



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

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www.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 0-4000bar are available offering field adjustment of both span and zero for quick and easy re-ranging of the sensor.

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 IIC 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 ⁸ typical |
| ATEX Approval (4-20mA versions only) | | Ex II 1 G Ex ia IIC T4 Ga (zone 0) Ex II 1 D Ex ia IIC T135°C Da (zone 20) EX I M 1 Ex ia I Ma (group I M1) |



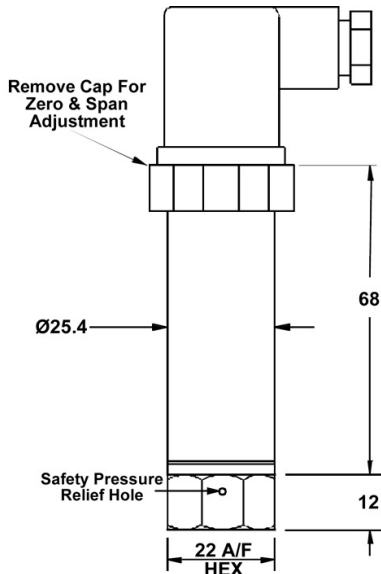
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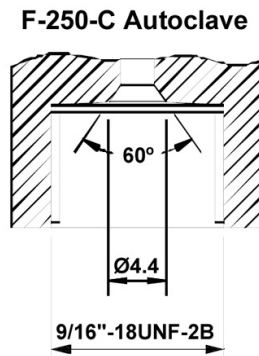
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Dimensions (mm):

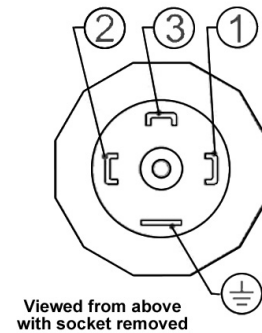


Pressure Fitting Detail



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) |
|---------|-------------------------------|
| 1 | common |
| 2 | +ve supply |
| 3 | +ve output |
| ⊥ | to case |

Associated Products:



[Tracker 211 Low-Cost Universal Digital Indicator](#)



[Intuitive4 Lite Digital Indicator](#)



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



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Ordering Codes:

| P642FAC-1000barg-AA-00-000 | P6 | 42 | FA | C | - | 1000barg | - | A | A | - | 00 | - | 000 |
|---|-----------|-----------|-----------|----------|---|-----------------|---|----------|----------|---|-----------|---|------------|
| <i>Example Code</i> | | | | | | | | | | | | | |
| Product Family | | | | | | | | | | | | | |
| P6--FA | P6 | | FA | | | | | | | | | | |
| Electrical Output | | | | | | | | | | | | | |
| 10 = 10mV/V | | 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 | | | | | | | | | | | |
| Electrical Connection / ATEX Certification | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| Pressure Range | | | | | | | | | | | | | |
| 1000barg = 0 to 1000bar gauge | | | | | | 1000barg | | | | | | | |
| 15,000psig = 0 to 15,000psi gauge | | | | | | 15,000psig | | | | | | | |
| Accuracy (Non-Linearity & Hysteresis) | | | | | | | | | | | | | |
| A = $\pm 0.25\%/FS$ (standard) | | | | | | | | A | | | | | |
| B = $\pm 0.15\%/FS$ (FA, FAX & FD versions only) | | | | | | | | B | | | | | |
| Process Connection | | | | | | | | | | | | | |
| B = F-250C Autoclave (9/16" UNF Female) | | | | | | | | | B | | | | |
| Cable Length in Metres | | | | | | | | | | | | | |
| 00 = None | | | | | | | | | | | 00 | | |
| 01 = 1 metre | | | | | | | | | | | 01 | | |
| Specials Code | | | | | | | | | | | | | |
| 000 = No Special Requirements | | | | | | | | | | | | | 000 |