



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

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<https://appmeas.co.uk>

P642FAX ATEX Certified, Intrinsically Safe Pressure Sensor

Key Features:

- Ranges 0-0.5 up to 0-700bar
- Outputs: 4-20mA
- ATEX Certified Intrinsically Safe:
II 1GD EEx ia IIC T4
Ex iaD 20 T200°C, Ta = -20°C to +70°C
- Sealed to IP65
- Accuracy: $\pm 0.25\%/FS$
- Excellent Chemical and Abrasion Resistance
- Rugged Construction
- Field Adjustable Output Range
- Excellent Performance / Price Ratio
- 3 Year Warranty



The P642FAX series of ATEX certified pressure sensors are designed for measuring liquid and gas pressures in hazardous areas across all common industrial applications including hydraulics, Pneumatics, Agriculture, Marine, Sewage, Gas, Medical, Chemical, Food Processing, Barometers, Dataloggers.

Pressure ranges between 0-500mbar and 0-700bar are available offering field adjustment of both span and zero by $\pm 5\%$ for quick and easy re-ranging of the sensor. For ranges from 0-1000bar to 0-4000bar see our [P600FA model](#). 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 with a wide range of harsh and aggressive pressure media.

The P642FAX pressure sensor's electrical output is the intrinsically safe standard 4-20mA, 2-wire signal, connection to which is made via a DIN43650 plug & socket. Pressure connection is made via a G $\frac{1}{4}$ " male on all pressure ranges up to 700bar.

The P642FAX series can also be supplied with any of our wide range of instrumentation to give you a complete calibrated system, please speak to our [technical sales team](#).

Options:

- Interim Pressure Ranges
- Special Output Scaling
- Supplied with Instrumentation and Calibrated as a complete system with traceable certificate

Applications:

- Hydraulics
- Pneumatics
- Agriculture
- Marine
- Gas
- Chemical
- Medical
- Research & Development
- Steel Manufacturing
- Food Processing & Preparation Processes
- Barometers



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Specification:

Input Pressure Range																		
Nominal Pressure Range	Bar (gauge)	0.5	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250	400	600	700
Permissible Overpressure	Bar	x 4	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 2	x 1.5

Output Signal & Supply Voltage	Number of Wires	Output	Supply Voltage
P642FAX	2 - wire	4 - 20mA	13 - 28 Vdc

Performance		
Accuracy (non-linearity, hysteresis, repeatability)	% Full Scale Output	<±0.25 (BFSL)
Zero Offset and Span Tolerance	% / Span	±1 (at room temperature)
Zero Offset and Span Adjustment	% / Full Scale Output	±5 with easy access trimming potentiometers
Permissible Temperatures & Thermal Effects		
Media Temperature	°C	-50 to +125
Ambient Temperature	°C	-20 to +70
Storage Temperature	°C	+5 to +40
Thermal Zero Shift (TZS)	% / Full Scale / °C	<±0.02 typ.
Thermal Span Shift (TSS)	% / Full Scale / °C	<±0.02 typ.
Electrical Protection		
Reverse Polarity Protection		Protected against supply voltage reversal up to 50Vdc
Materials		
Media Compatibility		Any media compatible with BT9 Titanium Alloy
Misc		
Weight	Grams	90 nominal
Insulation Resistance	Megohm @ 50 Vdc	>100
Electrical Connection		Mating socket with screw terminal connections to DIN 43650. Cable entry PG9.
Pressure Connection		1/4" BSP or 1/4" NPT male (others available on request)
Response Time (10% - 90%)	ms	≤1
Environmental Protection		IP65
Load Driving Capability	4 - 20mA	= supply voltage - 10V / 0.02A (i.e. 36V - 10V / 0.02A = 1300Ω)
Long Term Stability	% / Full Scale	<0.2 / 6 months
Operational Life	Pressure Cycles	>10 ⁸ typical
ATEX Approval		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)



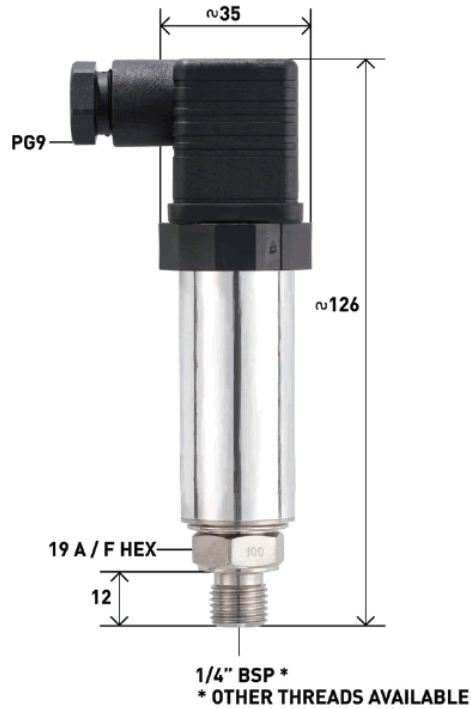
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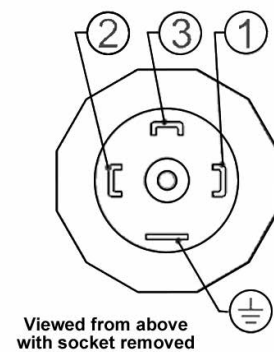
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Dimensions (mm):



Wiring Diagram:

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



Associated Products:



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



[Intuitive4 Lite Digital Indicator](#)



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Ordering Codes:

P642FAX-10barg-AA-00-000	P6	42	FA	X	-	10barg	-	A	A	-	00	-	000
<i>Example Code</i>													
Product Family													
P6--FA	P6		FA										
Electrical Output													
42 = 4-20mA (2 wire)		42											
Electrical Connection / ATEX Certification													
X = ATEX + Large DIN Plug & Socket (standard)				X									
CX = ATEX + IP67 Cable (1 metre fitted as standard)				CX									
Pressure Range													
10barg = 0 to 10bar gauge						10barg							
M1P1barg = -1 to +1bar gauge						M1P1barg							
P15P500psia = +15 to +500psi absolute						P15P500psia							
2400psig = 0 to 2400psi gauge						2400psig							
Accuracy (Non-Linearity & Hysteresis)													
A = $\pm 0.25\%/FS$ (standard)								A					
B = $\pm 0.15\%/FS$								B					
Process Connection													
A = G1/4" Male									A				
Cable Length in Metres													
00 = None											00		
01 = 1 metre											01		
Specials Code													