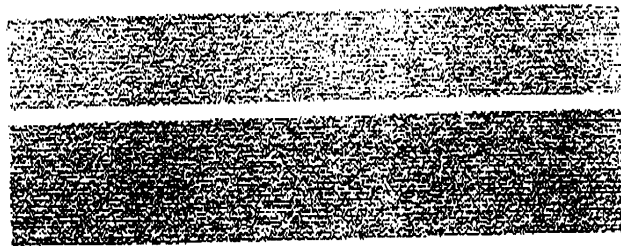


## FEATURES

- 0 ... 5 psi to 0 ... 500 psi absolute or gage
- 100 mV  $\pm$  1 % output signal
- For corrosive pressure media
- Excellent low temperature drift
- All welded stainless steel diaphragm construction
- For hostile environments



## SERVICE

Media wetted parts: any liquid or vapor that is compatible with stainless steel 316 (1.4401)

Housing: anodized aluminium

Protection class: IP65, according to DIN40050 (NEMA4)<sup>†</sup>

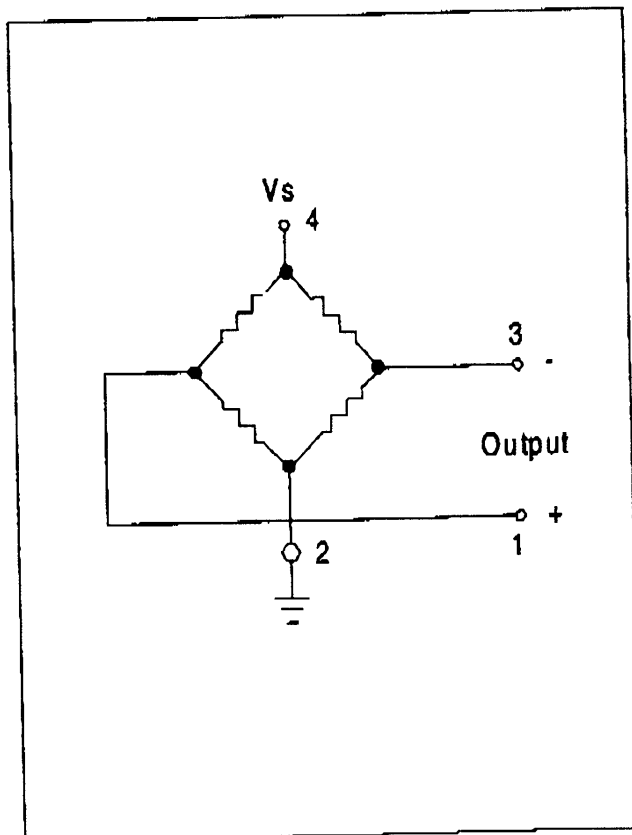
Scale: 1 cm 1 inch

## SPECIFICATIONS

### Maximum ratings

|                              |                     |
|------------------------------|---------------------|
| Supply voltage               | 15 V                |
| Temperature limits           |                     |
| Storage                      | -40°C to 125°C      |
| Operating                    | -20°C to 105°C      |
| Compensated                  | 0°C to 70°C         |
| Isolation resistance         | 100 M $\Omega$      |
| $V_s = 50 V_{DC}$            |                     |
| Isolation voltage            | 500 V <sub>AC</sub> |
| Vibration (50 Hz to 2000 Hz) | 16 g <sub>RMS</sub> |
| Mechanical shock ( 0.5 ms)   | 50 g                |

## ELECTRICAL CONNECTION



# PS20000-Series

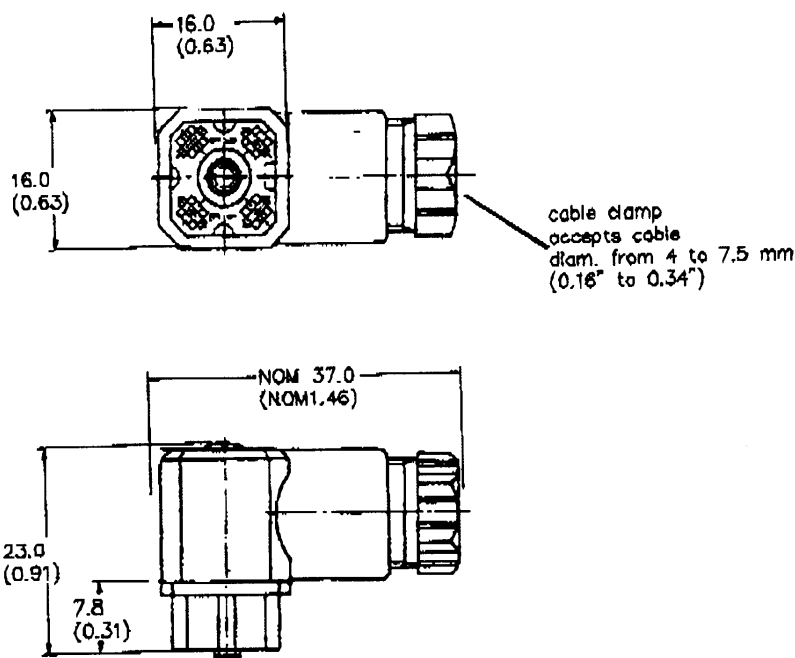
## Silicon stainless steel pressure sensors

### RECOMMENDED MATING CONNECTOR (included in delivery):

#### Hirschmann G4W1F

##### Note:

Sensors for gage pressure need to be vented through socket and mating connector. Thus the cable end needs to have access to the atmosphere.



### ORDERING INFORMATION

| pressure range | gage pressure devices | absolute pressure devices |
|----------------|-----------------------|---------------------------|
| 0 - 5 psi      | PS20005G              | ---                       |
| 0 - 15 psi     | PS20015G              | PS20015A                  |
| 0 - 30 psi     | PS20030G              | PS20030A                  |
| 0 - 50 psi     | PS20050G              | PS20050A                  |
| 0 - 100 psi    | PS20100G              | PS20100A                  |
| 0 - 200 psi    | PS20200G              | PS20200A                  |
| 0 - 300 psi    | PS20300G              | PS20300A                  |
| 0 - 500 psi    | PS20500G              | PS20500A                  |

#### SPECIFICATION NOTES:

- Reference conditions (unless otherwise noted): Supply Voltage,  $V_s \approx 10.0$  Vdc;  $t_{amb} = 25^\circ\text{C}$
- Span is the algebraic difference between the output voltage at full scale pressure and the output at zero pressure.  
Span is ratiometric to the supply voltage
- Linearity is based on best fit straight line. Hysteresis is the maximum output difference at any point within the operating pressure range for increasing and decreasing pressure.
- Maximum error band of the offset voltage or span over the compensated temperature range, relative to the  $25^\circ\text{C}$  reading.
- Long term stability over a one year period.
- Response time for 0 psi to full scale span pressure step change
- If maximum pressure is exceeded, even momentarily, the package may leak or burst, or the pressure sensing die may fracture.
- IP65 (NEMA4) protection is given with locked connector only.

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# PS20000-Series

## Silicon stainless steel pressure sensors

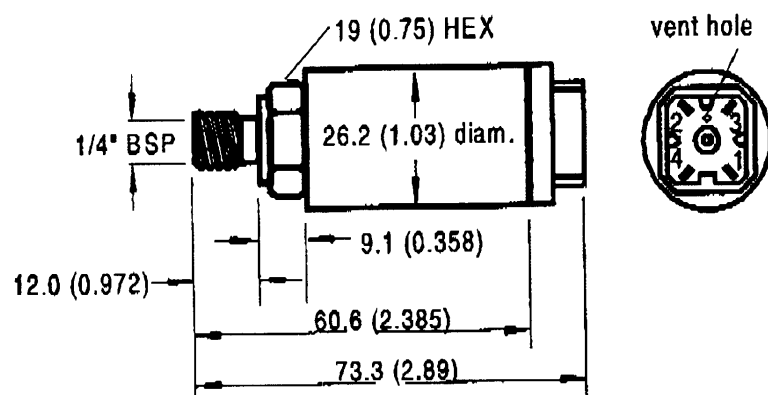
### PRESSURE RANGE SPECIFICATIONS

| Part No. | Pressure Range | Proof Pressure <sup>7</sup> |
|----------|----------------|-----------------------------|
| PS20005  | 0 - 5 psi      | 20 psi                      |
| PS20015  | 0 - 15 psi     | 45 psi                      |
| PS20030  | 0 - 30 psi     | 90 psi                      |
| PS20050  | 0 - 50 psi     | 150 psi                     |
| PS20100  | 0 - 100 psi    | 300 psi                     |
| PS20200  | 0 - 200 psi    | 600 psi                     |
| PS20300  | 0 - 300 psi    | 900 psi                     |
| PS20500  | 0 - 500 psi    | 1000 psi                    |

### PERFORMANCE CHARACTERISTICS<sup>1</sup>

| Characteristics                                     | Min.                   | Typ.      | Max.      | Unit  |
|-----------------------------------------------------|------------------------|-----------|-----------|-------|
| Zero pressure offset                                | -1.0                   | 0         | +1.0      | mV    |
| Full scale span <sup>2</sup>                        | PS20005G<br>all others | 60<br>100 | 61<br>101 | mV    |
| Combined linearity and hysteresis <sup>3</sup>      | ---                    | ±0.1      | ±0.5      | %FSS  |
| Temp. effect on span <sup>4</sup>                   | ---                    | ±0.2      | ±1.0      | %FSS  |
| Temp. effect on offset <sup>4</sup>                 | ---                    | ±0.2      | ±1.0      | mV    |
| Thermal hysteresis (0 to 50°C)                      | ---                    | ±0.2      | ---       | %FSS  |
| Long term stability of offset and span <sup>5</sup> | ---                    | ±0.1      | ---       | mV    |
| Response time (10 % to 90 %) <sup>6</sup>           | ---                    | 0.1       | ---       | ms    |
| Input impedance                                     | ---                    | 4.5       | ---       | kW    |
| Output impedance                                    | ---                    | 4.5       | ---       | kW    |
| Repeatability                                       | ---                    | ±0.05     | ---       | %FSS  |
| Common mode output                                  | 1.0                    | 2.5       | 4.0       | Volts |

### Outline drawing



### Electrical connection

| Pin | connection        |
|-----|-------------------|
| 1   | +V <sub>out</sub> |
| 2   | GND               |
| 3   | -V <sub>out</sub> |
| 4   | +V <sub>s</sub>   |

Mass: 45 g

Dimensions in mm (inches)