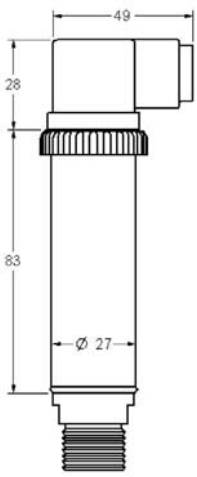
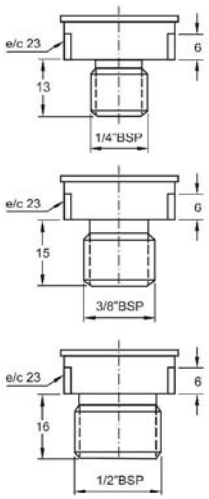
DISIBEINT

TPSP 41 / TPSP 41 904-L





PRESSURE TRANSMITTER FOR GENERAL APPLICATION

Materials in contact with the environment	Process thread	SS AISI316L (1.4404)
	Sensor	Ceramic of Aluminium oxide (AL_2O_3 96%)
	Toric joint	Viton (pressures from -1 to 160 Bar). On request: NBR, EPDM, PTFE...

Technical data	
Pressures	Relatives, Absolutes and Void
Measurement ranges	From 0..0,250 Bar to 0..250 Bar (ranges on request)
Resolution of sensor	From 0,01 to 0,014 % FE
Combined error of sensor	≤ 0,3 % FE (Liniality, with hysteresis and repeatibility)
Enviroment voltage of sensor	2 KV
Response time	Lower than 1 mseg.
Output signal normalized	4..20 mADC: 2 wires - Linear Supply voltage: 10..35 VDC Maximum load resistance: Ra ≤ [Ub(VDC) - 10(VDC)] / 0,02(ADC) 0..10 VDC: 3 wires - Linear Supply voltage: 15..35 VDC Maximum load resistance: Ra > 10 KΩ Others: On request
Electric protections	Yes. From polarity and shortcircuit.

Constructive features	
Type of sensor	Ceramic
Process threads DIN-3852-E	1/2 BSP. On request 1/4 or 3/8 BSP. 1/2, 3/8 and 1/4 NPT
Possibility of remote seal	Yes. See program of separators seals.
Degree protection	IP65 (EN60529)
Zero adjustments and span	±10 by internal potentiometers
Electrical connection	Connector of three poles DIN 43650 EN60529 - PG9
Temperature	-5..+90 ºC (Ambient). -10..+80 ºC (Storage)
Weight	< 250 gr.
Approval	RoHS: Yes CE: 97/23/EG and 89/336/CE (EN61326)

Features of the ceramic capsule	Minimum	Typical	Maximum
Global error (linearity, histeresys and repetibility) % (FE)	0,2	0,3	0,4
Sensitivity (span) mV/V (FE)	2,0	-	3,2
Resolution % (FE)	0,06	-	0,1
Operating temperature ºC	- 25		+ 125
Response time		< 10 ms	
Isolation voltage between the capsule and any terminal		> 2 KV	

Operating scales (bar)

Range	0,25	0,50	0,75	1,00	1,60	2,50	4,00	6,00	10,0	16,0	25,0	40,0	60,0	100,0	160,0	250,0
Maximum pressure	1,00	1,00	2,00	2,00	2,00	5,00	5,00	10,00	20,00	20,00	50,0	50,0	100,0	200,0	200,0	400,0
Breaking pressure	2,00	2,00	5,00	5,00	5,00	12,00	12,00	25,00	50,00	50,00	120,0	120,0	250,0	250,0	250,0	500,0

General conditions of installation

Before installing the transmitter shall be verified that all materials will be in contact with the process are shareable in order to prevent their destruction.
The presence of air chambers between the sensor and process fluid applications result in a malfunction of the transmitter (non-linearity, erroneous readings ...). To make the connection will use two-conductor cable, thereby avoiding placing it in locations that exist inductive character dispersions because their effects may damage the electronic elements of the transmitter.
In some cases it is advisable to use shielded cable connecting its braid to terminal intended for that purpose on the connector.
As the sensor transmitter fragile ceramic will take special care in handling and should not ever be subjected to a higher pressure which would deteriorate (water hammer overpressures point for unwanted effect, fluid jets directly on the sensor, etc.).

Starting

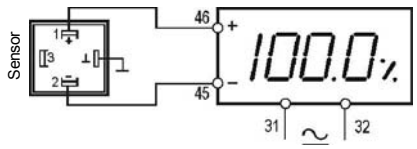
Once completed the installation conditions shall place the pressure transmitter to the appropriate media. The process thread should be protected against leakage of the element to be measured by an toric joint, PTFE tape or other elemneto to ensure that a maximum working pressure there is no escape.
Air will be drawn DIN 43650 connector connecting to it and conveniently electrical conductors. Special care should be, once that is done, tightening the packing nut and screw fastening the base connector enchuufable through accompanying board connector IP65 garantizarel.
Once the connection to the system voltage will eléctricase (8 to 35 VDC) and proved that in the absence of pressure by the circulating current loop 4 mA, and the maximum working pressure 20 mADC with a suitable measuring instrument.
When connecting multiple devices or control readings on current loop will be found that the sum of the internal resistance does not exceed the transmitter operating margins.

Accessories
Separators

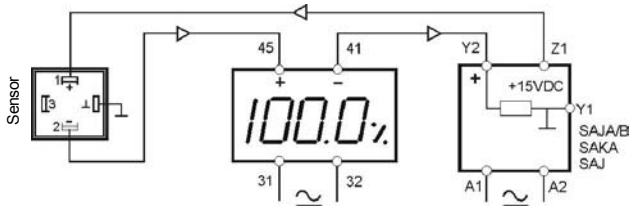
Our range of separators have a scope in the paper industry, chemical, pharmaceutical, food, etc. and fits all nuesrtro transmitter program.
The separator body is usually supplied in SS AISI316 (1.4401) and the diaphragm may be of various materials such as Hastelloy, Monel, Nickel, Halar, PTFE, SS 316L (1.4404), Tantalum, etc.

Connection and application exemples

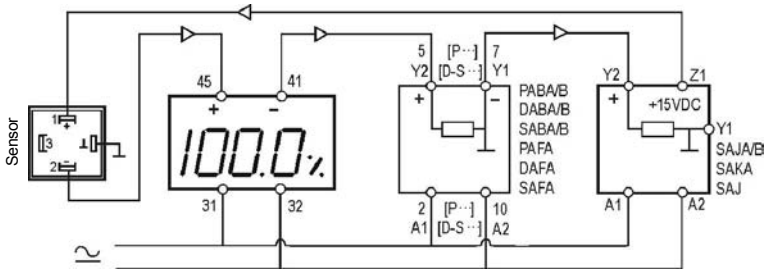
Only visualization



Sensor supply and 1 or 2 order points



Sensor supply and use of several models



LEVEL RELAYS FOR PRESSURE SENSORS WITH 4-20 mA LOOP

Amplifiers for level sensors with loop 4-20 mA

	SAJA SAJB	SAKA	SAJ
			
Function	Relay for loop current 4-20 mA.	Relay for loop current 4-20 mA.	Relay for loop current 4-20 mA.
Operating mode	A order to detection.	Two orders to independent adjustable detection.	Detection orders and/or asociate independent release adjustables. Visualization to asociate magnitude to loop current.
Loop 4-20 mA	15 VDC	15 VDC	15 VDC
Sensibility	-	-	Adjustable in to relay.

Digital Display

IPD

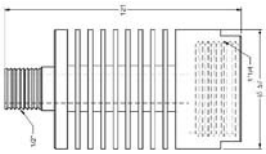
- Instrument digital display.
- Three setpoints.
- 96 x 50 x 70 mm (panel)
- Range 4-20 mA
- Supply loop: 16..25 VDC/0..20 mA

Overvoltage Protector atm

PS4

It is conceived to protect electronic components that are powered by a maximum voltage of 35 VDC and subject to the effects of atmospheric discharges, overvoltages, etc..

Radiator



Have been developed for the protection of both active and passive elements compared to high process temperature (pressure transmitters, pressure gauges, cablegland, etc..). The thread of adaptation to the environment is 1/2 BSP (other thread pitches on request).

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