

COMHAS

# AT-102-3000MR/MRS AT-102S-3000MR/MRS

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

# SPECIFICATIONS

<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 a 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>	aluminium (optional stainless steel).
<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 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 6 to 16 kg

## Switch specifications

### 3000MR

<b>Switch Type:</b>	each setpoint has 1 form C relay (SPDT).
<b>Electrical rating:</b>	(Resistive load) 1 form C rated 1.0A @ 30 Vdc, 0.3A @ 110 Vdc or 0.5A @ 125 Vac.
<b>Power requirements:</b>	24 VDC, regulated ±10%.
<b>Electrical connection:</b>	46 cm cable assembly (longer or request).

### 3000MRS

<b>Switch Type:</b>	each setpoint has a solid state relay.
<b>Switching voltage:</b>	20-280 Vac.
<b>Switching current:</b>	1.0 amp (AC) max, 0.01 mA (AC) min, (2) SPST NO.
<b>Electrical connection:</b>	46 cm cable assembly (longer or request).

\* 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-energizing 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

<b>CODE</b>	<b>AT-102</b>											
<b>Enclosure extension</b>	Enclosure without extension	N										
	Enclosure with extension	n/a										
<b>Case material</b>	Aluminum		A									
	Stainless steel		S									
<b>Dwyer model</b>	Standard range (MR)			3XXXMR								
	Standard range (MRS)			3XXXMRS								
	Not standard range			special P/N								
	Power requirements 24 Vdc				24 Vdc							
	Power requirements 24 Vac				24 Vac							
<b>Options</b>	Standard -0.677 to 1.72 bar (-20" Hg to 25 psig) static pres. (pls see max P limit on table 2)				X							
	Standard construction					X						
	Silicone free					SF						
	Standard temperature limit -6.67 to 48.9 (20 to -120°F)						X					
	Low temperature to -28.8°C (-20°F)							LT				
<b>Cover</b>	Blind								B			
	Glass window								W			
<b>Pressure port / Venting valve material</b>	Brass									1		
	Stainless steel									2		
<b>Pressure port / Venting valve (check table 2 based on max static pressure)</b>	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	
<b>Cable entry</b>	1/2" NPT ANSI/ASME B1.20.1										12	
<b>Other options</b>	Stainless steel tag											
	See "other options" - Possible more than one option											...

n/a: NOT AVAILABLE

## 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

Code	Simplified scheme of pressure port / breathing device (venting valve)	Maximum pressure value with:			
		only one pressure port connected	both pressure ports connected		
Code	VS0	STD	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
				Enclosure breathing device (venting valve)	

## Standard ranges 3000MR

MODEL	INCH W.C.	MODEL	MM W.C.
3000MR-00	0-25	3000MR-6MM	0-6
3000MR-0	0-50	3000MR-10MM	0-10
3001MR	0-1.0	3000MR-25MM	0-25
3002MR	0-2.0	3000MR-50MM	0-50
3003MR	0-3.0	3000MR-100MM	0-100
3004MR	0-4.0	<b>MODEL</b>	<b>PA</b>
3008MR	0-8.0	3000MR-60PA	0-60
3010MR	0-10	3000MR-125PA	0-125
3015MR	0-15	3000MR-250PA	0-250
3020MR	0-20	3000MR-500PA	0-500
3025MR	0-25	<b>MODEL</b>	<b>KPA</b>
3030MR	0-30	3000MR-1KPA	0-1
3050MR	0-50	3000MR-3KPA	0-3
3100MR	0-100	3000MR-4KPA	0-4

## Standard ranges 3000MRS

MODEL	INCH W.C.	MODEL	MM W.C.
3000MRS-00	0-25	3000MRS-6MM	0-6
3000MRS-0	0-50	3000MRS-10MM	0-10
3001MRS	0-1.0	3000MRS-25MM	0-25
3002MRS	0-2.0	3000MRS-50MM	0-50
3003MRS	0-3.0	3000MRS-100MM	0-100
3004MRS	0-4.0	<b>MODEL</b>	<b>PA</b>
3008MRS	0-8.0	3000MRS-60PA	0-60
3010MRS	0-10	3000MRS-125PA	0-125
3015MRS	0-15	3000MRS-250PA	0-250
3020MRS	0-20	3000MRS-500PA	0-500
3025MRS	0-25	<b>MODEL</b>	<b>KPA</b>
3030MRS	0-30	3000MRS-1KPA	0-1
3050MRS	0-50	3000MRS-3KPA	0-3
3100MRS	0-100	3000MRS-4KPA	0-4

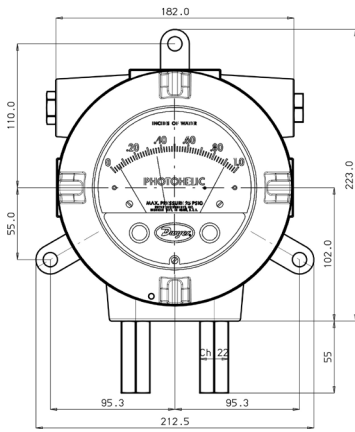
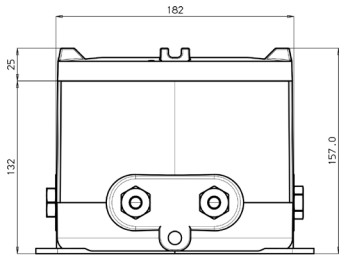
OTHER SCALES AVAILABLE WITH LIMITATIONS OF MAX PRESSURE TO 20 OR 40 KPA AS ON TABLE 2.

# Dimension

## Aluminum case

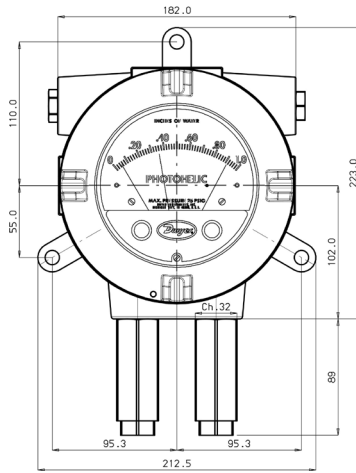
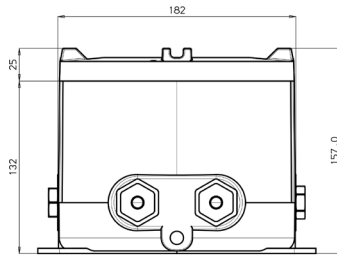
### VS0

STD pressure port/no venting valve



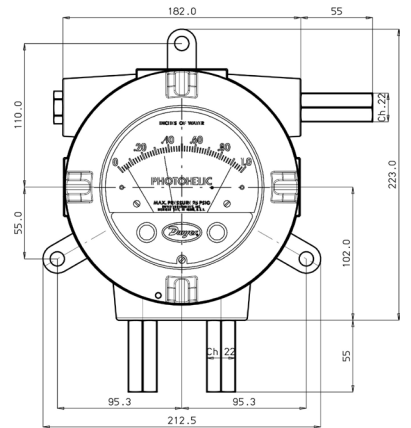
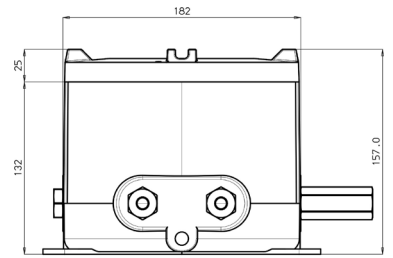
### VL0

LD pressure port/no venting valve



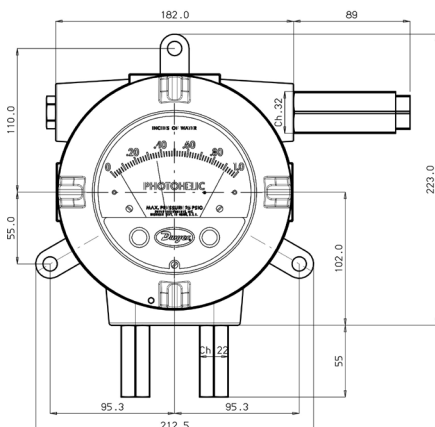
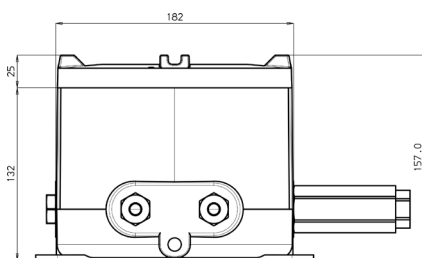
### VS1

STD pressure port/STD venting valve



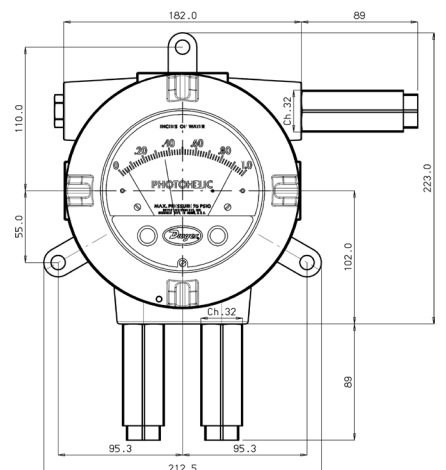
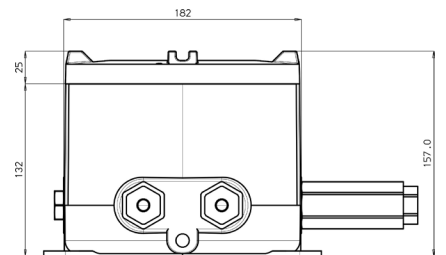
### VS2

STD pressure port/LD venting valve



### VL1

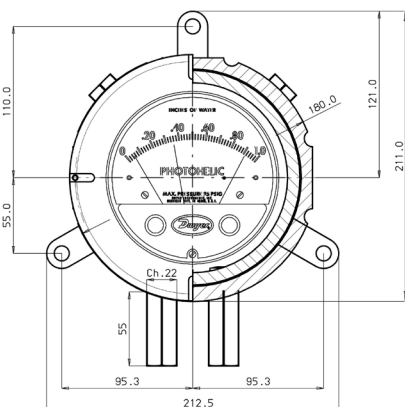
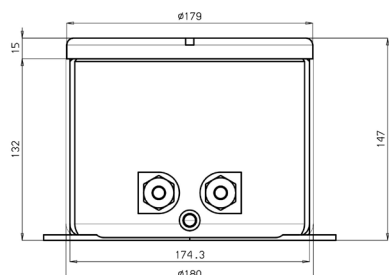
LD pressure port/LD venting valve



## Stainless steel case

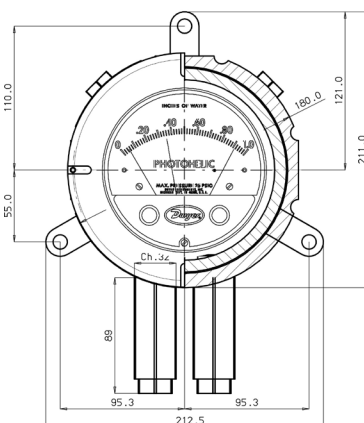
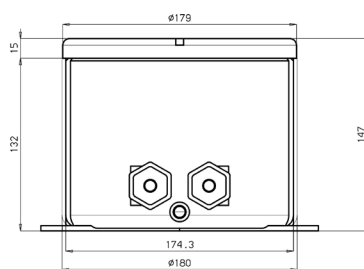
### VS0

STD pressure port/no venting valve



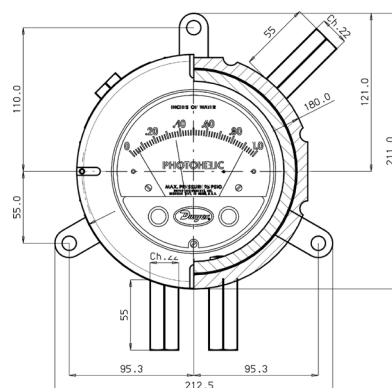
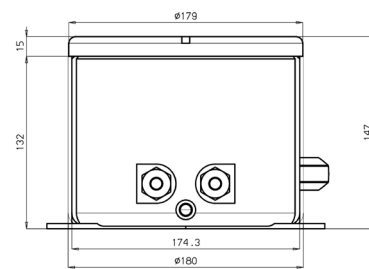
### VL0

LD pressure port/no venting valve



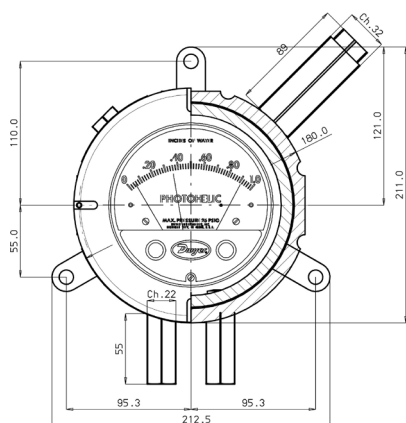
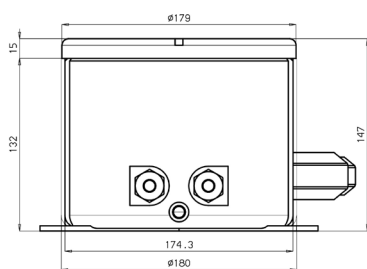
### VS1

STD pressure port/STD venting valve



### VS2

STD pressure port/LD venting valve



### VL1

LD pressure port/LD venting valve

