



FEATURES

- 0...35 mbar to 0...16 bar and 0...0.5 to 0...250 psi gage or differential
- High impedance bridge
- Miniature package
- Different pinning configurations
- Usable for wet/wet applications⁸
- Sensortech PRO services

MEDIA COMPATIBILITY

All media compatible with

- port 1: - polyetherimide
- silver-filled silicone
- silicon nitride

- port 2⁹: - polyetherimide
- fluor-silicone
- silicon

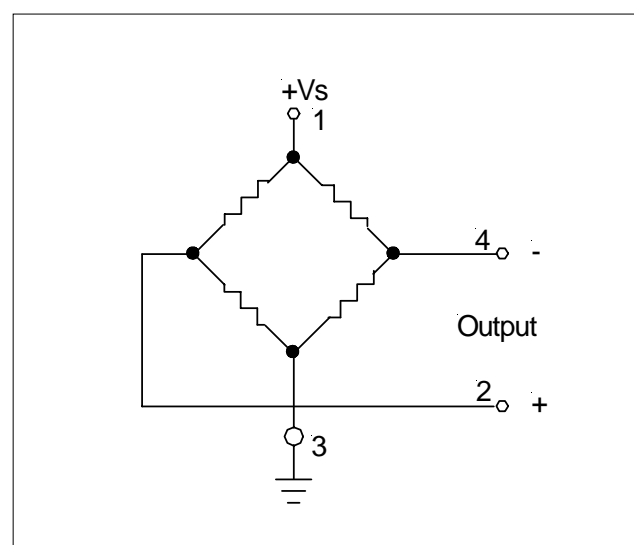


SPECIFICATIONS

Maximum ratings

| | |
|--|---------------|
| Supply voltage | 12 V |
| Temperature limits | |
| Storage | -55 to +100°C |
| Operating | -40 to +85°C |
| Lead temperature (10 sec. soldering) | 300°C |
| Humidity limits | 0...100 %RH |
| Vibration (0 to 2000 Hz) (qualification tested) | 20 g sine |
| Mechanical shock (qualification tested) | 150 g |

ELECTRICAL CONNECTION





PRESSURE SENSOR CHARACTERISTICS

($V_s = 10.0 \pm 0.01$ V, $t_{amb} = 25$ °C)

| Part number | Operating pressure | Proof pressure ¹ | Full-scale span ² | | |
|-------------|--------------------|-----------------------------|------------------------------|--------|--------|
| | | | Min. | Typ. | Max. |
| RPUM035... | 0...35 mbar | 1.4 bar | 24 mV | 35 mV | 46 mV |
| RPUM050... | 0...50 mbar | 1.4 bar | 21 mV | 33 mV | 44 mV |
| RPUM100... | 0...100 mbar | 1.4 bar | 44 mV | 66 mV | 88 mV |
| RPUM250... | 0...250 mbar | 1.4 bar | 61 mV | 83 mV | 105 mV |
| RPUB001... | 0...1 bar | 3 bar | 159 mV | 218 mV | 276 mV |
| RPUB002... | 0...2 bar | 4 bar | 232 mV | 320 mV | 410 mV |
| RPUB005... | 0...5 bar | 12 bar | 113 mV | 163 mV | 215 mV |
| RPUB010... | 0...10 bar | 35 bar | 84 mV | 123 mV | 163 mV |
| RPUB016... | 0...16 bar | 35 bar | 134 mV | 197 mV | 260 mV |
| RPUP0x5... | 0...0.5 psi | 20 psi | 24 mV | 35 mV | 46 mV |
| RPUP001... | 0...1 psi | 20 psi | 30 mV | 45 mV | 60 mV |
| RPUP005... | 0...5 psi | 20 psi | 85 mV | 115 mV | 145 mV |
| RPUP015... | 0...15 psi | 45 psi | 165 mV | 225 mV | 285 mV |
| RPUP030... | 0...30 psi | 60 psi | 240 mV | 330 mV | 420 mV |
| RPUP100... | 0...100 psi | 200 psi | 156 mV | 225 mV | 294 mV |
| RPUP250... | 0...250 psi | 500 psi | 145 mV | 212 mV | 280 mV |

PERFORMANCE CHARACTERISTICS

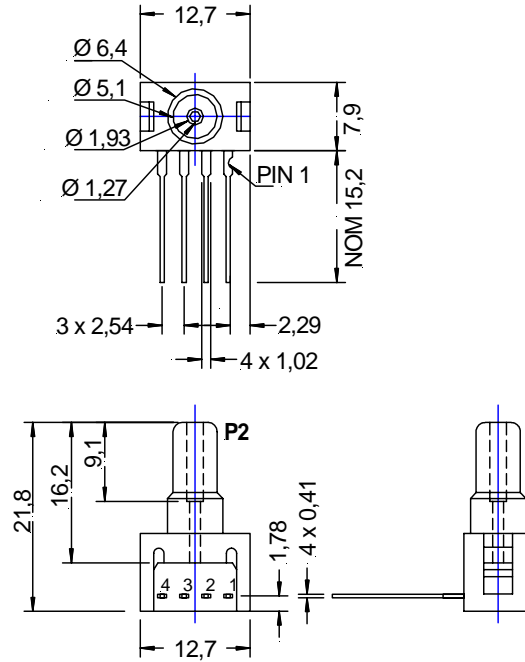
($V_s = 10.0 \pm 0.01$ V, $t_{amb} = 25$ °C)

| Characteristics | Min. | Typ. | Max. | Unit |
|--|--------|-------|-------|--------|
| Zero pressure offset | -20 | | +20 | mV |
| Temperature effects (0 to 50 °C) ⁴ | Offset | ±2.0 | | |
| | Span | | -2000 | ppm/°C |
| Temperature effects on bridge impedance ⁴ | | +2200 | | |
| Non-linearity (BSL) ³ | | ±0.25 | ±1.0 | % span |
| Repeatability and hysteresis ⁵ | | ±0.15 | | |
| Long term stability ⁷ | | ±0.5 | | |
| Input impedance | 4.0 | 5.0 | 6.0 | kΩ |
| Output impedance | 4.0 | 5.0 | 6.0 | |
| Response time ⁶ | | | 1.0 | ms |



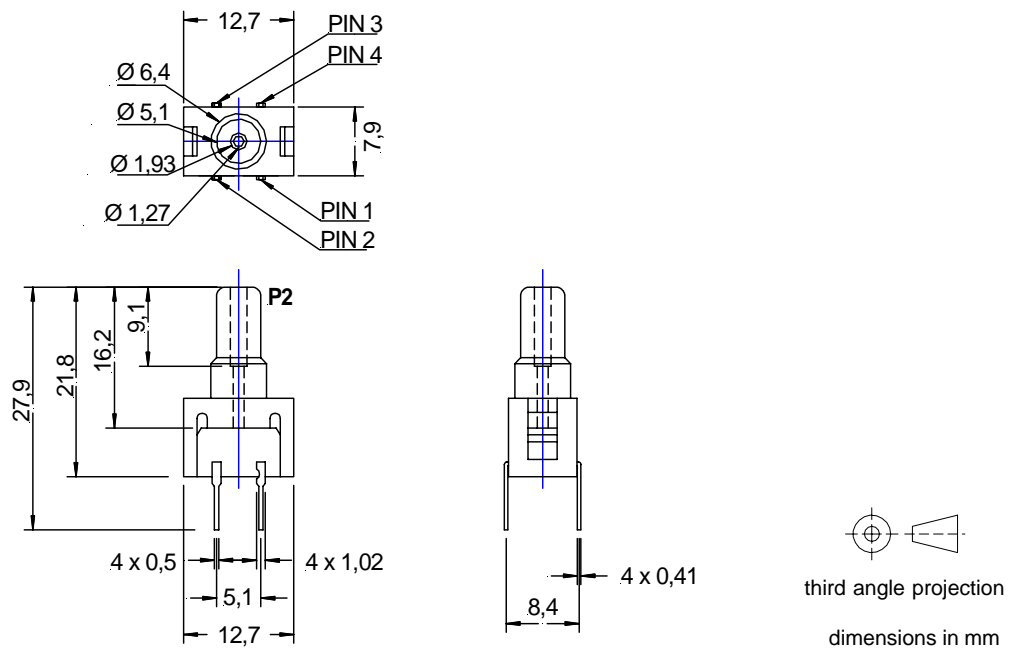
OUTLINE DRAWINGS¹⁰

RPU...G6A (single inline pinning, 1 x 4), gage pressure devices



mass: 2 g

RPU...G2A (dual inline pinning, 2 x 2), gage pressure devices

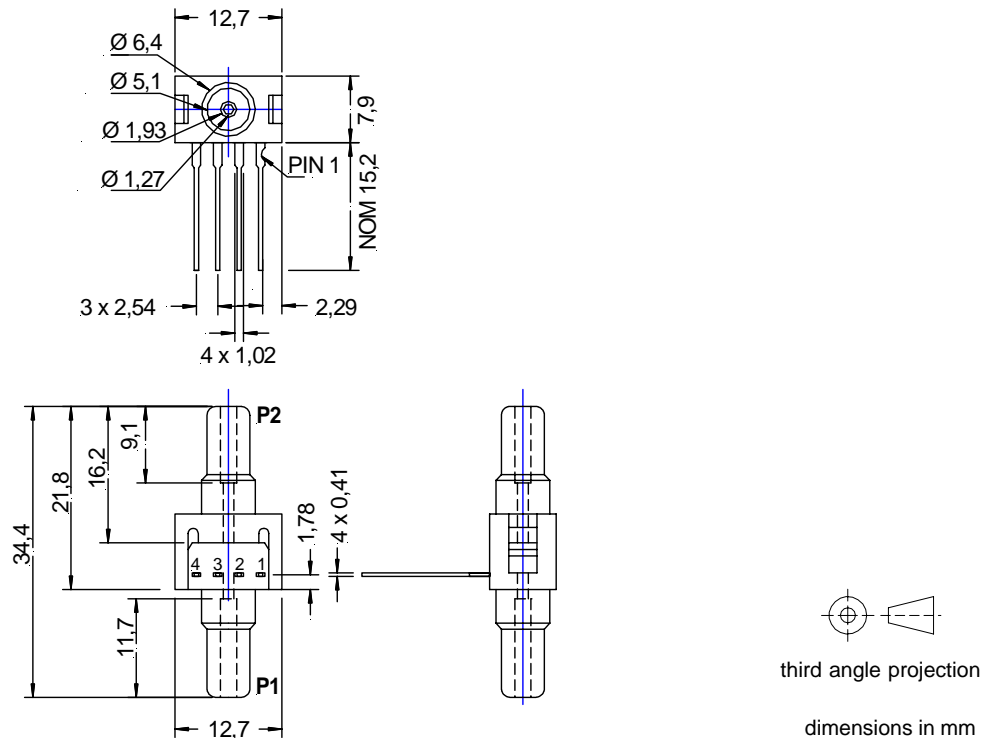


mass: 2 g



OUTLINE DRAWINGS¹⁰

RPU...D6A (single inline pinning, 1 x 4), differential pressure devices



mass: 2 g

Specification notes:

1. The maximum specified pressure which may be applied to the sensor without causing a permanent change in the output characteristics.
2. 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.
3. Non-linearity refers to the **Best Straight Line** fit, measured for offset pressure, full scale pressure and 1/2 full scale pressure.
4. Error band of the offset voltage, span or bridge impedance in the specified temperature range, relative to the 25°C reading.
5. Repeatability, the deviation in output readings for successive application of any given input pressure (all other conditions remaining constant). Hysteresis, the error defined by the deviation in output signal obtained when a specific pressure point is approached first with increasing pressure, then with decreasing pressure or vice versa (all other conditions remaining constant).
6. Response time for 0 to full-scale pressure step change, readings taken at 10 % and 90 % of full-scale pressure.
7. Long term stability of offset and span over a period over one year.
8. The sensors might be used on both ports for media compatible with the components specified under "Media Compatibility".
9. **Other sealing materials are available on request.** Minimum order quantities might be required.
10. **Other pressure port styles, like barbed ones, luers, modular, M5, needle style or flow through connection, are available on request.** Minimum order quantities might be required.



ORDERING INFORMATION - AVAILABLE LISTINGS

Note: Preferred listings are highlighted in grey

| Pressure range | Gage pressure | | Differential pressure |
|----------------|-----------------------|---------------------|-----------------------|
| | Single inline pinning | Dual inline pinning | Single inline pinning |
| 35 mbar | RPUM035G6A | - | RPUM035D6A |
| 50 mbar | RPUM050G6A | RPUM050G2A | RPUM050D6A |
| 100 mbar | RPUM100G6A | RPUM100G2A | RPUM100D6A |
| 250 mbar | RPUM250G6A | RPUM250G2A | RPUM250D6A |
| 1 bar | RPUB001G6A | RPUB001G2A | RPUB001D6A |
| 2 bar | RPUB002G6A | RPUB002G2A | RPUB002D6A |
| 5 bar | RPUB005G6A | RPUB005G2A | RPUB005D6A |
| 10 bar | RPUB010G6A | RPUB010G2A | RPUB010D6A |
| 16 bar | RPUB016G6A | RPUB016G2A | RPUB016D6A |
| 0.5 psi | RPUP0x5G6A | - | RPUP0x5D6A |
| 1 psi | RPUP001G6A | RPUP001G2A | RPUP001D6A |
| 5 psi | RPUP005G6A | RPUP005G2A | RPUP005D6A |
| 15 psi | RPUP015G6A | RPUP015G2A | RPUP015D6A |
| 30 psi | RPUP030G6A | RPUP030G2A | RPUP030D6A |
| 60 psi | - | - | - |
| 100 psi | RPUP100G6A | RPUP100G2A | RPUP100D6A |
| 250 psi | RPUP250G6A | RPUP250G2A | RPUP250D6A |

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- Improved performance characteristics
- Custom product modifications and adaptations even for small quantities
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- Fastest possible technical response for design and QA engineers
- ... plus other services on request

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