

COMHAS

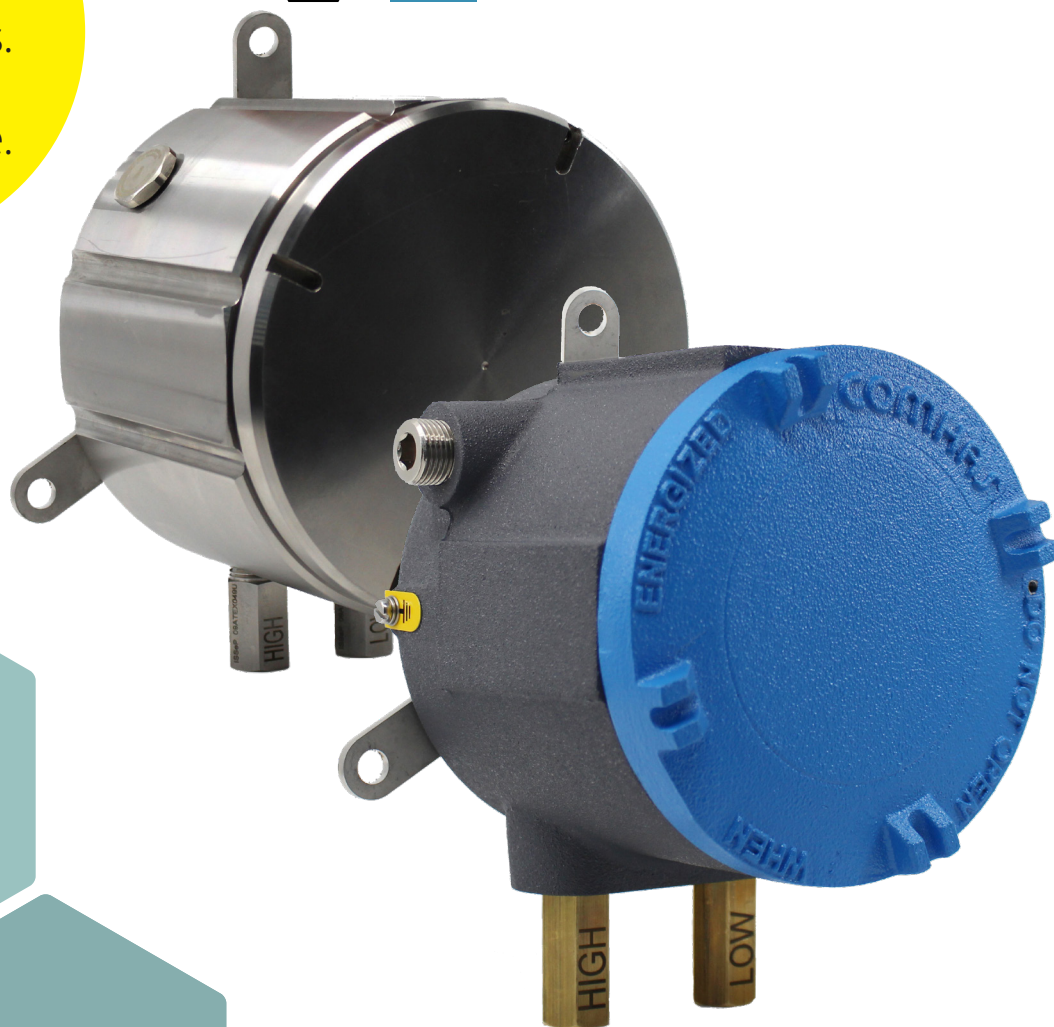
# AT-101-ADPS&EDPS

# AT-102S-ADPS&EDPS

Differential pressure switch for low ranges atex/iecex Exd approved

**NEW**

Now available  
with Low DP  
pressure ports.  
Improved  
response time.



ADPS & EDPS  
differential pressure  
switch now available  
from Comhas as  
single instrument  
Atex/IECEx  
approved

Ranges from  
20 to 4000 Pa

#### ATEX

CE 0080

II 2G Ex db IIC T5, T6 Gb -60°C ≤ Ta ≤ +50°C (T6)  
-60°C ≤ Ta ≤ +60°C (T5)

II 2D Ex tb IIIC T75 °C Db  
Certificate: INERIS 21 ATEX 0033 X

#### IECEx

Ex db IIC T5, T6 Gb -60°C ≤ Ta ≤ +50°C (T6)  
-60°C ≤ Ta ≤ +60°C (T5)

Ex tb IIIC T75°C Db  
Certificate: IECEx INE 21.0064X

# SPECIFICATIONS

<b>Service:</b>	air and compatible gases and dry gases. Not suitable for combustible gases.
<b>Wetted materials ADPS:</b>	Diaphragm material: silicone Housing material: POM Switch body: PA 6.6 Cover: polystyrene
<b>Wetted materials EDPS:</b>	Diaphragm material: silicone Housing material: switch body PA 6.6 Cover: polystyrene Materials UL94 V-0 rated
<b>Temperature limits:</b>	Pressure switch ADPS/EDPS: from -20 to 85°C case: -76 to 140°F (-60 to 60°C)* T5 (-60 to 50°C) T6
<b>Pressure limits:</b>	40" H2O - 10 Kpa
<b>Switch:</b>	type SPDT
<b>Electrical rating:</b>	max. frequency 6 cycles/min.
<b>Electrical wiring:</b>	3 screw type, common, normally open and normally closed.
<b>Set point adjustment:</b>	hand knob on pressure switch ADPS inside case (de-energise before opening case).
<b>Installation:</b>	diaphragm in vertical position.
<b>Housing material:</b>	aluminium (stainless steel optional).
<b>Finishing:</b>	Grey - texture epoxy coat RAL7015 (aluminum case) Blue - RAL 5015 (top cover)
<b>Process connections:</b>	1/8" female NPT brass (stainless steel optional).
<b>Electrical connections:</b>	2 x 1/2" NPT F standard (cable gland not included).
<b>Enclosure rating:</b>	IP66
<b>Dimensions:</b>	see drawing below
<b>Weight:</b>	from 4,7 to 15,5 kg
<b>Response time:</b>	higher response time with "STD" pressure ports PLS see table 3

\* Operating ambient temperature is defined also according to the options and pressure instrument choosed.

## IMPORTANT NOTES FOR INSTALLATION:

Cables must be fitted through 1/2" NPT cable gland or Atex/IECEx conduit (not supplied with instrument).

Make sure after cabling to close tight cover and cable gland, in order to keep IP66 rating (only without venting valve).

Open cover only after de-energising instrument.

Attention: check local safety rules and warnings on unit and manual for a correct use of the instrument in hazardous area.

# 1. Model configuration ADPS

CODE	AT-101			-	ADPS	-		-						
	AT-102 (only for stainless steel material version)													
Enclosure extension	Enclosure without extension	N												
	Enclosure with extension	n/a												
Case material	Aluminum		A											
	Stainless steel (only AT-102 version)		S											
Dwyer model					ADPS									
Ranges	0.08 - 1.2 Inch W.C. (20-300 Pa)						08 - 2 - N							
	0.12 - 1.60 Inch W.C. (30-400 Pa)						04 - 2 - N							
	0.20 - 2.00 Inch W.C. (50-500 Pa)						03 - 2 - N							
	0.80 - 4.00 Inch W.C. (200-1000 Pa)						05 - 2 - N							
	2.00 - 10.00 Inch W.C. (500-2500 Pa)						06 - 2 - N							
	4.00 - 20.00 Inch W.C. (1000-5000 Pa)						07 - 2 - N							
Cover	Blind							B						
	Glass window							W						
Pressure port / venting valve material	Brass								1					
	Stainless steel								2					
Pressure port/venting valve (check table 2 based on max static pressure)	STD pressure port 1/8" F NPT / no venting valve									VS0				
	LD pressure port 1/8" F NPT / no venting valve									VL0				
Cable entry	1/2" NPT ANSI/ASME B1.20.1										12			
Other options	Stainless steel tag													

n/a: NOT AVAILABLE

# 1. Model configuration EDPS

CODE	AT-101			-	EDPS	-		-						
	AT-102 (only for stainless steel material version)													
Enclosure extension	Enclosure without extension	N												
	Enclosure with extension	n/a												
Case material	Aluminum		A											
	Stainless steel (only AT-102 version)		S											
Dwyer model					EDPS									
Ranges	0.08 - 1.2 Inch W.C. (20-300 Pa)						08 - 2 - N							
	0.12 - 1.60 Inch W.C. (30-400 Pa)						04 - 2 - N							
	0.20 - 2.00 Inch W.C. (50-500 Pa)						03 - 2 - N							
	0.80 - 4.00 Inch W.C. (200-1000 Pa)						05 - 2 - N							
	2.00 - 10.00 Inch W.C. (500-2500 Pa)						06 - 2 - N							
	4.00 - 20.00 Inch W.C. (1000-5000 Pa)						07 - 2 - N							
Cover	Blind							B						
	Glass window							W						
Pressure port / venting valve material	Brass								1					
	Stainless steel								2					
Pressure port/venting valve (check table 2 based on max static pressure)	STD pressure port 1/8" F NPT / no venting valve									VS0				
	LD pressure port 1/8" F NPT / no venting valve									VL0				
Cable entry	1/2" NPT ANSI/ASME B1.20.1										12			
Other options	Stainless steel tag													

n/a: NOT AVAILABLE

## 2. Max static pressure admitted - Pressure ports and venting valve configuration

		Simplified scheme of pressure port / breathing device (venting valve)				Maximum pressure value with:	
						only one pressure port connected	both pressure ports connected
Code	VS0	PRESSURE PORTS	STD	Enclosure breathing device (venting valve)	None	10 kPa	10 kPa
	VL0		LD		None	10 kPa	10 kPa

# 3. Time response graphs

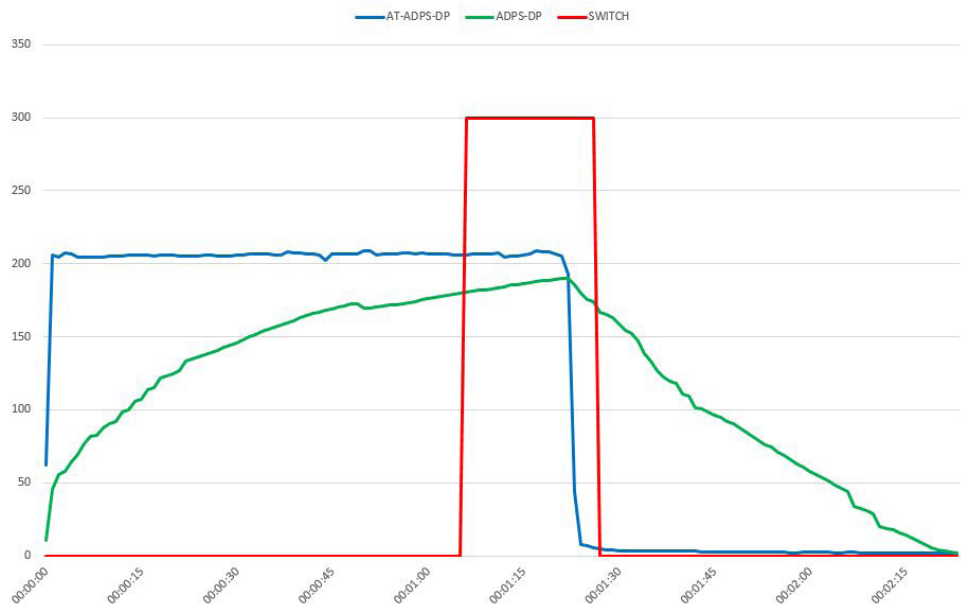
## NEW “LD” FLAME ARRESTORS

The use of flame arrestors introduce some time delay in switching of the relay.

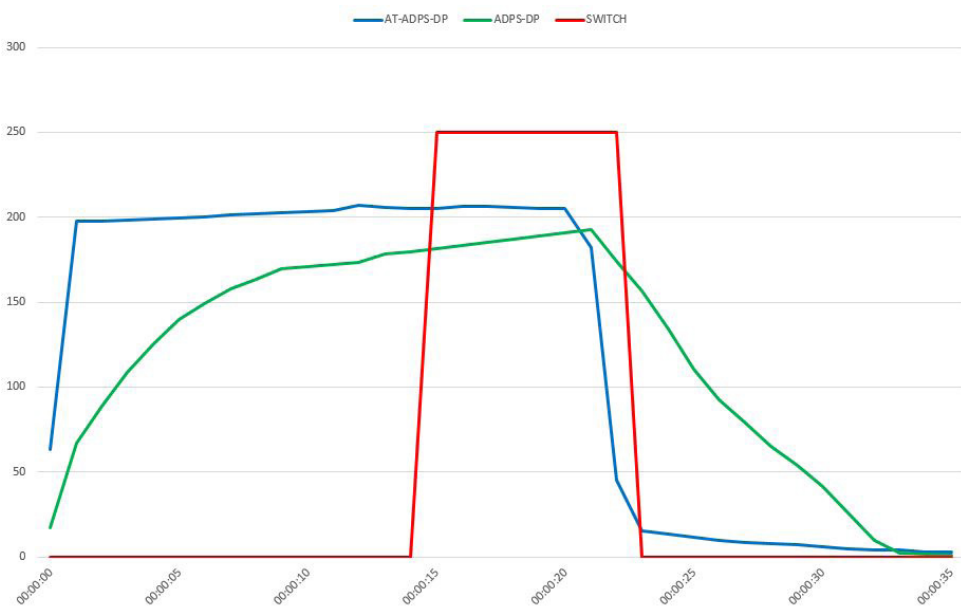
Comhas have developed a new Low pressure drop flame arrestor (LD series) that is suggested if requested better response time. Following are some graphs with difference in response time between LD and STD series.

- upstream pressure ports
- downstream pressure ports

ADPS-STD

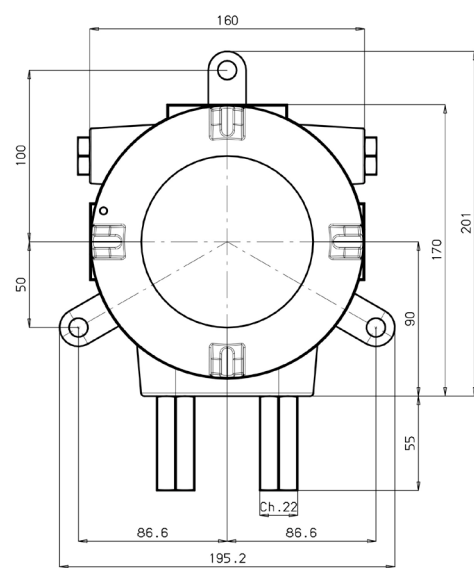


ADPS-LD

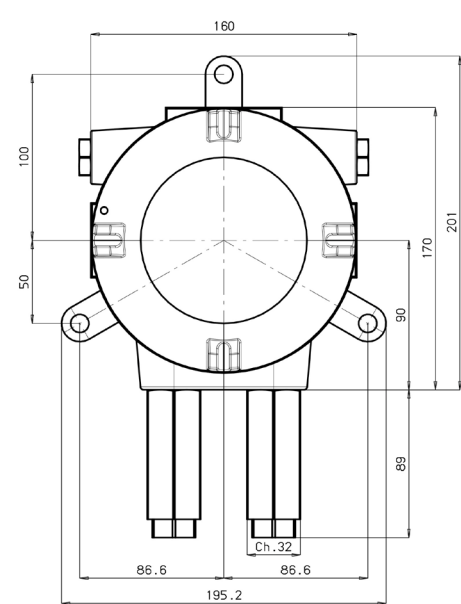


### Aluminum case

STD pressure port/no venting valve



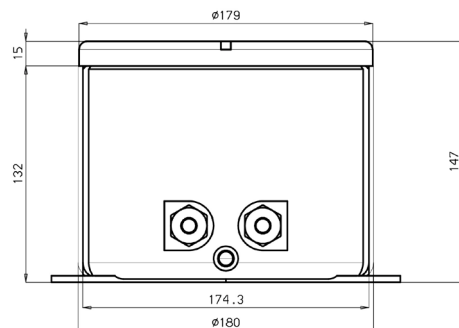
LD pressure port/no venting valve



## Stainless steel case

### VS0

STD pressure port/no venting valve



### VL0

LD pressure port/no venting valve

