

PS...G... - Series

Precision stainless steel pressure sensors

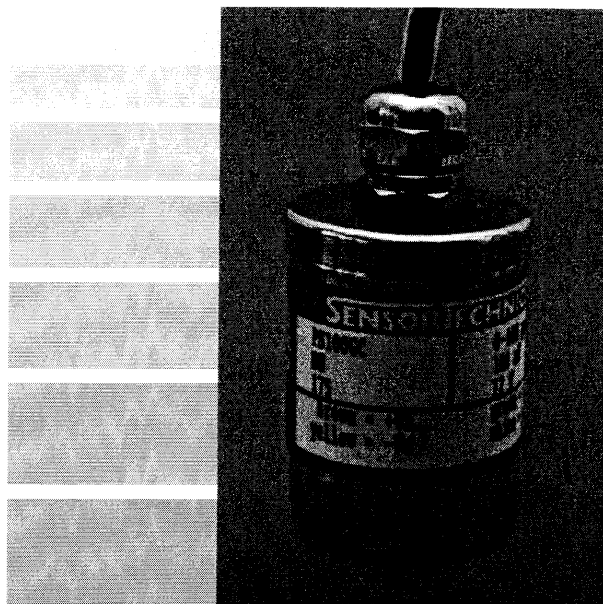
FEATURES

- 0 ... 5 psig to 0 ... 500 psig
- For corrosive pressure media
- Factory calibrated and temperature compensated to within $\pm 1\%$
- All welded stainless steel diaphragm construction
- For harsh environments

SERVICE

Pressure inlet: any liquid, gas or vapor that is compatible with 303 stainless steel.

Housing: 303 SS, protection class, IP67 according to DIN40050¹



Scale: 1 cm 1 inch

SPECIFICATIONS

Maximum ratings

Supply voltage

5 V_{DC} ... 24 V_{DC}

Temperature limits

Storage

-55°C to 100°C

Operating

-40°C to 100°C

Media

-40°C to 125°C

Compensated

0°C to 70°C

Humidity limits

0 - 100 %RH

Vibration (5 Hz to 500 Hz)

2 g

Mechanical shock

50 g

Proof pressure²

PS05G...

20 psig

PS15G...

30 psig

PS30G...

60 psig

PS100G...

200 psig

PS300G...

450 psig

PS500G...

750 psig

Burst pressure³

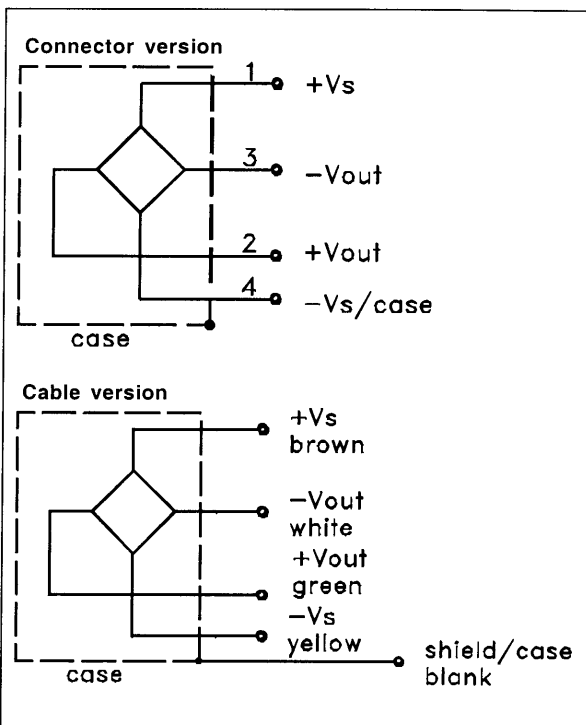
PS05G.../PS30G...

1000 psig

PS100G... to PS500G

5000 psig

ELECTRICAL CONNECTION



PS...G... - Series

Precision stainless steel pressure sensors

PERFORMANCE CHARACTERISTICS⁸ (unless otherwise noted $V_s = 12\text{ V}$, $t_{\text{amb}} = 25^\circ\text{C}$)

Characteristic		Min.	Typ.	Max.	Unit
Operating pressure	PS05G... PS15G... PS30G... PS100G... PS300G... PS500G...			5 15 30 100 300 500	psig
Zero pressure offset		-500	0	500	μV
Full scale span ⁶	PS05G... PS15G..., PS30G... PS100G..., PS500G... PS300G...	49.0 89.0 99.0 59.0	50.0 90.0 100.0 60.0	51.0 91.0 101.0 61.0	mV
Non-linearity ⁴			± 0.1	± 0.5	FSO
Repeatability			± 0.1	± 0.2	
Thermal effects (0°C to 70°C) ⁵					FSO/ $^\circ\text{C}$
Offset	PS05G... PS15G... to PS500G		0.01 0.01	0.03 0.02	
Span			0.01	0.03	
Thermal effects (-40°C to 0°C , 70°C to 100°C)					
Offset			0.02		
Span			0.02		
Power consumption			40		mW
Input impedance			4.0		kOhm
Output impedance			4.0		
Output noise at $0.1\text{ Hz} < f < 1\text{ kHz}$				0.01	%FSO
Response time			1		ms
Long term stability ⁷					%FSO
Offset			± 0.1		
Span			± 0.1		
Common mode voltage		5.8	6.0	6.2	V

Specification Notes: (For all devices)

- IP67 protection is given with locked connector only.
- Proof pressure is the max. pressure which may be applied without causing damage to the sensing element.
- The package features a stainless steel diaphragm which is dead ended into a small through hole. The media will therefore be contained until the extreme burst pressure limit is exceeded.
- Non-linearity - the maximum deviation of measured output, at constant temperature (25°C), from "Best StraightLine" through three points (offset pressure, full scale pressure, one-half scale pressure).

$$\%FS \text{ error} = \frac{V_{1/2 \text{ full scale}} - \left\{ \left(\frac{V_{\text{full scale}} - V_{\text{offset}}}{\text{full scale pressure}} \right) \times (1/2 \text{ full scale pressure}) + V_{\text{offset}} \right\}}{2 (V_{\text{full scale}})} \times 100\%$$

(V = measured value for each device)

- Temperature tested and guaranteed at 70°C relative to 25°C . All specs are shown relative at 25°C .
- Span is the algebraic difference between the output at full scale pressure and offset.
- Change in output after 1 year or 1 million pressure cycles.
- The package is an all-sealed housing. For proper function the gage port is vented to the atmosphere through the connecting cable. For that the cable end must have access to the ambient pressure.

January 1998/037

SENORTECHNICS

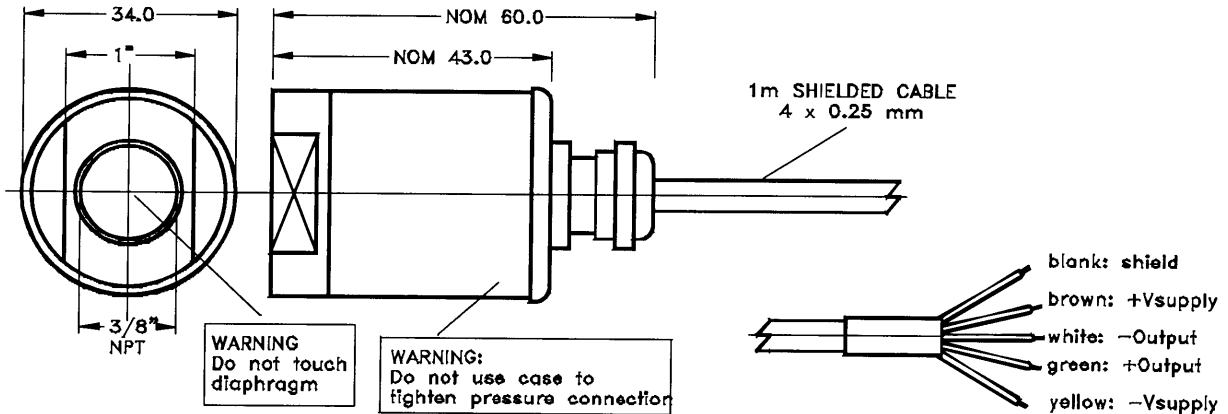
Aubinger Weg 27, 82178 Puchheim, Germany
Phone 0049 - (0) 89 80 08 30, Fax 0049 - (0) 89 8 00 83 33
<http://www.sensortechncs.com>

PS...G... - Series

Precision stainless steel pressure sensors

OUTLINE DRAWING

Cable version
PS...GC



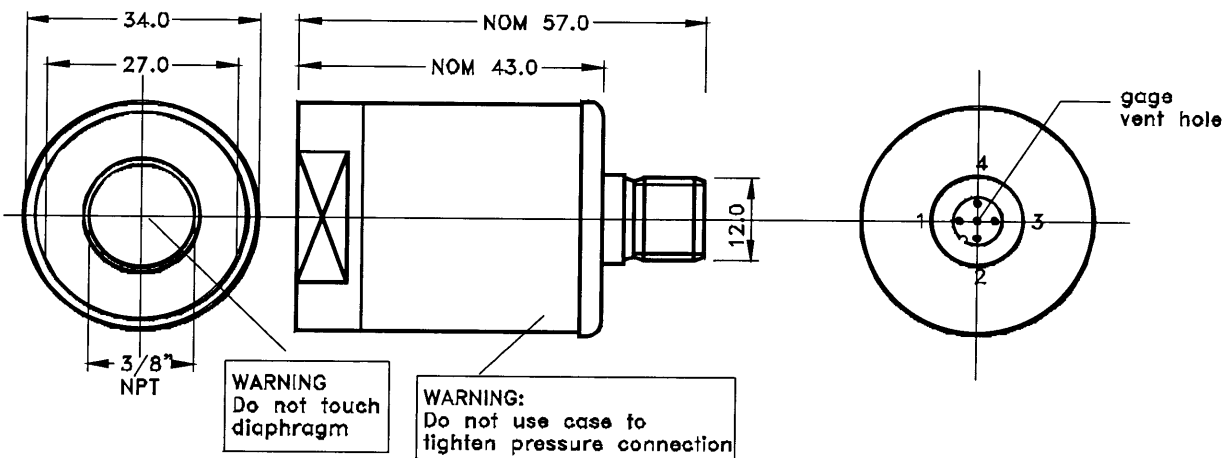
Electrical connection

wire color	connection
blank	shield/case
brown	+Vs
white	-Vout
green	+Vout
yellow	-Vs

Mass: typ. 190g

OUTLINE DRAWING

Connector version
PS...GA



Electrical connection

Pin	connection
1	+Vs
2	+Vout
3	-Vout
4	-Vs

Mass: typ. 190g

January 1998/037

SENORTECHNICS

Aubinger Weg 27, 82178 Puchheim, Germany
Phone 0049 - (0) 89 80 08 30, Fax 0049 - (0) 89 8 00 83 33
<http://www.sensortechtechnics.com>

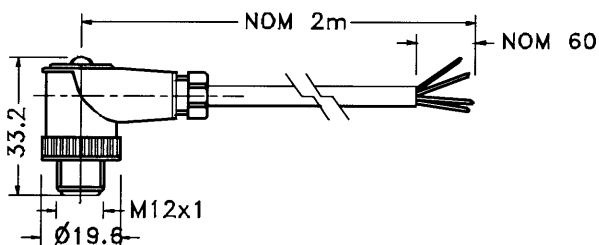
PS...G... - Series

Precision stainless steel pressure sensors

RECOMMENDED CABLE/CONNECTOR ACCESSORY

for Connector version PS...GA

Order number ZK000106, other cable length on special request



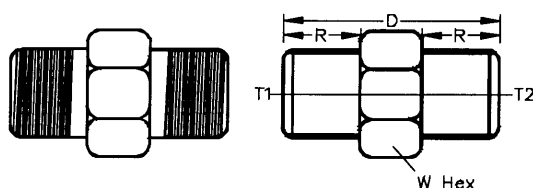
Pin connection

Pin	Flying lead end
1	brown
2	green
3	white
4	yellow
NC	shield

Included in Delivery !

OPTIONAL PIPE FITTING DRAWINGS

Part No.	Thread		W Hex	D		R		Maximum working pressure (psig)
	Male T1	Male T2		in.	mm.	in.	mm.	
SFIT62	3/8 NPT	1/8 NPT	3/4	1.27	32.3	0.56/0.38	14.2/9.7	7200
SFIT64	3/8 NPT	1/4 NPT	3/4	1.45	37.0	0.56	14.2	7200
SFIT68	3/8 NPT	1/8 BSP	3/4	1.45	37.0	0.56	14.2	7200



Material: Stainless Steel 316

ORDERING INFORMATION

Operating pressure	Part number	
	Cable version	Connector version
0 - 5 psig	PS05GC	PS05GA
0 - 15 psig	PS15GC	PS15GA
0 - 30 psig	PS30GC	PS30GA
0 - 100 psig	PS100GC	PS100GA
0 - 300 psig	PS300GC	PS300GA
0 - 500 psig	PS500GC	PS500GA

Sensortech reserves the right to make changes to any products herein. Sensortech does not assume any liability arising out of the application or use of any product or circuit described herein, neither does it convey any license under its patent rights nor the rights of others.

January 1998/037

SENSORTECHNICS

Aubinger Weg 27, 82178 Puchheim, Germany
Phone 0049 - (0) 89 80 08 30, Fax 0049 - (0) 89 8 00 83 33
<http://www.sensortech.com>