

# diaphragm pressure switches ATEX flameproof enclosure

# 3.42



**Certificate :  
CESI 04 ATEX 027**

These flameproof electrical apparatus comply with European Directive ATEX 94/9/EC, for group II and category 2 GD. They are suitable for a variety of uses in hazardous zones 1, 2, 21 and 22 in which the use of flameproof instrument is required. The sensing element is a metallic diaphragm and acts directly on the microswitch through a self-centering pivot. The simplicity of the design, without levers, cams or similar mechanisms, gives the unit an exceptionally long working life.

## 3.42 - Standard Model

**Type of ignition protection:** Ex d IIC T6 as per EN 60079-0, EN 60079-1 and Ex tD A21 IP65 T85°C as per EN 61241-0, EN 61241-1.

**Protection:** IP 65 as per EN 60529.

**Ranges:** 0...1 bar / 0...160 bar; -1...0 bar.

**Electrical specifications:** N. 1...2 SPDT microswitches, or N.1 with adjustable differential (see microswitches table).

**Differential:** fixed, or adjustable 10%...50% of setting range (see microswitches table).

**Repeatability:** ≤ 1% of the full setting value.

**Set-point adjustment:** internal, micrometric adjustable.

**Earth contacts:** N. 1 internal, N. 1 external.

**Process fluid temperature:** -4...+140°F (-20...+60 °C).

**Ambient temperature:** -4...+149°F (-20...+65 °C).

**Thermal drift:** ≤ 0,027% / °F (≤ 0,05% / °C).

**Process connection:** AISI 316 st.st.

**Elastic element:** AISI 316 st.st. diaphragm for pressure ranges ≤ 2,5 bar; carbon steel diaphragm covered with AISI 316 st.st. for pressure ranges > 2,5 bar. Diaphragm PTFE gasket.

**Case:** aluminium, blue polyurethane painted.

**Cover:** aluminium, beige polyurethane painted.

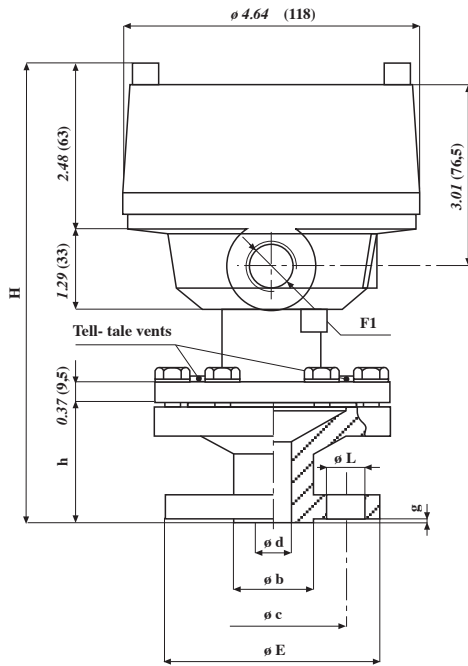
**Tag:** AISI 304 st.st., etched.

**Tell-tale vents:** polypropylene.

Set-point ranges	Test pressure	Special overrange (cod. F03)	Differential 1 micro (2)	Differential 2 micro (2)
0,06...1 bar (1)	1,2 bar	10 bar	25 mbar	60 mbar
0,06...1,6 bar (1)	2 bar	10 bar	30 mbar	60 mbar
0,06...2,5 bar (1)	3 bar	10 bar	40 mbar	60 mbar
0,08...4 bar	5 bar	15 bar	50 mbar	80 mbar
0,09...6 bar	8 bar	15 bar	60 mbar	90 mbar
0,15...10 bar	12 bar	20 bar	100 mbar	150 mbar
0,25...16 bar	20 bar	30 bar	160 mbar	250 mbar
0,4...25 bar	30 bar	35 bar	250 mbar	400 mbar
0,6...40 bar	48 bar	60 bar	400 mbar	600 mbar
0,9...60 bar	70 bar	80 bar	600 mbar	900 mbar
6...100 bar	120 bar		4 bar	6 bar
8...160 bar	185 bar		5 bar	8 bar

(1) also available for vacuum and compound

(2) differential and minimum set-point values for microswitches cod. I, L, N, R, S, T, U, V are 300% of those shown in table.



dimensions : inches (mm)

UNI - DIN STANDARDS (1)

dimensions : mm

Code	DN(2)	PN-bar	h	H	E	b	d	g	c	L(3)
OOO	15	6	46	188	80	40	15	2	55	11,5
OQO	15	10...16	50	192	95	45	15	2	65	14
OSO	15	25...40	52	194	95	45	15	2	65	14
QOO	25	6	49	191	100	60	25	2	75	11,5
QQO	25	10...16	59	201	115	68	25	2	85	14
QSO	25	25...40	59	201	115	68	25	2	85	14

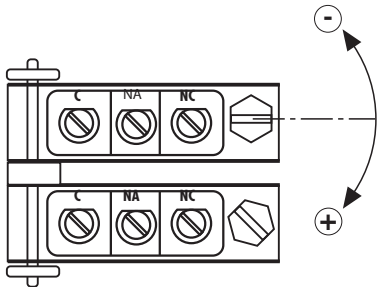
ASME STANDARDS (1)

dimensions : inches

Code	DN(2)	Class	h	H	E	b	d	g	c	L(3)
4AA	1/2"	150	1.89	7.48	3.50	1.38	0.59	0.06	2.38	0.63
4BA	1/2"	300	2.11	7.70	3.74	1.38	0.59	0.06	2.64	0.63
4DA	1/2"	600	2.36	7.95	3.74	1.38	0.59	0.25	2.64	0.63
6AA	1"	150	2.01	7.60	4.25	2	0.98	0.06	3.13	0.63
6BA	1"	300	2.36	7.95	4.88	2	0.98	0.06	3.50	0.75
6DA	1"	600	2.60	8.19	4.88	2	0.98	0.25	3.50	0.75

- 1) Finishing: UNI - Ra 12,5 µm max;  
DIN - Rz 40...160 µm; ASME - AARH 125...250 µin
- 2) Available also DN 20,32,40,50 e 1" 1/2 , 2"
- 3) N°4 threaded or through holes.

Set-point adjustment



MICROSWITCHE  
ohmic load

Single / Double	Type	250	125	24
		Vac	Vac	Vdc
C/D	std.	15A	15A	0,1A
G/H	SPLASH	15A	15A	0,1A
I/L	goldplated		1A	0,1A
M/P	inert gas filled	15A	15A	0,1A
N/R	goldplated and inert gas filled		1A	0,1A
E	adjustable dead band	20A	20A	0,1A
S/T	SPLASH VDC	15A	15A	6A
U/V	inert gas filled VDC	15A	15A	6A

F1
1 - R 1/2-ISO 7/1
2 - R 3/4-ISO 7/1
3 - 1/2-14 NPT
4 - 3/4-14 NPT
A - M20 x 1,5

OPTIONS

F03 - Special overpressure stop	E30 - Nace MR 01.03 version (1)
M26 - PTFE diaphragm	M23 - Monel diaphragm
T01 - Tropicalization	M22 - Hastelloy C diaphragm
P02 - Oxygen service	M29 - Tantalum diaphragm

(1) Monel or Hastelloy C diaphragm.

"HOW TO ORDER" SEQUENCE

Section / Model / Set-point Adjustment / Microswitch / Electrical connection / Process connection / ATEX / Options
3 42 C, D, G, H I, L, M, P N, R, E S, T, U, V 1 2 3 4 A OO0...QS0 4AA...6AA 2D2 F03...M29