



**APPLIED MEASUREMENTS LTD.**  
Transducer Specialists...

+44 (0) 118 981 7339

[info@appmeas.co.uk](mailto:info@appmeas.co.uk)

<https://appmeas.co.uk>

## P600FA High Pressure Type Sensor

### **Key Features:**

- Ranges 0-1000bar up to 0-5000bar
- Outputs: 4-20mA, 0-5Vdc, 0-10Vdc, 0-100mV
- Sealed to IP65
- Accuracy:  $<\pm 0.25\%$ /FS (BFSL)
- High Pressure F-250-C Autoclave Fitting
- Field-Adjustable Span & Zero ( $\pm 5\%$ )
- Vented Gauge Pressure Reference
- Excellent Chemical and Abrasion Resistance
- Rugged Construction
- Excellent Performance / Price Ratio
- Optional ATEX Version
- 3 Year Warranty



The P600FA series of pressure sensors are designed for the measurement of high range liquid and gas pressures in a diverse range of general industrial and specialised applications, including hydraulics, medical, research and development and a range of steel manufacturing and preparation processes.

Pressure ranges between 0-1000bar and 0-5000bar are available offering field adjustment of both span and zero for quick and easy re-ranging of the sensor. [See our full range of pressure sensors.](#)

Constructed from Titanium (using Silicon on Sapphire technology), it offers excellent long term performance and superb media compatibility.

The P600FA high range pressure transmitter offers a 2-wire 4-20mA electrical output as standard while 0-100mV, 0-5Vdc and 0-10Vdc are optional.

The P600FA series can also be supplied with any of our wide range of instrumentation to give you a complete calibrated system, please [contact our technical sales team.](#)

### **Options:**

- Interim Pressure Ranges
- Special Output Scaling
- Supplied with Instrumentation and Calibrated as a Complete System with Traceable Certificate
- ATEX Certified Version (4-20mA Versions Only):  
EX II 1 G Ex ia IIC T4 Ga (zone 0),  
EX II 1 D Ex ia IIIC T135°C Da (zone 20),  
EX I M 1 Ex ia I Ma (group I M1)

### **Applications:**

- Hydraulics
- Pneumatics
- Agriculture
- Marine
- Gas
- Chemical
- Medical
- Research & Development
- Steel Manufacturing



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## Specification:

| Input Pressure Range     |             |       |       |       |       |       |        |       |
|--------------------------|-------------|-------|-------|-------|-------|-------|--------|-------|
| Nominal Pressure Range   | Bar (gauge) | 1000  | 1500  | 2000  | 2500  | 3000  | 4000   | 5000  |
| Permissible Overpressure | x nominal   | x 1.5 | x 1.5 | x 1.5 | x 1.5 | x 1.5 | x 1.25 | x 1.2 |
| Burst Pressure           | Bar         | 4000  | 4000  | 4000  | 6000  | 6000  | 6000   | 6000  |

| Output signal & supply voltage | Number of Wires | Output     | Supply Voltage             | Supply Current |
|--------------------------------|-----------------|------------|----------------------------|----------------|
| P610FA                         | 4 - wire        | 10 mV/V    | 5 to 15 Vdc (regulated)    | 0.6mA/V        |
| P605FA                         | 3 - wire        | 0 - 5 Vdc  | 13 to 30 Vdc (unregulated) | 13mA           |
| P6010FA                        | 3 - wire        | 0 - 10 Vdc | 13 to 30 Vdc (unregulated) | 13mA           |
| P642FA                         | 2 - wire        | 4 - 20 mA  | 10 to 36 Vdc (unregulated) | N/A            |

| Performance   |                           |   |
|---|---------------------------|---|
| Accuracy (non-linearity, hysteresis, repeatability) | % Full Scale Output       | <±0.25 (BFSL)   |
| Zero Offset and Span Tolerance                      | % / Span                  | ±0.5% (at room temperature)   |
| Zero Offset and Span Adjustment                     | % / Full Scale Output     | ±5 adjustment with easy access trimming potentiometers on amplified versions only                                 |
| Permissible Temperatures & Thermal Effects          |                           |   |
| Media Temperature                                   | °C                        | -50 to +125   |
| Ambient Temperature                                 | °C                        | -40 to +85 (-20 to +70 ATEX Version)  |
| Storage Temperature                                 | °C                        | +5 to +40   |
| Thermal Zero Shift (TZS)                            | % / FS / °C               | <±0.02  |
| Thermal Span Shift (TSS)                            | % / FS / °C               | <±0.02  |
| Electrical Protection                               |                           |   |
| Reverse Polarity Protection                         |                           | Protected against supply voltage reversal up to 50Vdc (amplified version only)                                    |
| Materials   |                           |   |
| Media Compatibility                                 |                           | Any media compatible with BT9 Titanium Alloy  |
| Misc  |                           |   |
| Weight  | grams                     | 125 nominal   |
| Insulation Resistance                               | Megohm @ 50 Vdc           | >100  |
| Input Resistance and Output Resistance              | Ω                         | 1500 ±30% (P610FA only)   |
| Electrical Connection                               |                           | Mating socket with screw terminal connections to DIN 43650  |
| Pressure Connection                                 |                           | F250-C Autoclave fitting. Thread Type 9/16-18UNF-2B (female)  |
| Response Time (10% - 90%)                           | ms                        | ≤1  |
| Environmental Protection                            |                           | IP65  |
| Load Driving Capability                             | 4 - 20mA version          | = Supply voltage - 10V / 0.02A (i.e. 36V - 10V / 0.02A = 1300Ω)   |
|   | 0 - 5V / 0 - 10V versions | >5kΩ / >10kΩ  |
| Long Term Stability                                 | % / Full Scale            | < 0.2 / 6 months  |
| Operational Life                                    | Pressure Cycles           | > 10 <sup>8</sup> typical   |
| ATEX Approval (4-20mA versions only)                |                           | Ex II 1 G Ex ia IIC T4 Ga (zone 0)<br>Ex II 1 D Ex ia IIC T135°C Da (zone 20)<br>EX I M 1 Ex ia I Ma (group I M1) |



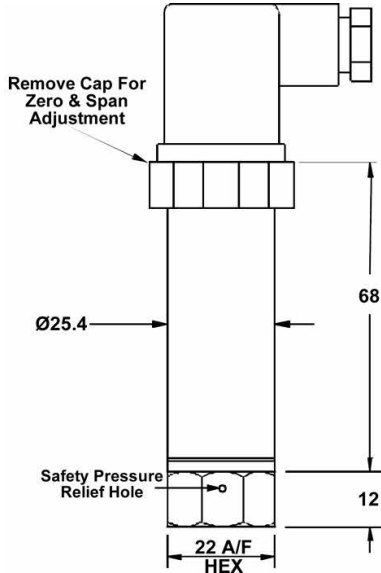
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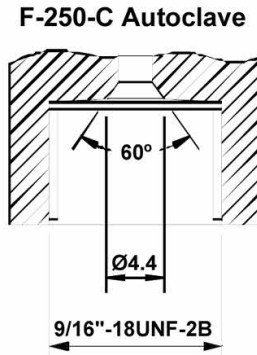
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**Dimensions (mm):**

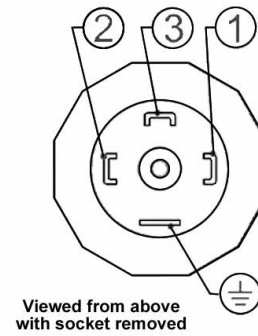


**Pressure Fitting Detail**



**Wiring Diagram:**

| Pin No. | 2 Wire (4 - 20mA) |
|---------|-------------------|
| 1       | +ve supply        |
| 2       | 4 - 20mA signal   |
| 3       | not fitted        |
| ⊥       | to case           |



| Pin No. | 3 Wire (0 - 5Vdc / 0 - 10Vdc) | 4 Wire (10mV/V) |
|---------|-------------------------------|-----------------|
| 1       | common                        | -ve supply      |
| 2       | +ve supply                    | +ve supply      |
| 3       | +ve output                    | +ve output      |
| ⊥       | to case                       | -ve output      |

**Associated Products:**



[Intuitive4-P Process Panel-Mount Indicator](#)



[Intuitive4 Lite Digital Indicator](#)



## Ordering Codes:

| <b>P642FAC-1000barg-AA-00-000</b>                           | <b>P6</b> | <b>42</b> | <b>FA</b> | <b>C</b> | - | <b>1000barg</b> | - | <b>A</b> | <b>A</b> | - | <b>00</b> | - | <b>000</b> |
|---|-----------|-----------|-----------|----------|---|-----------------|---|----------|----------|---|-----------|---|------------|
| <i>Example Code</i>   |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| <b>Product Family</b>                                       |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| P6--FA  | P6        |           | FA        |          |   |                 |   |          |          |   |           |   |            |
| <b>Electrical Output</b>                                    |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| 10 = 10mV/V (4 wire)  |           | 10        |           |          |   |                 |   |          |          |   |           |   |            |
| 42 = 4-20mA (2 wire)  |           | 42        |           |          |   |                 |   |          |          |   |           |   |            |
| 45 = 0.5-4.5Vdc (5V excitation)                             |           | 45        |           |          |   |                 |   |          |          |   |           |   |            |
| 05 = 0-5Vdc (3 wire)  |           | 05        |           |          |   |                 |   |          |          |   |           |   |            |
| 010 = 0-10Vdc (3 wire)                                      |           | 010       |           |          |   |                 |   |          |          |   |           |   |            |
| <b>Electrical Connection / ATEX Certification</b>           |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| Blank = Large DIN Plug & Socket (standard)                  |           |           |           | Blank    |   |                 |   |          |          |   |           |   |            |
| C = IP67 Cable (1 metre fitted as standard)                 |           |           |           | C        |   |                 |   |          |          |   |           |   |            |
| X = ATEX Certified  |           |           |           | X        |   |                 |   |          |          |   |           |   |            |
| CX = IP67 cable + ATEX                                      |           |           |           | CX       |   |                 |   |          |          |   |           |   |            |
| <b>Pressure Range</b>                                       |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| 1000barg = 0 to 1000bar gauge                               |           |           |           |          |   | 1000barg        |   |          |          |   |           |   |            |
| 15,000psig = 0 to 15,000psi gauge                           |           |           |           |          |   | 15,000psig      |   |          |          |   |           |   |            |
| <b>Accuracy (Non-Linearity &amp; Hysteresis)</b>            |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| A = <math>\pm 0.25\%/FS</math> (standard)                   |           |           |           |          |   |                 |   | A        |          |   |           |   |            |
| B = <math>\pm 0.15\%/FS</math> (FA, FAX & FD versions only) |           |           |           |          |   |                 |   | B        |          |   |           |   |            |
| <b>Process Connection</b>                                   |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| B = F-250C Autoclave (9/16" UNF Female)                     |           |           |           |          |   |                 |   |          | B        |   |           |   |            |
| D = M16 x 1.5 Female Cone Seal                              |           |           |           |          |   |                 |   |          | D        |   |           |   |            |
| <b>Cable Length in Metres</b>                               |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| 00 = None   |           |           |           |          |   |                 |   |          |          |   | 00        |   |            |
| 01 = 1 metre  |           |           |           |          |   |                 |   |          |          |   | 01        |   |            |
| <b>Specials Code</b>  |           |           |           |          |   |                 |   |          |          |   |           |   |            |
| 000 = No Special Requirements                               |           |           |           |          |   |                 |   |          |          |   |           |   | 000        |