

## PS...G... - Series

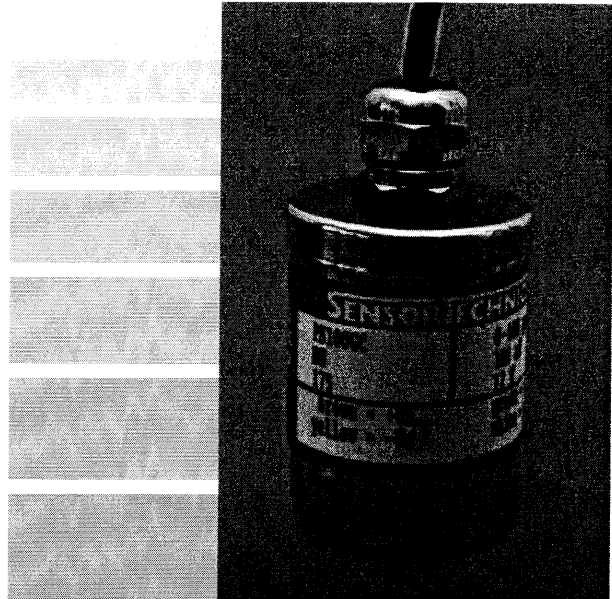
### Precision stainless steel pressure sensors

#### 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 DIN40050<sup>1</sup>

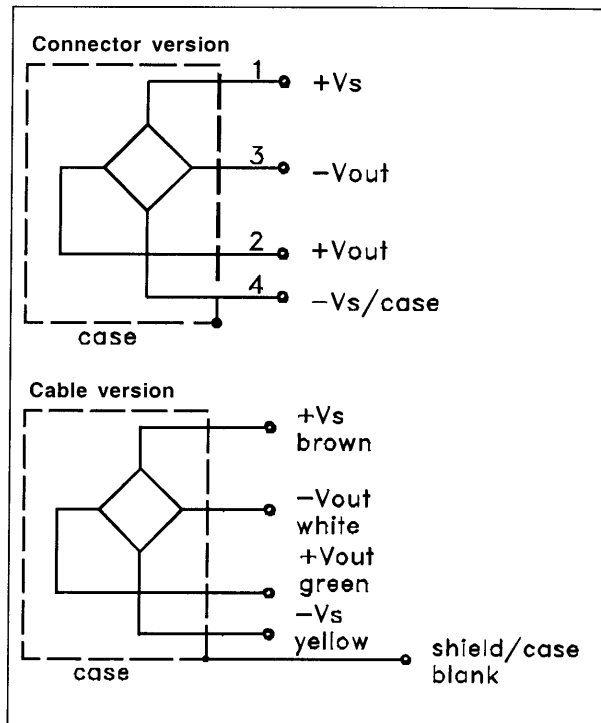


#### SPECIFICATIONS

##### Maximum ratings

Supply voltage	5 V <sub>DC</sub> ... 24 V <sub>DC</sub>
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 pressure <sup>2</sup>	
PS05G...	20 psig
PS15G...	30 psig
PS30G...	60 psig
PS100G...	200 psig
PS300G...	450 psig
PS500G...	750 psig
Burst pressure <sup>3</sup>	
PS05G.../PS30G...	1000 psig
PS100G... to PS500G	5000 psig

#### ELECTRICAL CONNECTION



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### PERFORMANCE CHARACTERISTICS<sup>8</sup> (unless otherwise noted $V_s = 12\text{ V}$ , $t_{amb} = 25^\circ\text{C}$ )

Characteristic		Min.	Typ.	Max.	Unit
Operating pressure	PS05G...			5	psig
	PS15G...			15	
	PS30G...			30	
	PS100G...			100	
	PS300G...			300	
	PS500G...			500	
Zero pressure offset		-500	0	500	$\mu\text{V}$
Full scale span <sup>6</sup>	PS05G...	49.0	50.0	51.0	mV
	PS15G..., PS30G...	89.0	90.0	91.0	
	PS100G..., PS500G...	99.0	100.0	101.0	
	PS300G...	59.0	60.0	61.0	
Non-linearity <sup>4</sup>			$\pm 0.1$	$\pm 0.5$	FSO
Repeatability			$\pm 0.1$	$\pm 0.2$	
Thermal effects ( $0^\circ\text{C}$ to $70^\circ\text{C}$ ) <sup>5</sup>	Offset	PS05G... PS15G... to PS500G	0.01	0.03	FSO/ $^\circ\text{C}$
			0.01	0.02	
Span			0.01	0.03	
			0.02		
Thermal effects ( $-40^\circ\text{C}$ to $0^\circ\text{C}$ , $70^\circ\text{C}$ to $100^\circ\text{C}$ )	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 <sup>7</sup>	Offset		$\pm 0.1$		%FSO
			$\pm 0.1$		
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 ( $25^\circ\text{C}$ ), from "Best StraightLine" through three points (offset pressure, full scale pressure, one-half scale pressure).

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

(V = measured value for each device)

- Temperature tested and guaranteed at  $70^\circ\text{C}$  relative to  $25^\circ\text{C}$ . All specs are shown relative at  $25^\circ\text{C}$ .
- 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.

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# SENORTECHNICS

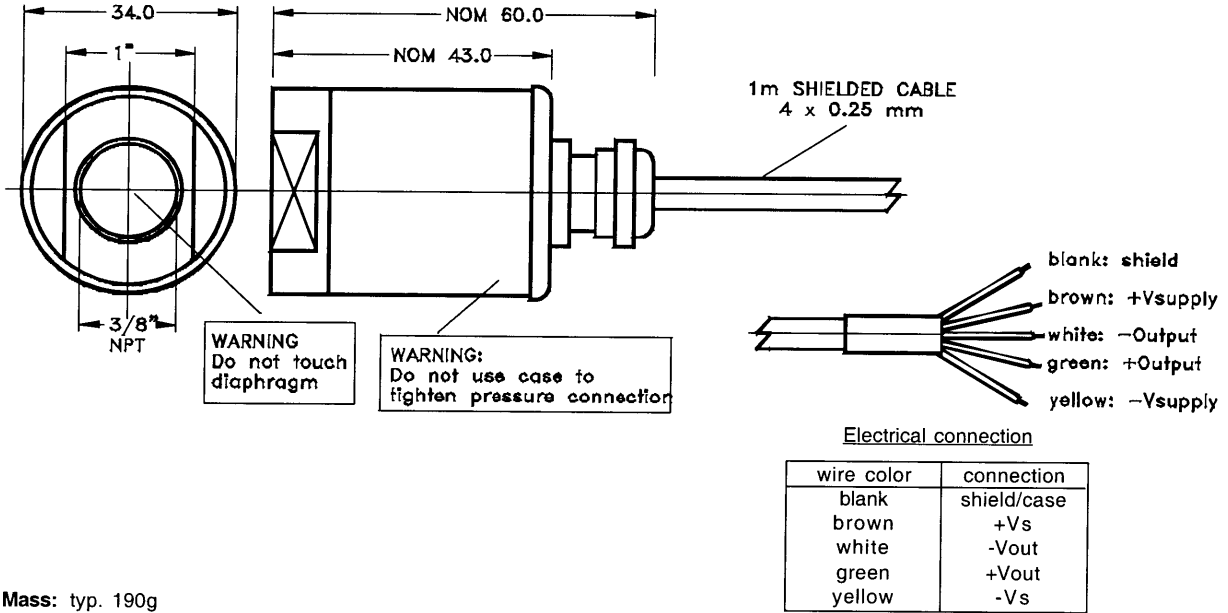
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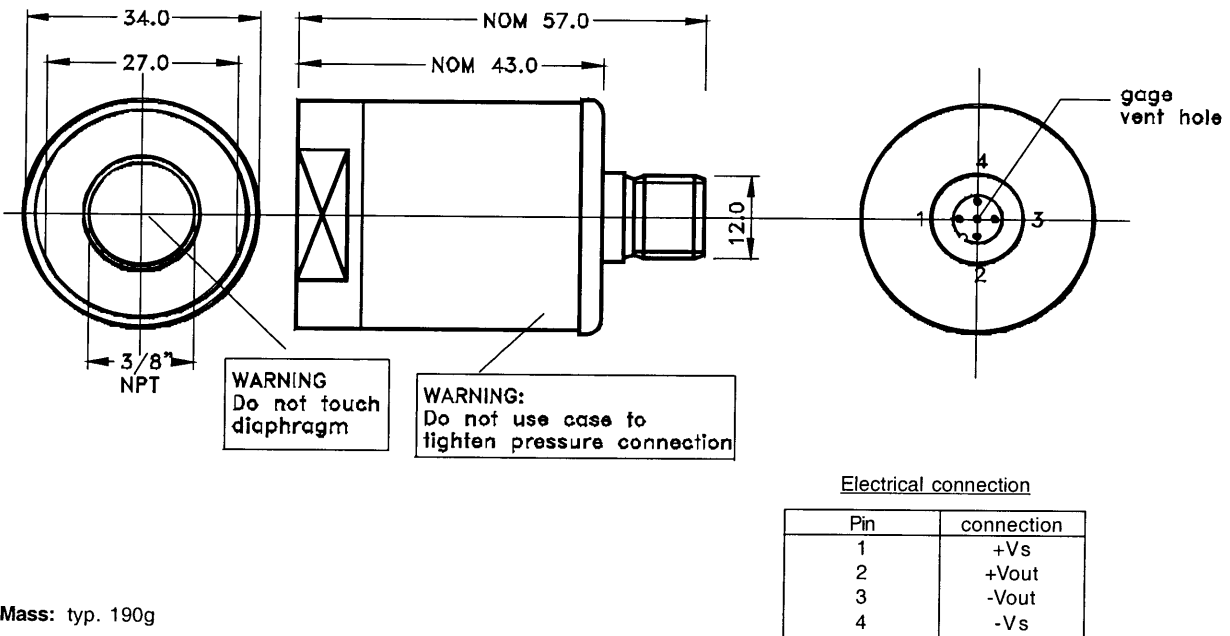
### OUTLINE DRAWING

Cable version  
PS...GC



### OUTLINE DRAWING

Connector version  
PS...GA



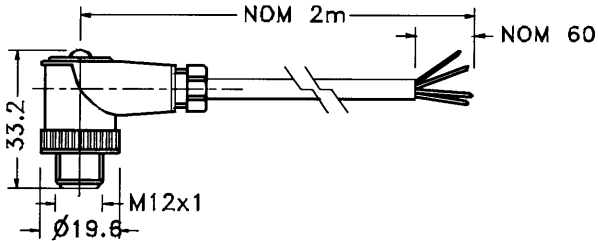
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### RECOMMENDED CABLE/CONNECTOR ACCESSORY

for Connector version PS...GA

Order number ZK000106, other cable length on special request



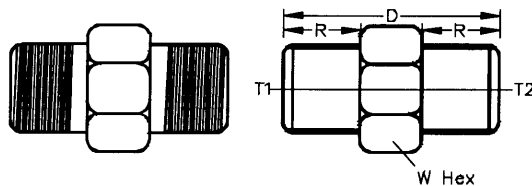
#### Pin connection

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	
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

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