

Differential pressure switch for air, flue and exhaust gases

AA-A2...

DUNGS[®]
Combustion Controls



Approvals

UL Listed

- UL 353
- File # MH 16628

CSA Certified

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

FM Approved

- Class 3510, 3530
- File # J.I. 0D6A1.AF

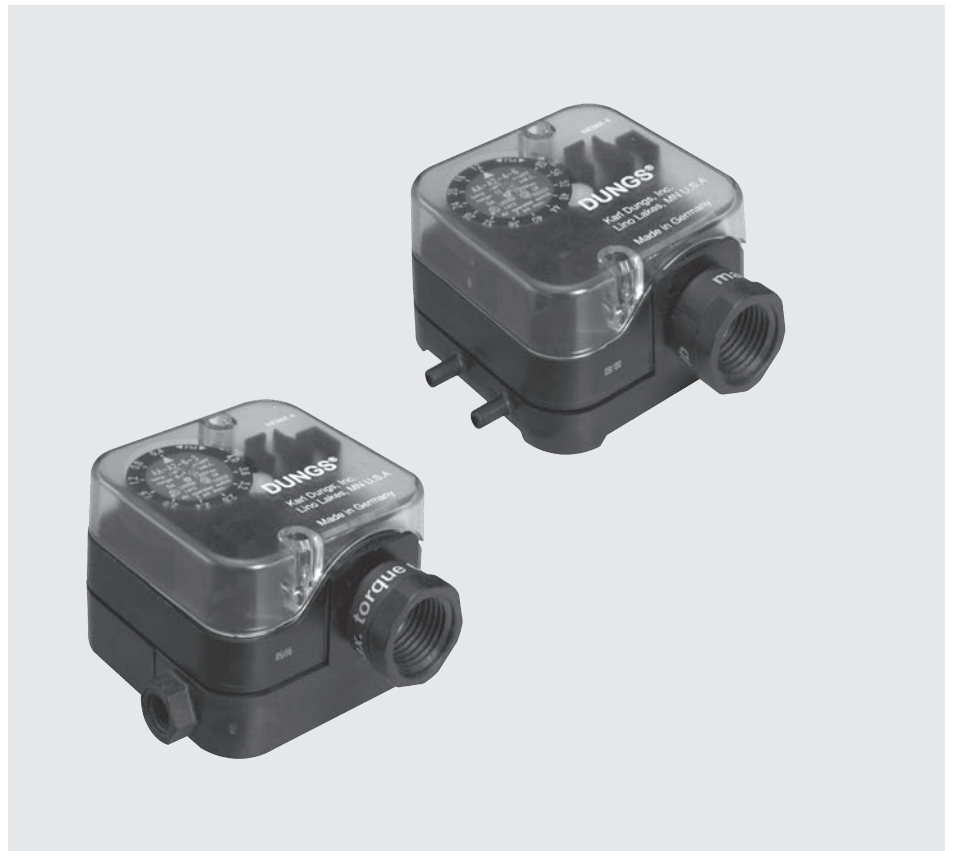
Commonwealth of Massachusetts Approved Product

- 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, ANSI Z83.4/CSA 3.7, ANSI Z83.18/CSA 4.9, ANSI Z21.13, CSD-1, UL 795, CSA B149.1, CSA B149.3 and CSA B149.6.

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



Description

AA-A2... differential pressure switches are field adjustable, compact pressure switches for automatic burner controls. Available with hose or NPT threaded connections.

AA-A2-4... differential pressure switches are suitable for making and/or breaking a circuit when the medium pressure changes relative to the set point. AA-A2-4... versions feature hose connections.

AA-A2-6... differential pressure switches are suitable for making and/or breaking a circuit when the medium pressure changes relative to the set point. AA-A2-6... versions feature NPT threaded connections that also include a test button in the lower housing.


Application

Differential pressure monitoring in firing, ventilation and air-conditioning systems. The AA-A2... 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-A2... 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

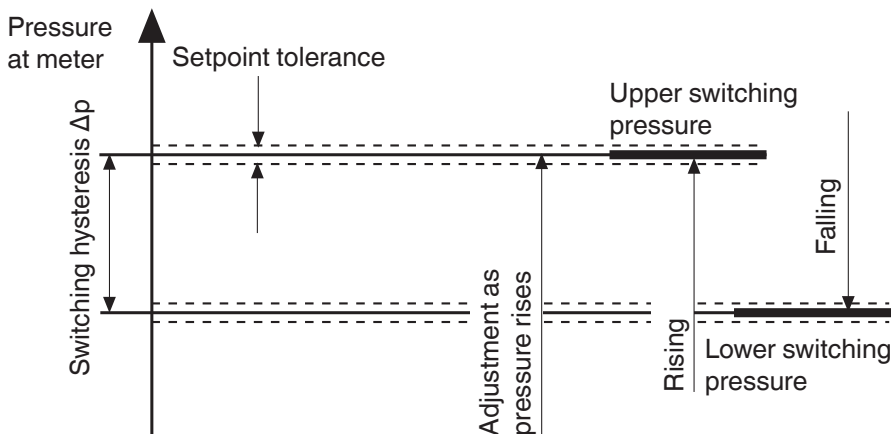
Specifications

Max. operating pressure	7 PSI (500 mbar)	
Pressure connection	AA-A2-4 Hose connection 5/32" (4.6 mm) dia. positive 5/32" (4.6 mm) dia. negative	AA-A2-6 Threaded connection 1/4" NPT positive 1/8" NPT negative 5/32" (4.6 mm) test connection
Temperature range	Ambient temperature Medium temperature	-40 °F to +140 °F (-40 °C to +60 °C) -40 °F to +140 °F (-40 °C to +60 °C)
Materials	Housing: Switch: Diaphragm: Switching contact:	Polycarbonate Polycarbonate NBR-based rubber Silver (Ag)
Electrical ratings	AC eff. DC	min. 24 V max. 250 V min. 24 V max. 48 V
Current ratings	AC 5A resistive @ 120 VAC AC 3A inductive @ 120 VAC DC min. 20 mA @ 24 VDC DC max. 1A @ 12 - 48 VDC	
Electrical connection	Screw terminals via 1/2" NPT conduit connection	
Enclosure rating	NEMA Type 4	
Setting tolerance	±15% switching point deviation referred to set point, adjusted as pressure rises, vertical diaphragm position	
Installation position	Multipoised	

 Installation position: Standard installation position is vertical upright diaphragm. When installed horizontally, the pressure switch switches at a pressure higher by approx. 0.2 in. W.C. When installed upside down, the pressure switch switches at a pressure lower by approx. 0.2 in. W.C. When installed in other positions, the pressure switch switches at pressure deviating from the set reference value by max. ± 0.2 in. W.C.

Definition of switching hysteresis Δp

The pressure difference between the upper and lower switching pressures.



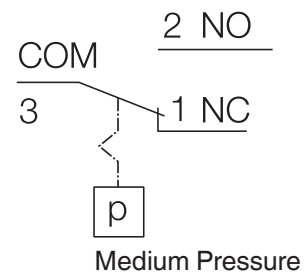
AA-A2... switching function

As pressure rises:

1 NC opens, 2 NO closes

As pressure falls:

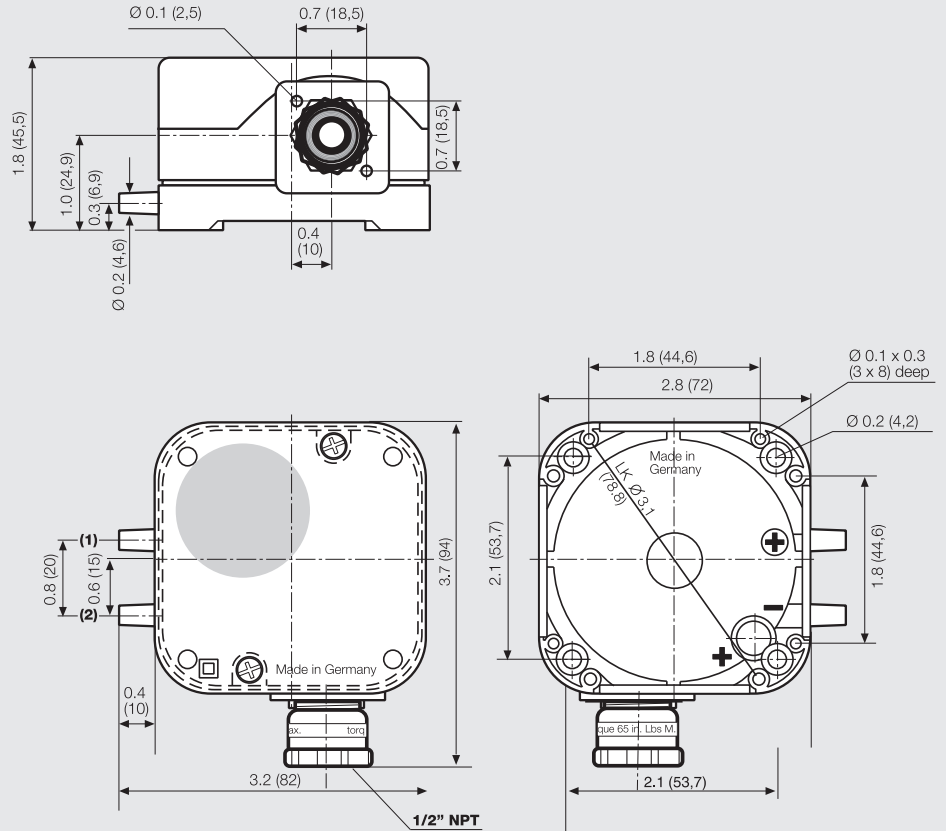
1 NC closes, 2 NO opens



Dimensions inch (mm)

- 1 Pressure connection (+)
- 2 Pressure connection (-)
- 3 Test nipple p(+)

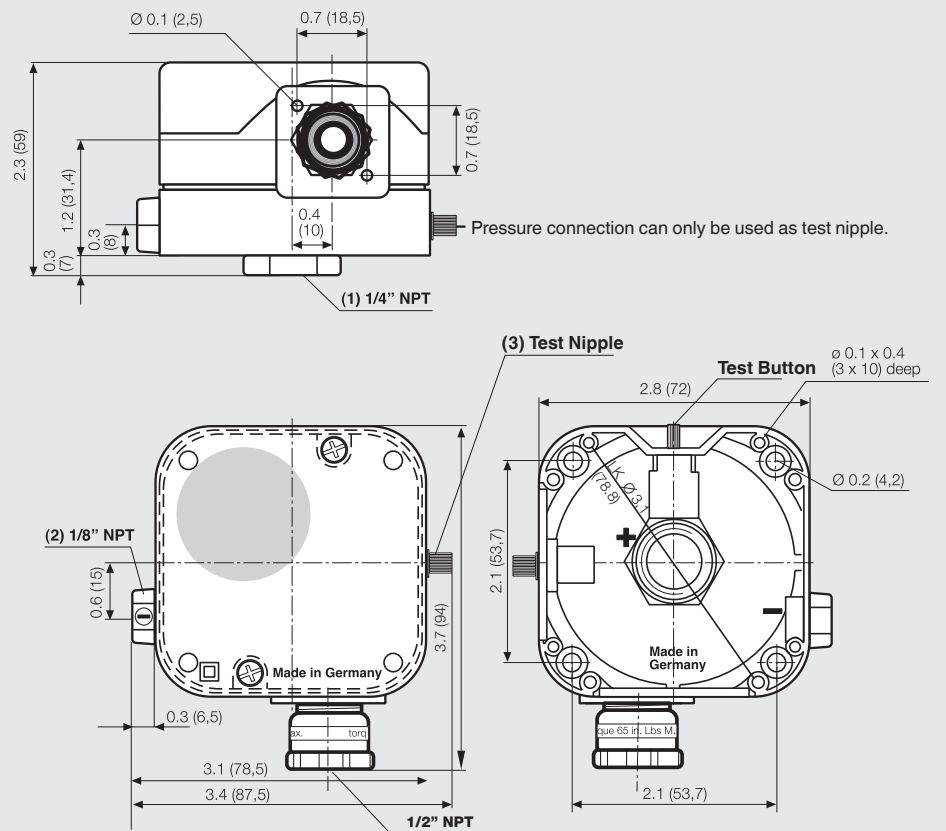
AA-A2-4... Hose connection



Dimensions inch (mm)

- 1 Pressure connection (+)
- 2 Pressure connection (-)
- 3 Test nipple p(+)

AA-A2-6... Threaded connection



Test button

The AA-A2-6... threaded version is equipped with a test button. When the test button is pressed, the connection 3 ... 4 to the 1/4" NPT pressure connection is

interrupted and the pressure below the diaphragm is relieved. The microswitch of the pressure switch changes the contact position from NO to NC.

If the test button is released, the pressure below the diaphragm is built up again and the microswitch changes to its original position.

Differential pressure switch for air,
flue and exhaust gases

AA-A2...



Type	Version	Description	Order No.	Setting range in. W.C	Switching hysteresis in. W.C.	Factory Calibration
AA-A2-4-...	AA-A2-4-2	Hose connection	217-060A	0.16 - 1.20	≤ 0.12	
	AA-A2-4-3	Hose connection	217-061A	0.40 - 4.00	≤ 0.20	
	AA-A2-4-5	Hose connection	217-062A	2.00 - 20.00	≤ 0.40	
	AA-A2-4-6	Hose connection	217-063A	12.00 - 60.00	≤ 1.20	
AA-A2-6-...	AA-A2-6-2	Threaded connection	217-329A	0.16 - 1.20	≤ 0.12	
	AA-A2-6-3	Threaded connection	217-330A	0.40 - 4.00	≤ 0.20	
	AA-A2-6-5	Threaded connection	217-331A	2.00 - 20.00	≤ 0.40	
	AA-A2-6-6	Threaded connection	217-332A	12.00 - 60.00	≤ 1.20	

Accessories for pressure switch

	Order No.
Klima-Set (Duct mounting kit)	217-897
Replacement cover	228-732
Mounting plate (plastic)	230-301 (recommended mounting bracket)
Mounting bracket (plastic)	230-273 (optional mounting bracket)
120 VAC light mounting set (orange)	231-772
120 VAC light only (for switches with kit 231-772 already installed)	244-156
24 VDC/VAC light mounting set (orange)	231-774
Replacement conduit adapter PG 11 to 1/2" NPT	220-566
Replacement conduit adapter M 20 to 1/2" NPT	240-671
DIN connector (female plug)	210-318
Male plug for DIN connector	219-659

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

Karl Dungs Inc.
3890 Pheasant Ridge Drive NE
Suite 150
Blaine, MN 55449, U.S.A.
Phone 763 582-1700
Fax 763 582-1799
e-mail info@karldungsusa.com
Internet <http://www.dungs.com/usa/>

Karl Dungs GmbH & Co. KG
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
Internet <http://www.dungs.com>