

## FEATURES

- M20x1.5 high pressure port
- Metal / metal screw sealing
- Integrated Amplifier optional
- Heavy duty body

## APPLICATIONS

- Hydraulic regulation process
- Fatigue test benches
- Laboratory and research

## P105

### High Pressure Transducer

#### SPECIFICATIONS

- Range 0-1000 to 4000 bar [15k psi to 60k psi]
- Stainless steel diaphragm
- High level output in option
- Cable gland or connector output
- $\pm 0.3\%$  accuracy

The **P105** is a high pressure transducer designed to measure static and dynamic pressure under a wide variety of conditions, including hostile environments. The mechanical design and a stainless steel diaphragm allow the sensor to withstand most aggressive liquids.

The sensing element is fitted with a temperature compensated Wheatstone bridge equipped with thin strain gauges. With **the P105-A1/A2 Series Measurement Specialties, Inc.** offers a high level output model.

The pressure port uses a high pressure connector with metal-metal conic sealing.

For higher range, a specific sensor, model **P125**, can measure up to **7 000 bar**. Do not hesitate to contact and ask your local MEAS representative for its technical specification.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

**STANDARD RANGES**

|                     |     |     |     |     |
|---------------------|-----|-----|-----|-----|
| <b>Range in bar</b> | 1k  | 2k  | 3k  | 4k  |
| <b>Range in psi</b> | 15k | 30k | 45k | 60k |

**PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°C)**

|                                     |   |
|-------------------------------------|---|
| <b>Parameters</b>                   |   |
| Operating Temperature Range (OTR)   | -20 to 80° C [-4 to 176° F]                     |
| Compensated Temperature Range (CTR) | 0 to 50° C [32 to 122° F]                       |
| Zero Shift in CTR                   | <2% F.S. / 50° C [/100° F]                      |
| Sensitivity Shift in CTR            | <2% of reading / 50 °C [/100° F]                |
| Range (F.S.)                        | 1000, 2000, 3000, 4000 bar, G = gauge type only |
| <b>Over-Range</b>                   |   |
| Without Damage                      | 1.5 x F.S. or max. 5000bar.                     |
| Without Destruction                 | 3 x F.S. or max. 5000bar                        |
| <b>Accuracy</b>                     |   |
| Combined Non-Linearity & Hysteresis | ±0.3% F.S.                                      |

**Electrical Characteristics**

| <b>Model</b>                | <b>P105</b> | <b>P105-A1</b>    | <b>P105-A2</b>           |
|-----------------------------|-------------|-------------------|--------------------------|
| Supply Voltage              | 5 Vdc       | 10 to 30 Vdc      | ±15 Vdc (±12 to ±18 Vdc) |
| F.S. Output <sup>6</sup>    | 1.5 mV/V    | 4 V ±0.2V         | 5 V ±0.2V                |
| Zero Offset <sup>6</sup>    | <± 5% F.S.  | 0.5 V ±0.2V       | 0 V ±0.2V                |
| Input Impedance/Consumption | 350 Ω       | <25 mA            | <25 mA                   |
| Output Impedance            | 350 Ω       | 1 kΩ <sup>7</sup> | 1 kΩ <sup>7</sup>        |
| Insulation under 50Vdc      | ≥100 MΩ     | ≥100 MΩ           | ≥100 MΩ                  |

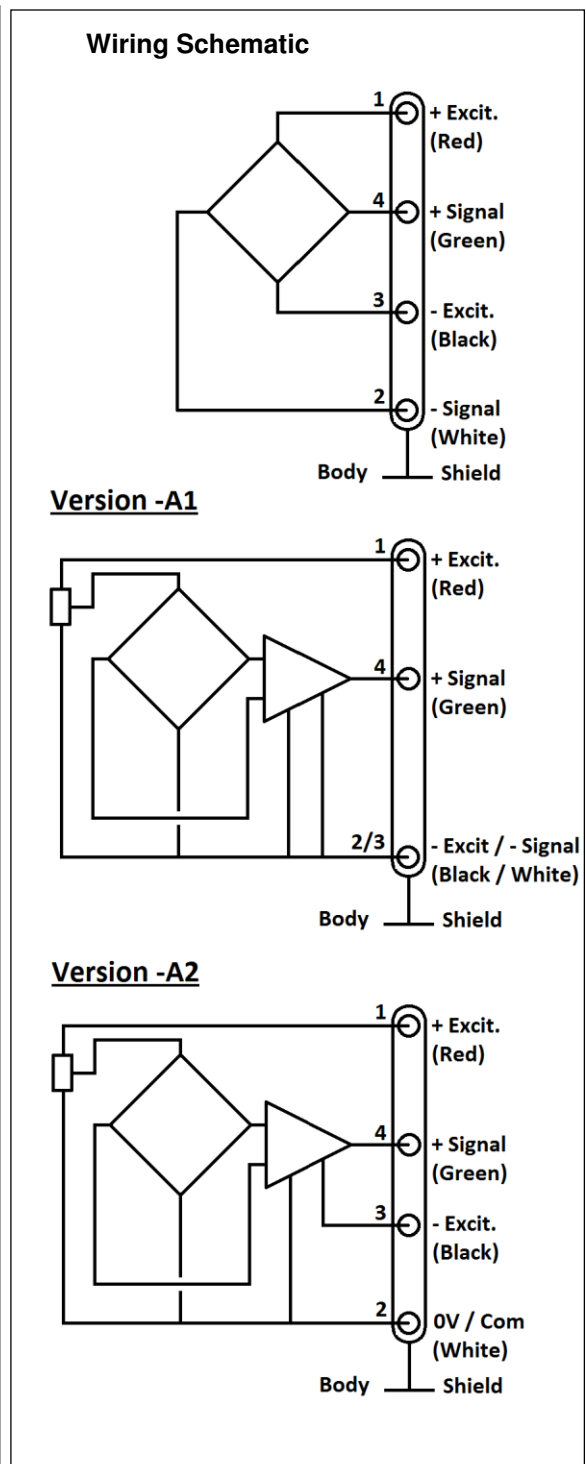
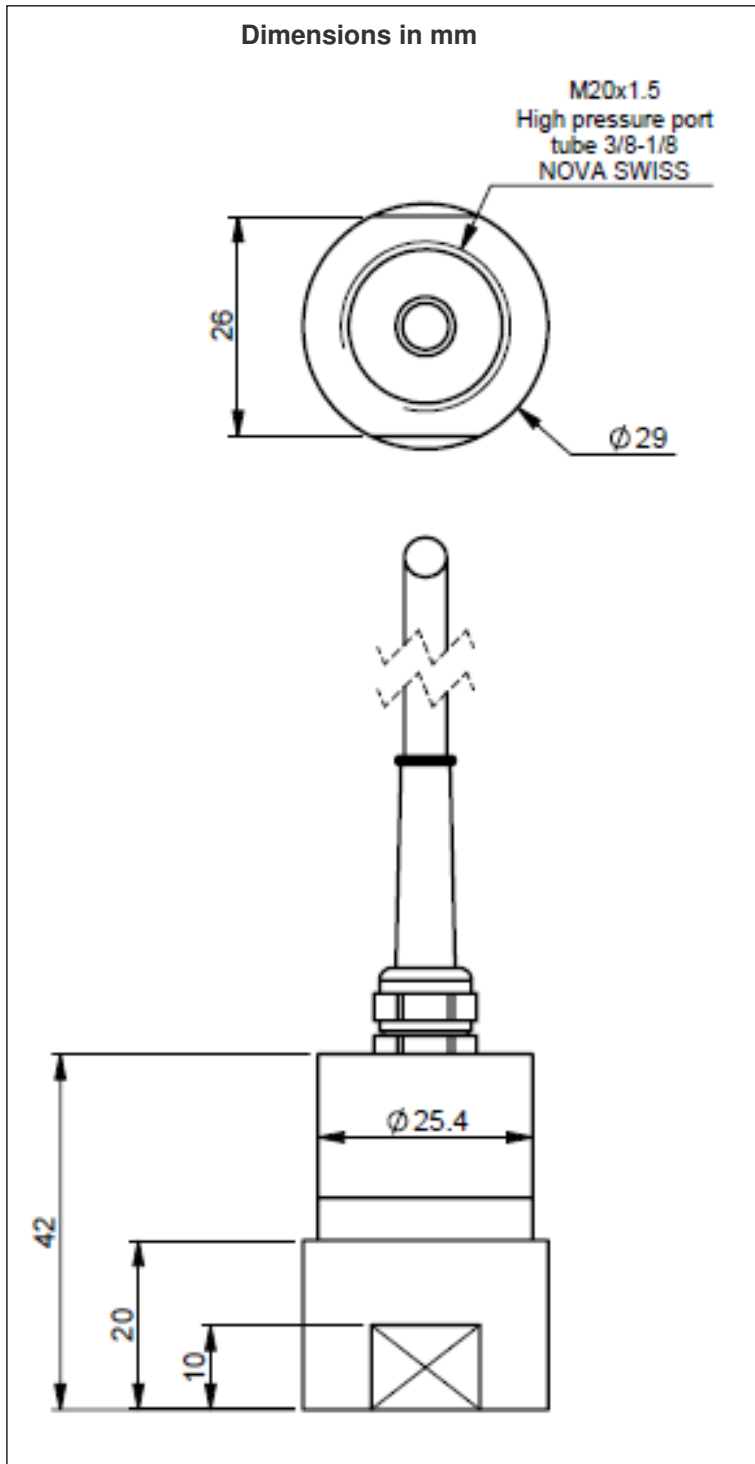
**Notes**

1. Electrical Termination: Cable gland, standard length 2m [6.6ft]. Optional connector output on request.
2. Material: Stainless steel diaphragm, body in aluminium
4. Weight: 300g [0.66lb]
5. Protection Index: IP50
6. Standard output signal, custom outputs available on request
7. Output impedance standard, available <100Ω on request.
8. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

**P105**

High Pressure Transducer

**DIMENSION & WIRING SCHEMATIC (METRIC ONLY)**



**OPTIONS**

|             |  |
|-------------|--|
| <b>A1</b>   | : Amplified Tension output with unipolar power supply            |
| <b>A2</b>   | : Amplified Tension output with bipolar power supply             |
| <b>ET1</b>  | : CTR -20 to 100° C [-4 to 212° F]                               |
| <b>ET2</b>  | : CTR -40 to 120° C [-40 to 248° F]                              |
| <b>SC</b>   | : Connector output   |
| <b>L00M</b> | : special cable length, replace "00" with total length in meters |

**ORDERING INFORMATION**

| <b>P105</b> | - | <b>A1</b>   | - | <b>2KB</b>   | <b>G</b>              | - | <b>/L4M</b>                               |
|-------------|---|---|---|--|-----------------------|---|---|
| Modèle      | - | Electrical interface  | - | Etendue de mesure                                    | Pression de référence | - | /Options                                  |
| <b>P105</b> | - | (empty) = bridge mV/V<br><b>A1</b> = 0.5 to 4.5 V<br><b>A2</b> = 0 to 5 V | - | <b>1KB</b><br><b>2KB</b><br><b>3KB</b><br><b>5KB</b> | <b>G</b> = Gage       | - | <b>/ETX</b><br><b>/SC</b><br><b>/L00M</b> |

The sensor ordering codes uses only bar as units because **P105** uses metric threads. Psi value correspondence is noted as information

**SUPPLIED ACCESSOIRES (ONLY WITH SC OPTION)**

|   |
|---|
| <b>EFMX-4M</b> : mating plug Jaeger 530-801-006 with clamp 530-841-006 standard with SC option          |
| <b>EFMX-4H</b> : mating plug Jaeger 530-804-006 with clamp 530-844-006 for ET1, ET2 or ET3 & SC options |

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