

**PRESSURE TRANSMITTER
FOR GENERAL APPLICATIONS _ PROTECTION IP68**

Type. XA-700

1. DESCRIPTION

This series of pressure transmitter degree of protection **IP68** has been developed to cover the majority of industrial applications. They are usual those ones that are dedicated to the continuous measurement of gases or liquids, mechanical engineering, hydraulics, pneumatic, etc.



The transmitter is made with the most novel techniques and it has inside of it a converter circuit of high quality it can be supplied with a non-stabilized direct voltage of 8 (15) ... 35 Vdc. And provide standard industrial output signals (see maximum load R).

This whole range of transmitters can be adapted to our program of cooling towers for high process temperatures applications and for the whole range of diaphragms for the chemical industry, food industry, pharmaceutical, etc.

2. USED TECHNIQUE

The sensor of the pressure transmitter is made of ceramic, and the technique used to make it is called "piezoresistive". This technology is related to the deformation of the diaphragm, in it there are recorded 4 electric resistences making a Wheastone bridge. Because of that any deformation that the diaphragm can suffer caused by the effect of any pressure will unbalance the electric circuit that will conform an exit sign proportional and linearity to the pressure that supports the ceramic sensor.

The ceramic sensors used are internally compensated in temperature through resistences PTC.

The use of the ceramic technology in the field of the pressure transmitters contributes an excellent fiability because it makes the pressure directly in the ceramic sensor. On not having existed no chamber of fluids in its interior (synthetic oil, glycerine, etc... that could produce variations for dilatation effects) contributed a high stability opposed to the effects of the temperature.

3. PRESSURE RANGES (Bar)

Ranges	0,25	0,50	0,75	1,00	1,60	2,50	4,00	6,00
Burst pressure	3,00	3,00	3,00	3,00	5,00	12,0	12,0	25,0

Ranges	10,0	16,0	20,0	25,0	30,0	40,0	50,0	60,0
Burst pressure	25,0	50,0	120	120	120	250	250	250

Other pressure ranges and units are available (m.c.a., PSI, Kg/cm², mmHg, KPa,...)

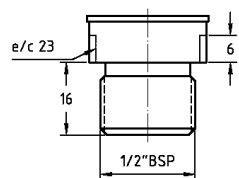
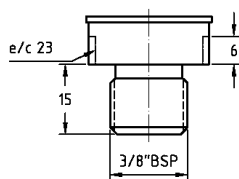
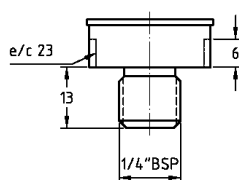
4. TECHNICAL DATA

4.1 Sensor characteristics

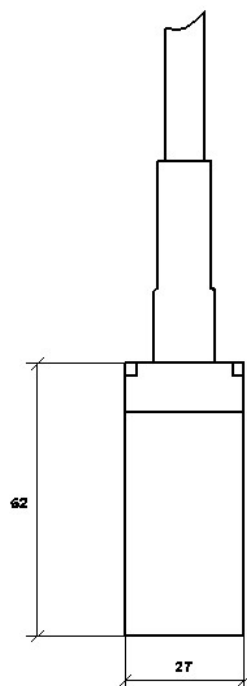
Pressure	Relative
Pressure ranges	0-0,250 Bar to 0-60 Bar
Sensor	Ceramic piezoresistor
Accuracy – Combined error hysteresis-linearity- reproducibility	Typical $\leq 0,4$ % of span
Resolution of sensor	0,01 to 0,014 % of span
Response time	< 1 mseg.
Materials wetted parts	Stainless steel AISI-316L, ceramic and o-ring
Material of the o-ring	Acrilnitrilo butadieno (NBR) (Other materials: VITON, EPDM, PTFE...)
Material case	Stainless steel AISI-316L
Degree of protection	IP-68
Signal output	Linearity
Power supply	8÷35 Vdc.
Wiring protection	Protected against reverse polarity, overvoltage and short circuiting
Signal output	4÷20 mAdc., 2 wire
Maximum load R - Ω	$R_{a\leq} [U_b(Vdc)-8(Vdc)] / 0,02 Adc$
Electrical connection	Through three poles cable
Temperature	-5 a +70 °C
Dimensions	See drawings
\varnothing diameter	27 mm.
Weight with cable	<0,5 Kg. With 2 mts. cable
CE - Conformity	89/336/CE-EN61000-6-2-97/23

5. DIMENSIONS (mm.)

5.1 Process connection



5.1 Dimensions case



4.2 Cable CS-700 characteristics

The **CS-700** cable is made of 3 conductors of power supply, a nylon tube and an iron cable. The outside cover of the cable is made of PVC prepared to its immersion in water, even salt water and free of dangerous products, according to annex 3, of RD.208/2005.

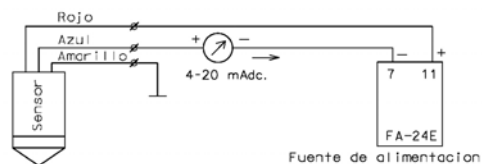
NOTE: The transmitter is given in its standard form with 2 mts of cable. It's possible to send it with more meters if we are asked for.

\varnothing diameter external	9 mm.
External colour	Blue – Ral: 5015
Degree of protection: IP68	With capillary (poliopheline)
Material external	Acrylic PVC - TM5 according UNE 21031/13
Compensation capillary (to balance the atmospheric pressure from outside)	Nylon 1x2
Material Conductor	3x0,34 mm ² (UNE 21064)
Steel cable (traction)	1 mm.
Breaking load	110 Kg.
Weight – approximate	100 gr./mt.
Conductive electrical resistance to 20 °C	59 Ω /Km.
Colour code	Red, blue and yellow
Temperature	-5 a +70 °C

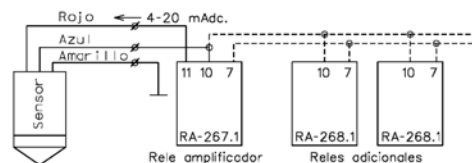
6. ELECTRICAL CONNECTION

Red: (+)	Blue: (-)	Yellow: (\perp)
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6.1 With switching power supply



6.2 With amplifier relay for the transmitter



6.3 With panel meters – process display

