



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

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<https://appmeas.co.uk>

P600FD Flush Diaphragm Pressure Sensor

Key Features:

- Ranges 0-4bar up to 0-400bar
- Outputs: 4-20mA
- Sealed to IP65
- Accuracy: $<\pm 0.3\%/FS$
- $\frac{1}{2}$ " BSP Pressure Port (1" BSP Optional)
- Flush Sensing Diaphragm
- Optional ATEX Version
- Excellent Chemical and Abrasion Resistance
- Rugged Construction
- Field Adjustable Output Range
- Excellent Performance/Price Ratio



The [P600FD series of flush pressure sensors](#) are designed for the measurement of liquid and gas pressures where the media is either viscous, contains particulates or solids, or is otherwise liable to block the port of a conventional pressure transducer with a recessed diaphragm or pressure port. Typical applications include food, process and industrial applications and is also well suited for applications where cavity-free installation or low volumetric displacement is required.

Pressure ranges between 0-4bar and 0-400bar are available offering field adjustment of both span and zero by $\pm 5\%$, for quick and easy re-ranging of the sensor.

The wetted parts of the P600FD flush pressure are constructed from 316 stainless steel and nitrile, offering excellent long term performance. The P600FD has a process connection of $\frac{1}{2}$ " BSP male as standard and the output is 2 wire 4-20mA as standard which exits through a DIN43650 plug & socket rated to IP65. A 1" BSP pressure port with semi-flush diaphragm is optional.

The P600FD 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
- Agriculture
- Marine
- Gas
- Chemical
- Medical
- Research & Development
- Steel Manufacturing
- Preparation Processes



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Specification:

Input pressure range												
Nominal Pressure Range	Bar (gauge)	4	6	10	16	25	40	60	100	160	250	400
Permissible Overpressure	Bar	x 1.5	x 1.5	x 1.5	x 1.5	x 1.5	x 1.5	x 1.5	x 1.5	x 1.5	x 1.5	x 1.5

Output Signal & Supply Voltage	Number of Wires	Output	Supply Voltage
P642FD	2 - wire	4 - 20mA	13 - 36Vdc (unregulated)
P642FDX	2 - wire	4 - 20mA (ATEX)	13 - 28Vdc (unregulated)
P605FD	3 - wire	0 - 5Vdc	13 - 30Vdc (unregulated)
P6010FD	3 - wire	0 - 10Vdc	13 - 30Vdc (unregulated)

Performance		
Accuracy (non-linearity, hysteresis, repeatability)	% Full Scale Output	<±0.30 (BFSL)
Zero Offset and Span Tolerance	% Span	±1
Zero Offset and Span Adjustment	% Full Scale Output	±5 with easy access trimming potentiometers
Permissible Temperatures & Thermal Effects		
Media Temperature	°C	-20 to +85
Ambient Temperature	°C	-20 to +85 (-20 to +70 ATEX version)
Storage Temperature	°C	+5 to +40
Thermal Zero Shift (TZS)	% / FS / °C	<±0.04 typical
Thermal Span Shift (TSS)	% / FS / °C	<±0.04 typical
Electrical Protection		
Reverse Polarity Protection		Protected against supply voltage reversal up to 50Vdc
Materials		
Media Compatibility		Any media compatible with 316L Stainless Steel & Nitrile
Misc		
Weight	grams	90 nominal
Insulation Resistance	Megohm @ 50 Vdc	>100
Electrical Connection		Mating socket with screw terminal connections to DIN 43650
Pressure Connection		1/2" BSPP male with integral Nitrile seal and flush 316L diaphragm. 1" BSPP male with semi-flush diaphragm optional.
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)



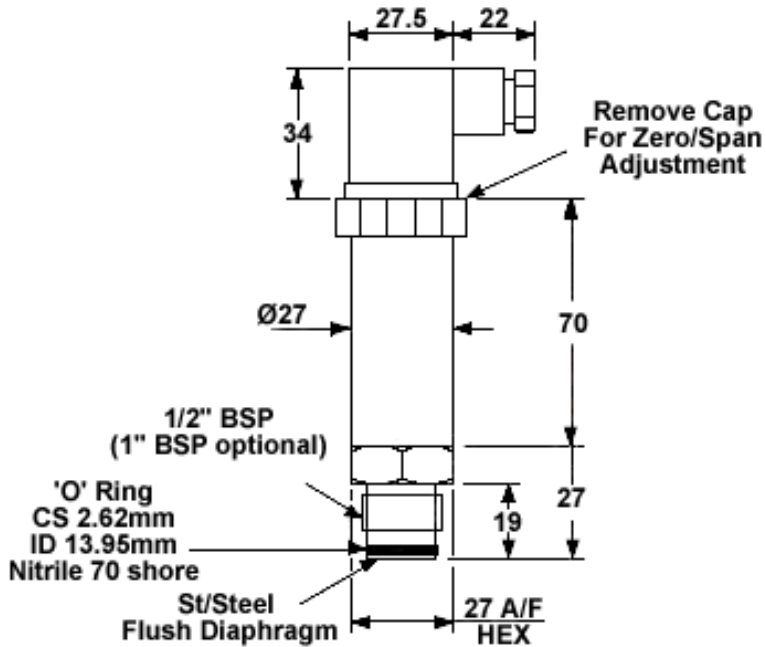
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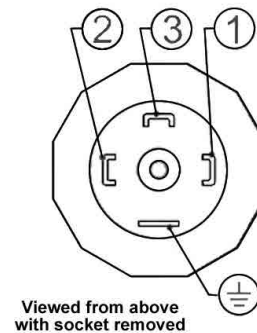
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Dimensions (mm):



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:



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



[Intuitive4 Lite Digital Indicator](#)



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Ordering Codes:

P642FDC-10barg-AA-00-000	P6	42	FD	C	-	10barg	-	A	A	-	00	-	000
<i>Example Code</i>													
Product Family													
P6--FD	P6		FD										
Electrical Output													
42 = 4-20mA (2 wire)		42											
42X = 4-20mA ATEX Certified (2 wire)		42x											
Electrical Connection / ATEX Certification													
Blank = Large DIN Plug & Socket (standard)				Blank									
C = IP67 Cable (1 metre fitted as standard)				C									
Pressure Range													
10barg = 0 to 10bar gauge						10barg							
2400psig = 0 to 2400psi gauge						2400psig							
Accuracy (Non-Linearity & Hysteresis)													
A = $\pm 0.3\%/FS$ (standard)								A					
Process Connection													
A = G1/2" Male									A				
B = 1" BSP Male (choose for 6 bar ranges and below)									B				
Cable Length in Metres													
00 = None											00		
01 = 1 metre											01		
Specials Code													
000 = No Special Requirements													000