

Thin-Film sensor technology for high - pressure applications in mobile hydraulics, offshore and sub-sea facilities.

PS-2000 Series Pressure Transmitters

- *Designed for high pressure applications above 20 bar*
- *High accuracy 0,15% FS*
- *Extreme temperature stability*
- *Pressure range from 0-60 to 0-1200 bar*
- *Signal output 4-20mA*
- *Linearity 0,1% FS*
- *Fast response time (2 ms)*
- *Eex d II C T5, II 2 G and Eex ia IIC T4*
- *Hastelloy C22 in wetted parts*
- *Extended guarantees*



Applications

- High pressure monitoring in oil and gas production facilities
- Mobile Hydraulics, hydraulic power units and high pressure pumps
- Offshore drilling and pipe-handling equipment
- Sub-sea wellhead pressure monitoring, seawater submerged applications
- Depth monitoring and navigation
- High pressure monitoring and control in hazardous environments

Description

The PS-2000 series of pressure transmitters represents the ultimate solution for high accuracy and long-term performance in harsh and hazardous environments. The thin-film strain gauge measuring technology is superior for dynamic and static measurements in the high- pressure ranges. All wetted parts are in Hastelloy C22 ensuring an excellent resistance against corrosion compared to ordinary stainless steel sensing elements with piezoresistive technology.

The 4-20 mA signal output in two conductor configuration loop enables connection to all major electronic controllers and zener barriers. Since accuracy depends and varies considerably with temperature of the fluid being measured, this sensor offers superior characteristics in this respect. The PS-2000 series offers both general and Ex certified models for use in all hazardous zones on oil and gas/ petrochemical installations. These sensors are widely used in heavy offshore drilling and production machinery/lifting tools within the typical 150–350 bar hydraulic pressure ranges. Field experience trough many years has been incorporated in the design, assuring a sensor stable in rough environments with high static and dynamic forces. The PS-2000 series transmitter withstands most dust filled and oily/chemical environments with an expected life-time in excess of other types of sensors available in the market. The PS-2000 sensor range is based on the valuable experience from sub-sea wellhead installations and submersible transponders used in seawater depth and offshore navigation equipment.

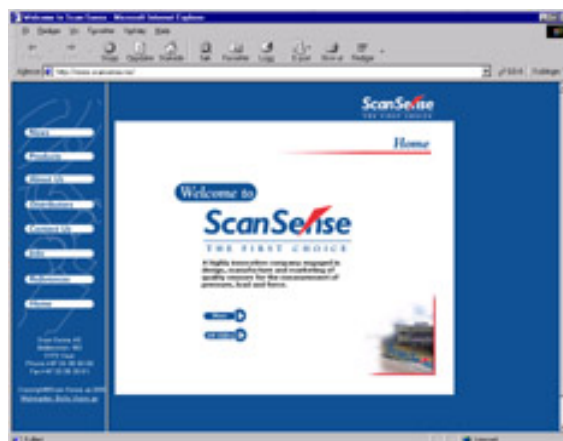
Transmitter model /main area of application:

PS-2000 Standard:	For hydraulic pressure monitoring in lifting machinery and drilling equipment.
PS-2010 Eex d IIC T5, II 2 G:	For hydraulic applications in Zone 1 & 2.
PS-2040 Ex nA II T5:	For submersible or partly submersed offshore, ROV and transponder equipment where hazardous area Zone 2 use is required.
PS-2120 Eex ia IIC T4:	For hydraulic pressure monitoring in hazardous areas Zone 0, 1 and 2.

Pressure ranges	bar	0- ...20, 40, 60, 80, 150, 300, 350, 400, 600, 1200. Others on request. Gauge, sealed gauge or absolute version.
Over pressure safety	bar	1,5 x FS
Burst pressure	bar	3 x FS
Pressure inlet connection		1/4 " BSP male, others on request. O-ring seal.
Pressure medium		Medium compatible with Hastelloy C22
Permissible temperatures		
• Medium	°C	-30...+140
• Ambient	°C	-25...+80 for EEx d IIC T5, II 2 G model and EEx nA II T5, -25...+85 for EEx ia IIC T4 model
• Storage	°C	-40...+100
Accuracy	% of span	≤ 0,15
	% of span	≤ 0,10 (BFSL)
Response time (typical)	ms	2
Hysteresis		< 0,03 % FS
Long term drift		< 0,1 % FS / year
Materials		
• Wetted parts		Hastelloy C22
• Housing		Stainless Steel S-165M
Power supply U_B	VDC	$9 \leq U_B \leq 30$
Signal output	mA	4 -20 mA, 2 wire
Ingress protection		
• Standard transmitters		IP 68 (PG 9 cable gland), see details for connector type.
• Sub-sea transmitters		1000 mH ₂ O submersible
Ex classifications, ATEX 94/9/EC		EEx ia IIC T4 model PS 2120, EEx d IIC T5, II 2 G model PS 2010, EEx nA II T5
CE-conformity		EMC tested according to EN 50081-1 and EN 50082-2
Electrical connections		See attached table with ordering information
Mechanical shock loads		1000 g 1ms half sine pulse in all 3 axis will not affect the performance of the sensor.
Stabilization time after power up	ms	70 (typical)
Standard cable supplied	m	Olflex-FD 855 CP/2, 2x0,75mm ² (18 AWG), TPE insulation, PUR polyurethane outer jacket. L = 5, 10 or 15m
Weight (typical)	kg	0,28

Further Information:

You can get further information on our internet web page: www.scansense.no

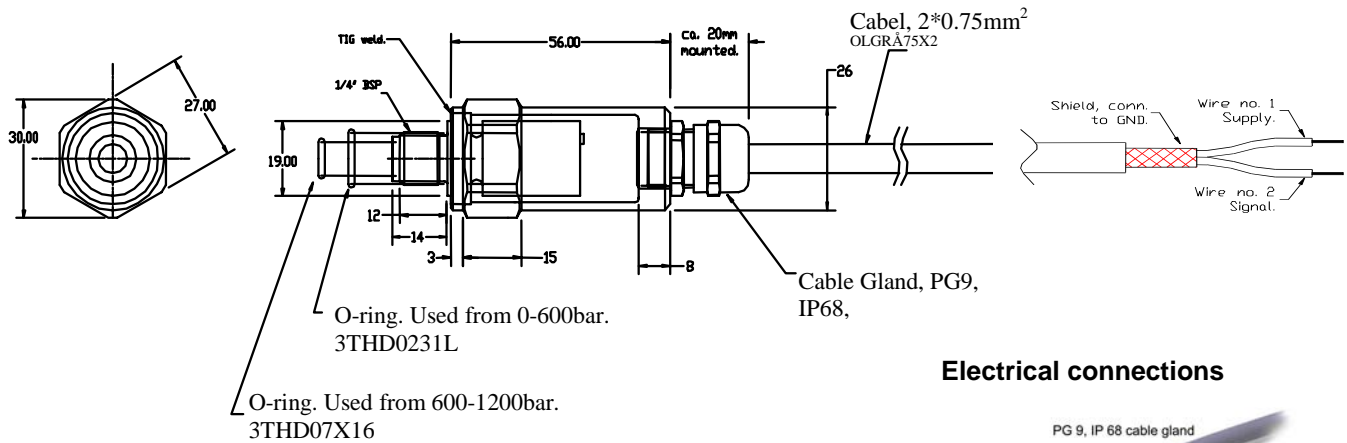


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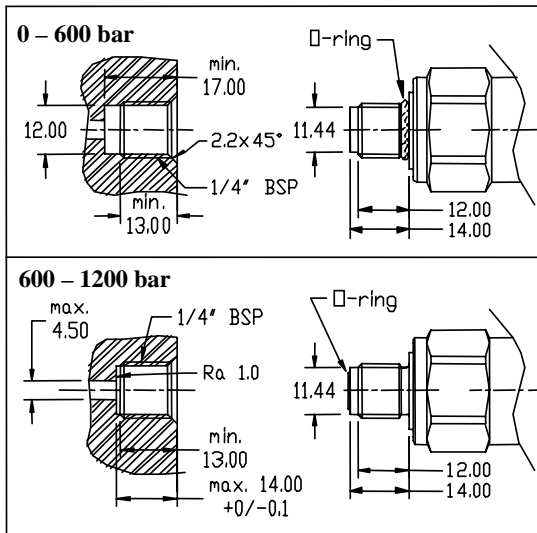
Dimensions PS 2000 standard

2-wire, 4-20mA connection

* EEx i, L= 70 mm



Pressure port



Electrical connections



Ordering Information

PS-2000 series Pressure Transmitter

Transmitter model	Part no.	Available options (Please specify)
PS-2000 Standard	5PS20H...600,121,221,451,901,182...KP	Din 46350 4 pin plug*
PS-2010 Eex d IIC T5, II 2G	5PS20H...600,121,221,451,901,182...KE	
PS-2040 Ex nA II T5	5PS20H...600,121,221,451,901,182...KJ	
PS-2120 Eex ia IIC T4	5PS21H... <u>600,121,221,451,901,182...KP</u>	Din 46350 4 pin plug*
Pressure range 0- 20.....40 bar	↑	{ KP= PG 9 cable gland, IP 68 KE= EX (d) cable gland KJ= Jupiter Connector, 3 or 4 pin * US Dual or M12 connector on request.
Pressure range 0- 40.....80 bar	↑	
Pressure range 0- 80.....150 bar	↑	
Pressure range 0-150.....300 bar	↑	
Pressure range 0-300.....600 bar	↑	
Pressure range 0-600....1200 bar	↑	

(Please specify requested maximum pressure within above intervals and requested cable length when ordering)

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