

COMHAS

# AT-102P-A3000

# AT-102PS-A3000

Explosion-proof ATEX/IECEX Exd  
Photohelic® pressure switch/gages

**NEW**

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



Atex/IECEX Exd  
Photohelic®  
pressure switch/gage  
now available  
from Comhas  
as single instrument  
Exd approved

3 in 1,  
indicating gage,  
lo-limit  
and hi-limit control

Repeatability  $\pm 2\%$

#### 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

# SPECIFICATION

<b>Service:</b>	air and compatible clean and dry gases. Not suitable for combustible gases.
<b>Wetted parts:</b>	consult factory.
<b>Temperature limits*:</b>	Photohelic®: from -6.67 to 48.9°C (20 to 120°F). Option "LT" low temperature to -20°F (-28.8°C) see also case temperature limits. case: -76 to 140°F (-60 to 60°C)* T5 (-60 to 50°C) T6
<b>Accuracy:</b>	±2% f.s. at 70°F (21.1°C); ±3% on -0; ±4% on -00 models
<b>Response time:</b>	up to 80 sec with "STD" pressure port and 40 sec with "LD" pressure port mainly on low ranges. suggested "LD" pressure port up to 125 Pa (VL0-VL1).
<b>Pressure limits:</b>	see table 2
<b>Dial size:</b>	4" (101.6 mm).
<b>Mounting orientation:</b>	diaphragm in vertical position.
<b>Housing material:</b>	alluminum (optional stainless steel).
<b>Finishing:</b>	texture epoxy coat RAL7015 (aluminum case) RAL 5015 (top cover)
<b>Process connections:</b>	1/8" female NPT brass (stainless steel optional).
<b>Electrical wiring:</b>	screw terminals.
<b>Electrical connection:</b>	2 x 1/2" NPT F standard (supplied without cable gland).
<b>Enclosure rating:</b>	IP66 (IP 65 for versions VS1-VS2-VL1)
<b>Set point adjustment:</b>	adjustable knobs on front of Photohelic® available behind cover (follow instructions and safety warnings to open cover).
<b>Dimensions:</b>	see drawing below.
<b>Weight:</b>	from 9 to 25 Kg

## Switch specification

<b>Switch Type:</b>	each setpoint has 2 form C relay (DPDT).
<b>Repeatability:</b>	± 1% of full scale.
<b>Electrical rating:</b>	10A @ 28 Vcc; 10A @ 120, 240 Vca.
<b>Power requirements:</b>	120 VAC, 50/60 Hz (standard).

\* 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

CODE	AT-102			-		-		-				-						
Enclosure extension	Enclosure without extension	n/a																
	Enclosure with extension	P																
Case material	Aluminum		A															
	Stainless steel		S															
Dwyer model	Standard range catalog				A3XXX													
	Not standard range				special P/N													
Power requirements	Power requirements 120 Vac					120 Vac												
	Power requirements 240 Vac					240 Vac												
	Power requirements 24 Vac					24 Vac												
Options	Standard -0.677 to 1.72 bar (-20" Hg to 25 psig) static pres.*						X											
	Standard construction							X										
	Silicon free							SF										
	Standard temperature limit -6.67 to 48.9 (20 to -120°F)								X									
	Low temperature to -28.8°C (-20°F)								LT									
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						
	STD pressure port 1/8" F NPT / STD venting valve											VS1						
	STD pressure port 1/8" F NPT / LD venting valve											VS2						
	LD pressure port 1/8" F NPT / LD venting valve											VL1						
Cable entry	1/2" NPT ANSI/ASME B1.20.1												12					
Other options	Stainless steel tag																	

n/a: NOT AVAILABLE

\* max static pressure is always defined by table 2, based on different configuration.

### OTHER OPTIONS

- B: diaphragm buna-n.  
TAMP: tamper proof knobs, require spanner type key (supplied). To change setpoints.  
G: green scale overlay.  
R: red scale overlay.  
Y: yellow scale overlay.

ACCESSORIES: Atex cable gland.

# 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
	VS1		STD		STD	20 kPa	15 kPa
	VS2		STD		LD	40 kPa	20 kPa
	VL1		LD		LD	20 kPa	15 kPa

# Standard ranges

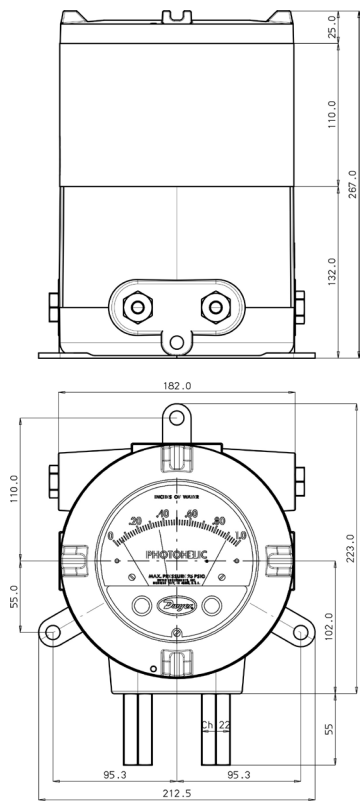
MODEL	INCH W.C.	MODEL	PSI	MODEL	MM W.C.	MODEL	PA
A3000-00	0-.25	A3201	0-1	A3000-6MM	0-6	A3000-60PA	0-60
A3000-0	0-.50	A3202	0-2	A3000-10MM	0-10	A3000-125PA	0-125
A3001	0-1.0	A3203	0-3	A3000-25MM	0-25	A3000-250PA	0-250
A3002	0-2.0	A3204	0-4	A3000-50MM	0-50	A3000-500PA	0-500
A3003	0-3.0	A3205	0-5	A3000-80MM	0-80	A3000-750PA	0-780
A3004	0-4.0	MODEL	INCH W.C. AIR VELOCITY F.P.M.	A3000-100MM	0-100	A3300-250PA	125-0-125
A3005	0-5.0	A3000-00AV	0-.25/300-2000	MODEL	MM W.C.	A3300-500PA	250-0-250
A3006	0-6.0	A3000-0AV	0-.50/500-2800	A3300-20MM	10-0-10	MODEL	KPA
A3008	0-8.0	A3001AV	0-1.0/500-4000	A3300-30MM	15-0-15	A3000-1KPA	0-1
A3010	0-10	A3002AV	0-2.0/1000-5600	MODEL	CM W.C.	A3000-1.5KPA	0-1.5
A3015	0-15	A3010AV	0-10/2000-12500	A3000-15CM	0-15	A3000-2KPA	0-2
A3020	0-20	Con tubo di Pitot		A3000 20CM	0-20	A3000-3KPA	0-3
A3025	0-25			A3000-25CM	0-25	A3000-4KPA	0-4
A3030	0-30			A3000-50CM	0-50	A3000-5KPA	0-5
A3040	0-40			A3000-80CM	0-80	A3000-8KPA	0-8
A3050	0-50			A3000-100CM	0-100	A3000-10KPA	0-10
A3060	0-60			A3000-150CM	0-150	A3000-15KPA	0-15
A3080	0-80			A3000-200CM	0-200	A3000-20KPA	0-20
A3100	0-100			A3000-250CM	0-250	A3000-25KPA	0-25
A3150	0-150			A3000-300CM	0-300	A3000-30KPA	0-30
BI-DIRECTIONAL RANGES				MODEL	CM W.C.	A3300-1KPA	.5-0- .5
A3000-00N	.05-.20			A3300-4CM	2-0-2	A3300-3KPA	1.5-0-1.5
MODEL	INCH W.C.	A3300-10CM	5-0-5				
A3300-0	.25-0-.25	A3300-30CM	15-0-15				
A3301	.5-0-.5						
A3302	1-0-1						
A3304	2-0-2						
A3310	5-0-5						
A3320	10-0-10						
A3330	15-0-15						

# Dimension

## Aluminum case

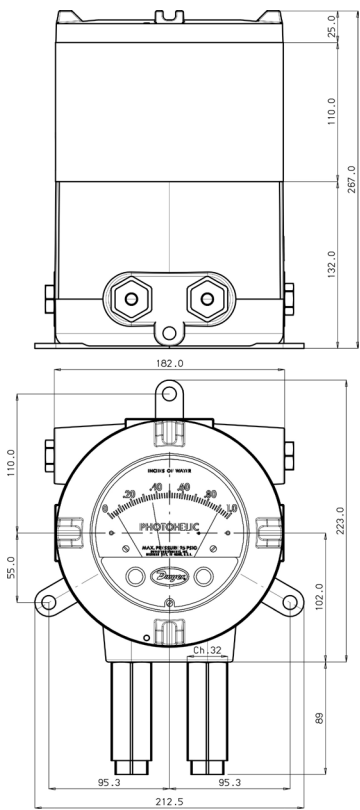
VS0

STD pressure port/no venting valve



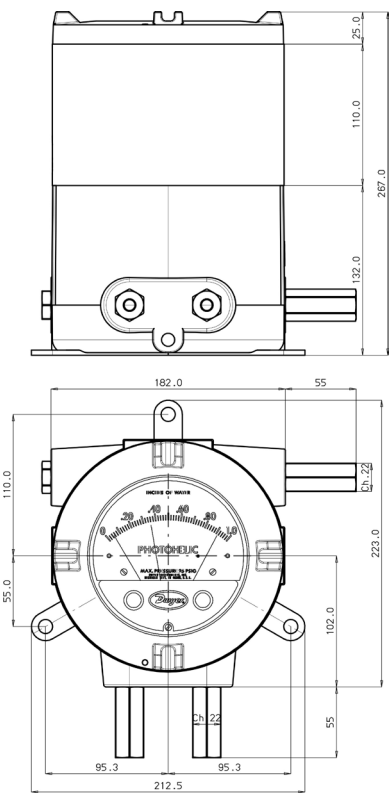
VL0

LD pressure port/no venting valve



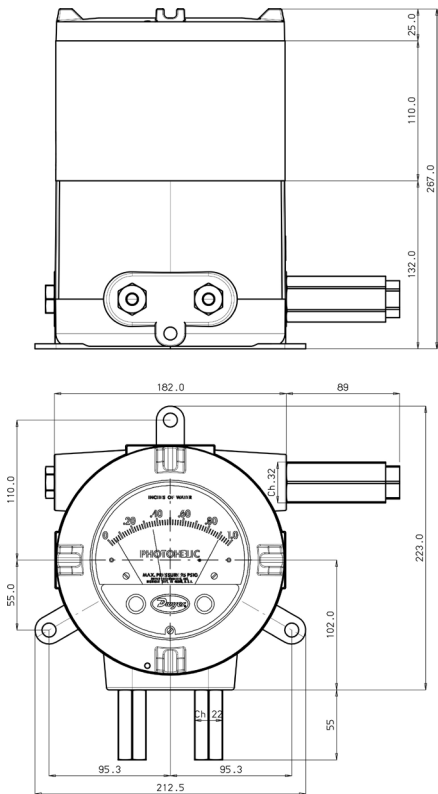
VS1

STD pressure port/STD venting valve



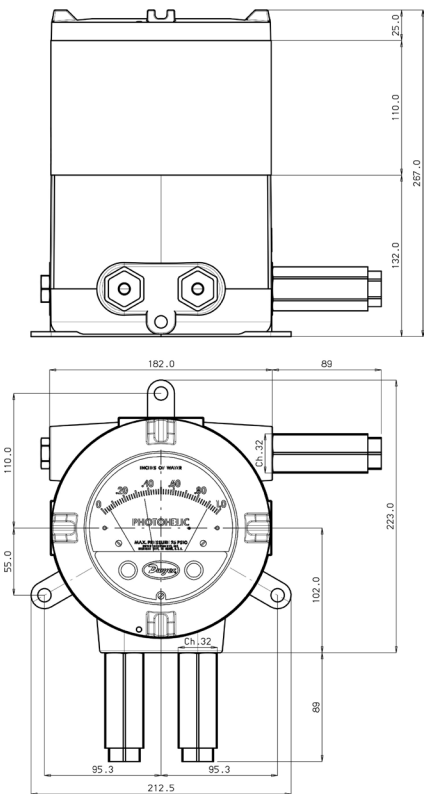
VS2

STD pressure port/LD venting valve



VL1

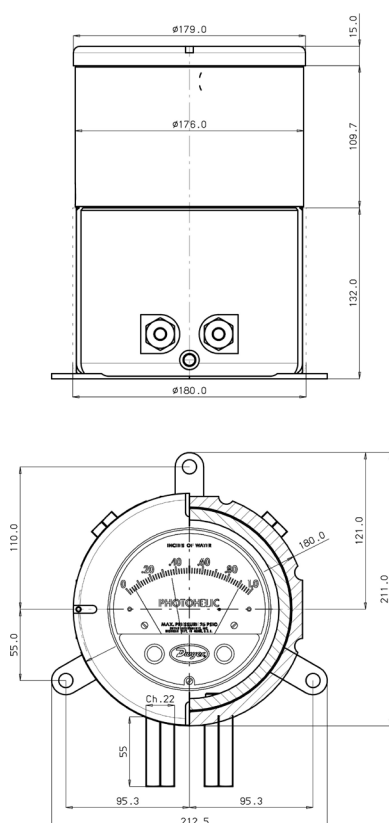
LD pressure port/LD venting valve



## Stainless steel case

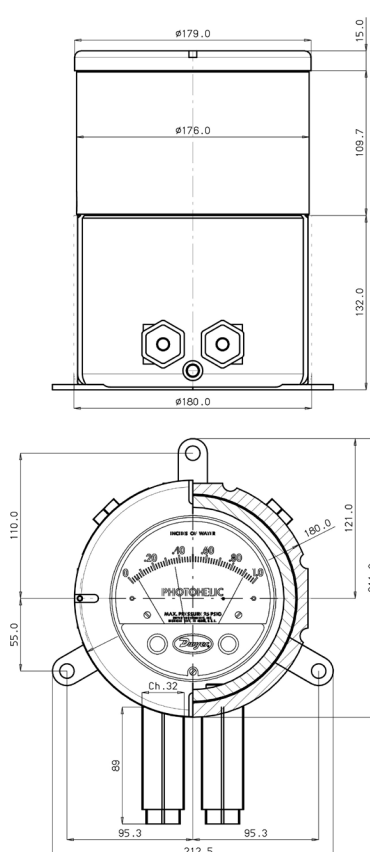
### VS0

STD pressure port/no venting valve



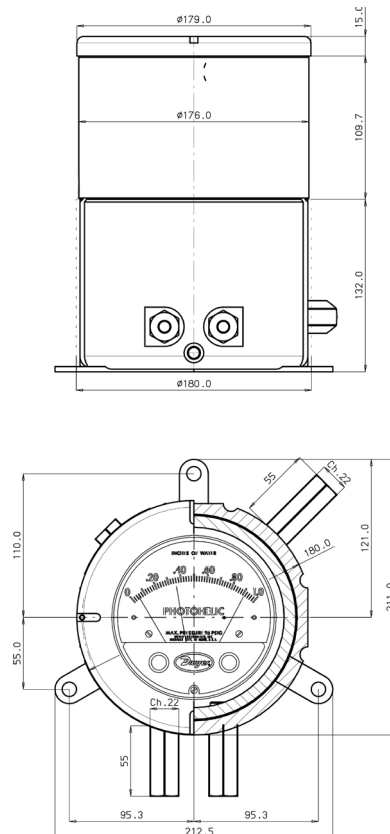
### VL0

LD pressure port/no venting valve



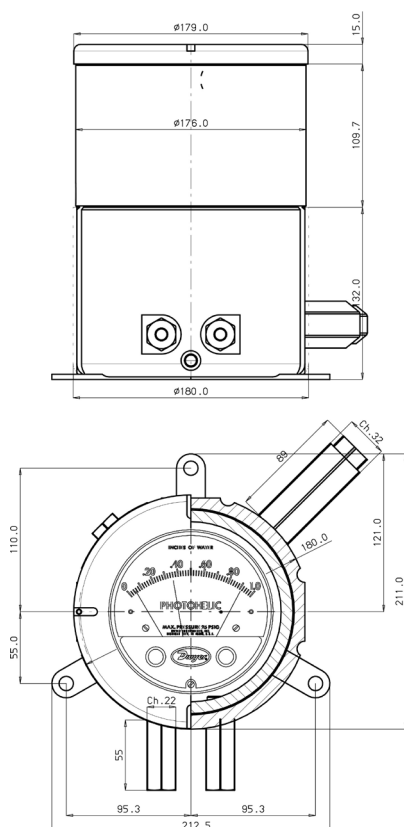
### VS1

STD pressure port/STD venting valve



### VS2

STD pressure port/LD venting valve



### VL1

LD pressure port/LD venting valve

