

# P105 High Pressure Transducer



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

## DESCRIPTION

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.

With many years of experience as a designer and manufacturer of sensors, Measurement Specialties, Inc. has the expertise to customize and/or design sensors for specific uses and testing environments. To meet your needs we also offer complete turnkey systems. Our conditioning electronics can power the sensor, amplify the electronic signal, and display the data digitally. A turnkey measurement system arrives with matched components, formatted, calibrated and ready for your immediate use.

## FEATURES

- M20x1.5 high pressure port
- Metal / metal screw sealing
- Optional Connector output
- High Level Tension Output Available
- Heavy duty body

## APPLICATIONS

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

## STANDARD RANGES

Range in bar	1k	2k	3k	4k
Range in psi	15k	30k	45k	60k

# P105 High Pressure Transducer

## CHARACTERISTICS

**Ambient Temperature: 20±1° C (unless otherwise specified)**

Parameters	
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

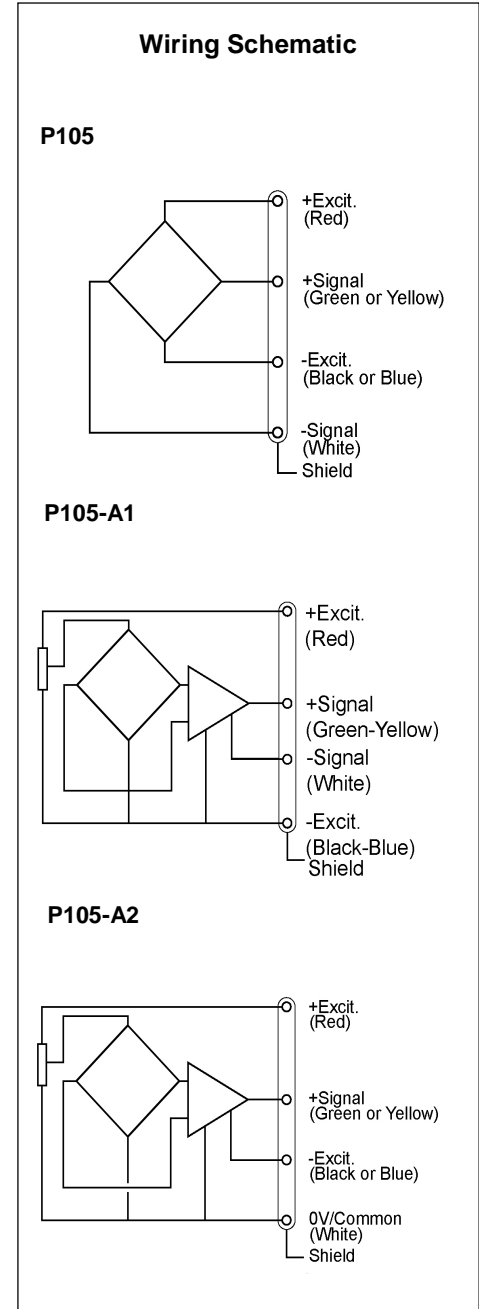
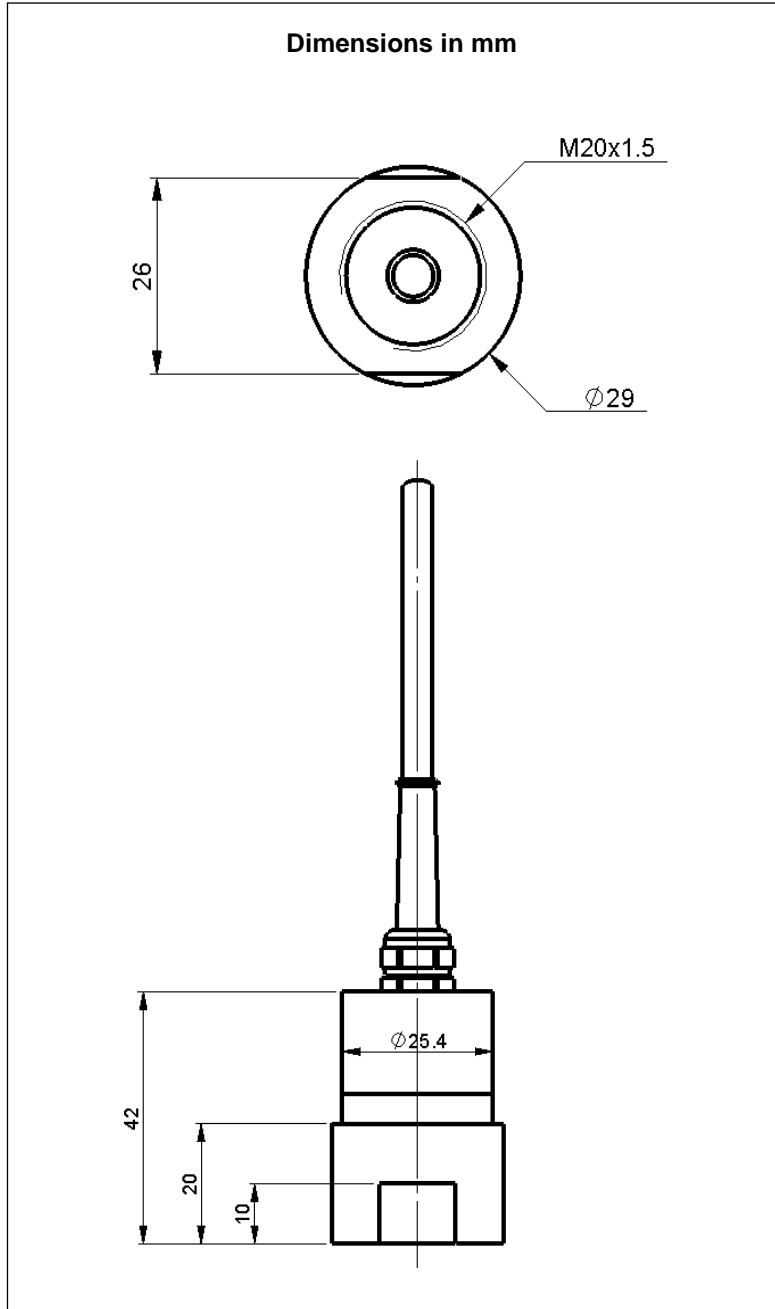
Model	P105	P105-A1	P105-A2
Power Supply	5 Vdc	10 to 30 Vdc	±15 Vdc (±12 to ±18 Vdc)
F.S. Output	1.5 mV/V typical	4 V ±5% F.S.	5 V ±5% F.S.
Zero Offset	<± 5% F.S.	0.5 V ±5% F.S.	0 V ±5% F.S.
Input Impedance/Consumption	350 Ω	<25 mA	<25 mA
Output Impedance	350 Ω	<10 Ω	<10 Ω
Insulation under 50Vdc	≥100 MΩ	≥100 MΩ	≥100 MΩ

### Notes

1. Electrical Termination: Cable gland, standard length 2m[6.6ft]
2. Material: Stainless steel diaphragm, body in aluminium
3. Pressure connector: Nova Swiss standard
4. Weight: 300g [0.66lb]
5. Protection Index: IP50

# P105 High Pressure Transducer

## DIMENSION & WIRING SCHEMATIC (METRIC ONLY)

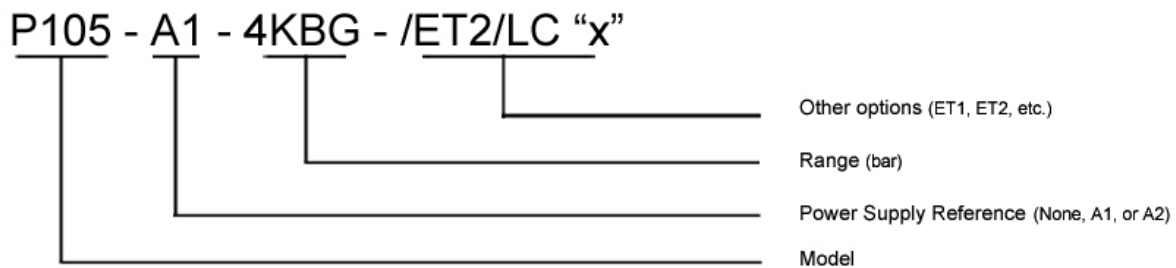


# P105 High Pressure Transducer

## OPTIONS

<b>A1</b>	: Unipolar Tension
<b>A2</b>	: Bipolar Tension
<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>LC"x"</b>	: Additional cable length to standard length (in m) ( <b>Note</b> : "X" = Custom value)

## ORDERING INFORMATION



### NORTH AMERICA

Measurement Specialties, Inc.  
1000 Lucas Way  
Hampton, VA 23666  
USA  
Tel: 1-757-766-1500  
Fax: 1-757-766-4297  
[pvg.cs.amer@meas-spec.com](mailto:pvg.cs.amer@meas-spec.com)

### EUROPE

Measurement Specialties  
(Europe), Ltd.  
26 Rue des Dames  
78340 Les Clayes-Sous-Bois,  
France  
Tel: +33 (0) 130 79 33 00  
Fax: +33 (0) 134 81 03 59  
[pfg.cs.emea@meas-spec.com](mailto:pfg.cs.emea@meas-spec.com)

### ASIA

Measurement Specialties  
(China), Ltd.  
No. 26 Langshan Road  
Shenzhen High-Tech Park (North)  
Nanshan District, Shenzhen  
518107  
China  
Tel: +86 755 3330 5088  
Fax: +86 755 3330 5099  
[pfg.cs.asia@meas-spec.com](mailto:pfg.cs.asia@meas-spec.com)

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.