

XA-300 PRESSURE TRANSMITTER FOR MARINE APPLICATIONS



1. DESCRIPTION

This series of pressure transmitters has been developed with highly anti-corrosive materials to cover saltwater measurement applications in marine applications such as desalination plants.

The transmitter is made with the latest techniques and has a high-quality converter circuit inside. The supply voltage range of the transmitter is very wide and can vary between 8 and 35 Vdc. without varying the output signal (see technical characteristics for maximum load resistance).

This range of transmitters can be adapted to our program of coolers for high process temperature applications and to the whole range of separators for the chemical industry, food industry, etc. The materials in contact with the process can be adapted to the physical characteristics of the product.

2. TECHNIQUE USED

The pressure transmitter sensor is made of ceramics, the technique used being piezoresistive. This technology is related to the deformation of the diaphragm, in which four electrical resistors are engraved forming a Wheatstone bridge. Consequently, any deformation of the diaphragm due to the effect of pressure will unbalance the electronic circuit, which will form an output signal proportional and linear to the pressure supported by the ceramic cell. The ceramic sensors used are internally temperature compensated by means of PTC resistors.

The use of ceramic technology in the field of pressure transmitters provides excellent reliability as the pressure is applied directly to the ceramic sensor. As there is no fluid chamber inside (synthetic oil, glycerin, etc., which can cause variations due to expansion effects), it provides high stability against temperature effects.

3. NORMALIZED WORKING SCALES (in Bar)

Range	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
Range	10,0	16,0	25,0	40,0	60,0	100	160	250
Burst pressure	25,0	50,0	120	120	250	250	500	500

Other working ranges and units (WCM, PSI, Kg/cm², mmHg, KPa, etc.) on request, depending on the different physical parameters of the application.

This publication does not try to establish the bases of a contract and the company keeps the right to modify without previous notice the design and the specifications of the instruments, in accordance with his politics of continued development.

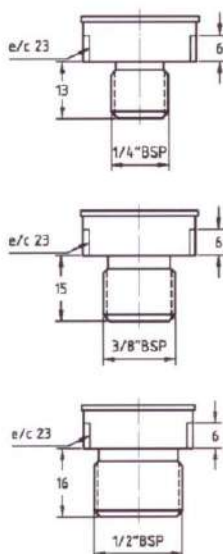
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4. TECHNICAL DATA

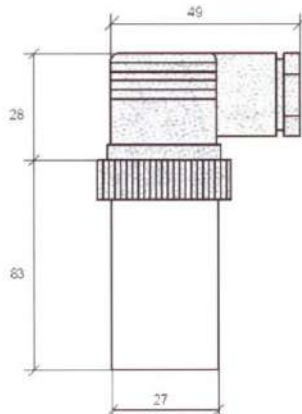
Pressure	Relative, absolute and vacuum
Pressure ranges	0-0,250 Bar to 0-250 Bar (for relative pressures) Pressure of vacuum and absolute (order pressure ranges and units are available)
Sensor	Ceramic piezoresistor
Accuracy – Combined error (hysteresis – linearity – reproducibility)	Typical $\leq 0,4 \%$ of span
Resolution of sensor	0,01 to 0,014 % of span
Response time	< 1 mseg.
Dielectric strength	2 KV
Materials wetted parts	Stainless steel AISI-904L, ceramic and o-ring
Material of the o-ring	Acrilnitrilo butadieno (NBR) (Other materials: VITON, EPDM, PTFE...)
Material case	Stainless steel
Process connection	1/2 , 3/8, 1/4 BSP and NPT
Degree of protection	IP-65
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 (other output can be adapted)
Maximum load R - Ω	$R_a \leq [U_b (Vdc.) - 8 (Vdc)] / 0,02 Adc.$
Electrical connection	4 pin connector Din 43650 EN60529 - PG9
Temperature	Process -5 a +90 °C Ambient -5 a +80 °C
Dimensions	See drawings
Weight	< 0,25 Kg. (with parking box and instructions)
CE - Conformity	89/336/CE-EN61000-6-2-97/23

5. DIMENSIONS (mm.)

5.1 Process connection

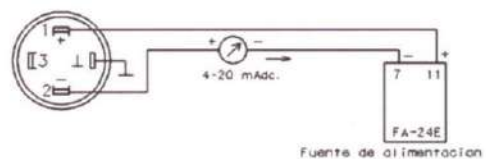


5.1 Dimensions case

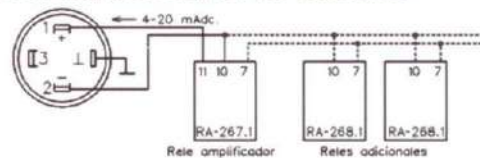


6. ELECTRICAL CONNECTION

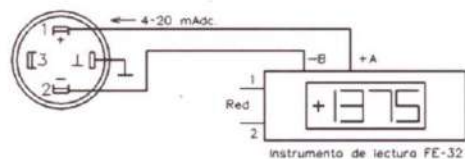
6.1 With switching power supply



6.2 With amplifier relay for the transmitter



6.3 With panel meters – process display



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