

AT3-A3000

EXPLOSION-PROOF ATEX/IECEX
PHOTOHELIC® PRESSURE
SWITCH/GAGES



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

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

Repeatability $\pm 2\%$

Photohelic® switch/gages series AT3-A3000 function as versatile, highly repeatable pressure switches combined with a precise pressure gage employing the time-proven Magnehelic® gage design. The Photohelic® switch/gage measures and controls positive, negative or differential pressures of air and compatible gases. Standard models are rated to 25 psig (1.7 bar) with options to 35 (2.4) or 80 (5.5 bar) psig. Single pressure 36000S models measure also available. Two phototransistor actuated, DPDT relays are included for low/high limit control. easy to adjust setpoint indicators are controlled by knobs located on the gage face (accessible opening case after de-energizing instrument). Individual setpoint deadband is one pointer width - less than 1% of full scale. Setpoints can be interlocked to provide variable deadband - ideal for control of fans, dampers, etc. Gage reading is continuous and unaffected by switch operation, even during loss of electrical power. Several ranges available (see standard ranges table).

Agency approvals

Atex:	CE 1370 II 2G Ex d IIC T6 Gb II 2D Ex tb IIIC T85°C Db, -60°C ≤ T _{amb} ≤ +60°C Certificate: BVI 14 ATEX 0072
IECEX:	Ex d IIC T6 Gb Ex tb IIIC T85°C Db Certificate: IECEX EPS 14.0082
Enclosure rating:	IP66 (IP65 with option OPV)

AT3-A3000 specifications

Service:	air and compatible clean and dry gases.
Wetted parts:	consult factory.
Temperature limits*:	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: from -60 to 60°C (see also above, Photohelic® temperature limits).
Accuracy:	±2% f.s. at 70°F (21.1°C) ±3% on -0 ±4% on -00 models
Pressure limits:	-20" Hg to 25 psig (-0.677 bar to 1.72 bar). MP option; 35 psig (2.41 bar) HP option; 80 psig (5.52 bar). A36003S – A36010S; 150 psig (10.34 bar).
Dial size:	4" (101.6 mm).
Mounting orientation:	Diaphragm in vertical position.
Housing material:	aluminium (optional stainless steel).
Finishing:	texture epoxy coat RAL7038 (only aluminium housings).
Process connections:	1/8" female NPT brass (stainless steel optional). In case of acetylene presence it is compulsory to use stainless steel.
Electrical wiring:	screw terminals.
Electrical connection:	3 x 1/2" NPT F standard (supplied without cable gland).
Set point adjustment:	adjustable knobs on face of Photohelic® available behind cover (follow instructions and safety warnings to open cover).
Dimensions:	see drawing below.
Weight:	12,9 Kg ab.
Response time**:	from f.s. to 0 up to 120 sec. max (mainly for low ranges models 60, 100 e 125 Pa or equivalentes).

SWITCH SPECIFICATIONS

Switch Type:	each setpoint has 1 form C relay (SPDT).
Repeatability:	±1% of full scale.
Electrical rating:	10A @ 28 Vcc, 10A @ 120, 240 Vca.
Power Requirements:	120 VAC, 50/60 Hz; 240 VAC & 24 VAC power optional.

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 IP 66 rating (IP65 with option OPV, pressure relief 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.

CAUTION FOR USE ONLY WITH AIR OR COMPATIBLE GASES!
CONTACT FACTORY FOR USE WITH GASES,
OTHER THAN AIR AND NITROGEN.

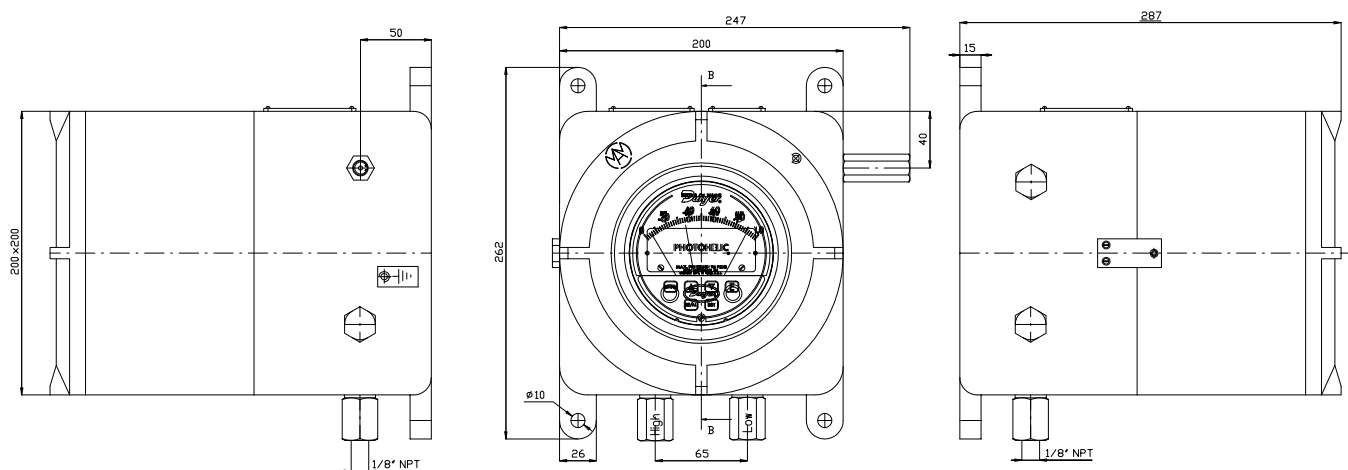
* Operating ambient temperatura is defined also according to the options and pressure instrument choosed.

** Due to flame arrestor installation.

Standard ranges (other ranges available)

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	A3210 **	0-10	A3000-100MM	0-100	MODEL	PA
A3005	0-5.0	A3215 **	0-15	MODEL	MM W.C.	A3300-250PA	125-0-125
A3006	0-6.0	A3220 ***	0-20	A3300-20MM	10-0-10	A3300-500PA	250-0-250
A3008	0-8.0	A3230 ***	0-30	A3300-30MM	15-0-15	MODEL	KPA
A3010	0-10	**MP o ***HP opzioni standard		MODEL	CM W.C.	A3000-1KPA	0-1
A3015	0-15	PHOTOHELIC® - SINGLE PRESSURE		A3000-15CM	0-15	A3000-1.5KPA	0-1.5
A3020	0-20	A36003S	0-30	A3000 20CM	0-20	A3000-2KPA	0-2
A3025	0-25	A36006S	0-60	A3000-25CM	0-25	A3000-3KPA	0-3
A3030	0-30	A36010S	0-100	A3000-50CM	0-50	A3000-4KPA	0-4
A3040	0-40	MODEL	INCH W.C. AIR VELOCITY F.P.M.	A3000-80CM	0-80	A3000-5KPA	0-5
A3050	0-50	A3000-00AV	0-.25/300-2000	A3000-100CM	0-100	A3000-8KPA	0-8
A3060	0-60	A3000-0AV	0-.50/500-2800	A3000-150CM	0-150	A3000-10KPA	0-10
A3080	0-80	A3001AV	0-1.0/500-4000	A3000-200CM	0-200	A3000-15KPA	0-15
A3100	0-100	A3002AV	0-2.0/1000-5600	A3000-250CM	0-250	A3000-20KPA	0-20
A3150	0-150	A3010AV	0-10/2000-12500	A3000-300CM	0-300	A3000-25KPA	0-25
BI-DIRECTIONAL RANGES				MODEL	CM W.C.	A3000-30KPA	0-30
A3000-00N	.05-.20	Con tubo di Pitot		A3300-4CM	2-0-2	MODEL	KPA
MODEL	INCH W.C.			A3300-10CM	5-0-5	A3300-1KPA	.5-0-.5
A3300-0	.25-0-.25			A3300-30CM	15-0-15	A3300-3KPA	1.5-0-1.5
A3301	.5-0-.5						
A3302	1-0-1						
A3304	2-0-2						
A3310	5-0-5						
A3320	10-0-10						
A3330	15-0-15						

Dimensions



Consult factory for different holes size and layout.

Model configuration

	CODE	AT3																
CASE	AT3	AT3																
RANGE	Standard range catalog	A3xxx																
	Not standard range	P/N spec.																
POWER REQUIREM.	Power requirements 120 Vac																	
	Power requirements 240 Vac																	
	Power requirements 24 Vac																	
OPTION	Standard -0,677 to 1,72 bar (-20" Hg to 25 psig) static pres.						X											
	Medium pressure (max static pressure 35 psig - 2,41 bar)						MP											
	High pressure (max static pressure 80 psig - 5,52 bar)						HP											
	Standard construction							X										
	Silicon free							SF										
	Standard temp. limit -6,67 to 48,9 (20 to -120°F)									X								
	Low temperature to -28,8°C (-20°F)									LT								
CASE MATERIAL	Alluminium													A				
	Stainless steel													S				
CASE OPTIONS	Blind top cover														B			
	Glass transparent cover														O			
	1/8" NPT F brass pressure port												1					
	1/8" NPT F stainless steel												2					
	Standard - without overpressure relief valve															X		
	Overpressure relief valve* (material: same as pressure ports)															OPV		
	Stainless steel tag																	T2
OTHER OPTIONS	See "other options" list - more than one option possible																

*IP65 in case of relief valve installation (OPV). Relief valve is used to keep atmospheric pressure inside the case.

Suggested in case of risk of having static pressure ≥ 19 Bar (static pressure admitted is indicated on tag and it will be anyway always < 19 bar).

OTHER OPTIONS

B: diaphragm buna-n.
 HC: horizontal calibration (consulta factory).
 M: mirror scale overlay.
 TAMP: tamper proof knobs, require spanner type key (supplied).
 to change setpoints.
 G: green scale overlay.
 R: red scale overlay.
 Y: yellow scale overlay.
 SRH: single right high latching
 SRL: single right lo latching.
 HL/LH/LL: latching option.
 XXXXX: layout code for different holes sizes and layout.

ACCESSORIES

Atex cable gland.

Dimensions may change without any advice.