<b>Setting range In. W.C</b>	<b>Switching hysteresis <math>\Delta p</math> In. W.C (calabrated at)</b>	
<b>AA-C2-4-...</b>	AA-C2-4-1	46010-1	0.08 - 0.60"	$\leq 0.18$ in W.C.	
	AA-C2-4-2	46010-2	0.16 - 1.20"	$\leq 0.12$ in W.C.	
	AA-C2-4-3	46010-3	0.40 - 4.00"	$\leq 0.16$ in W.C.	

**Accessories for pressure switch      Order No.**

Klima-Set (Duct mounting kit)	46000-5
Mounting bracket	D230 273
Replacement Conduit Adapter	46000-14
Neon Light (120 Vac)	46000-7
Neon Light (24 Vac / Vdc)	D231 771

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

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