



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

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<https://appmeas.co.uk>

Pi600B Barometric Pressure Sensor

Key Features:

- Ranges 750 – 1250mbar Absolute
- Outputs: 4-20mA, 0-5Vdc, 0-10Vdc, 0.5-4.5Vdc
- Sealed to IP65 Plug & Socket (optional IP65 or IP68 Cable)
- Accuracy: $<\pm 0.25\%/FS$ (0.1% option)
- Excellent Performance/Price Ratio
- Rugged Construction
- UKAS Traceable Calibration Certificate Included (UKAS Laboratory Certificate Optional)
- 3 Year Warranty



The [Pi600B series of barometric/atmospheric pressure sensors](#) are designed for measurement of barometric / atmospheric pressures in almost any application. The Pi600B barometric pressure sensor is suited to any common terrestrial ambient pressure measurement application. Typical applications include weather stations, process reference and many general meteorological applications.

With its ASIC-based amplifier circuit it can offer a wide choice of electrical outputs including 4-20mA, 0-5Vdc, 0-10Vdc and 1-6Vdc, as well as a ratiometric 0.5-4.5Vdc signal that requires a 5Vdc supply to suit most data loggers.

Constructed from stainless steel the Pi600B series of transducers are extremely rugged yet of compact design. A $G\frac{1}{4}$ " male process connection is offered as standard along with a choice of alternatives including $G\frac{1}{2}$ " male, $G\frac{1}{4}$ " female, $\frac{1}{4}$ " NPT male and $\frac{1}{2}$ " NPT male.

In addition, we can offer complete customisation to suit your application, please [contact our technical sales team](#).

Options:

- Alternate Materials for Application Compatibility
- 6-pin Bayonet Connector or DIN43650 Plug & Socket (Hirschmann)
- Improved Accuracy (NL&H): $<\pm 0.10\%/span$ BFSL
- Improved Accuracy (TZS): $<\pm 0.02\%$ or $<0.04\%/span/^{\circ}C$
- Supplied with any Instrumentation and Calibrated as a Complete System
- 316 Stainless Steel case or High Grade UNS S31803 Stainless Steel Case

Applications:

- Any Common Terrestrial Ambient Pressure Measurement
- Weather Stations
- Process Reference
- General Meteorological Applications



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Specification:

Input Pressure Range		
Nominal Pressure Range	Absolute	750 to 1250mbar
Permissible Overpressure	Bar	4
Burst Pressure	Bar	5

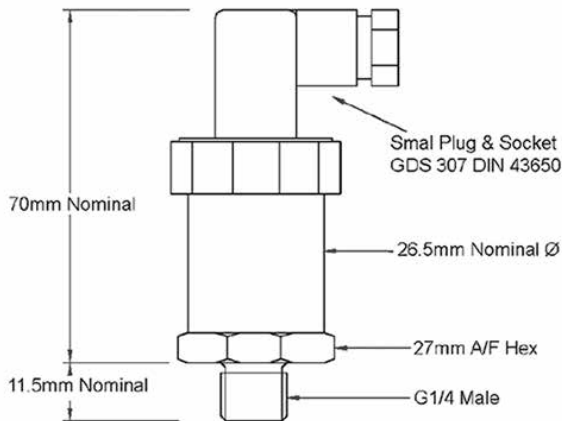
Output Signal & Supply Voltage	Wiring System	Output	Supply Voltage	Input Current	Input Resistance	Output Resistance
Pi642	2 - wire	4 - 20 mA	9 - 32 Vdc	n/a	<500	<500
Pi605	3 - wire	0 - 5V dc	9 - 32 Vdc	<6 mA	<500	<500
Pi6010	3 - wire	0 - 10V dc	13 - 32 Vdc	<6 mA	<500	<500
Pi615	3 - wire	1 - 5V dc	9 - 32 Vdc	<6 mA	<500	<500
Pi6110	3 - wire	1 - 10V dc	13 - 32 Vdc	<6 mA	<500	<500
Pi616	3 - wire	1 - 6V dc	9 - 32 Vdc	<6 mA	<500	<500
Pi606	3 - wire	0 - 6V dc	9 - 32 Vdc	<6 mA	<500	<500
Pi645	3 - wire	0.5 to 4.5V dc	5 Vdc	<6 mA	<500	<500

Performance		
Accuracy (non-linearity, hysteresis, repeatability)	% Full Scale Output	<±0.25 (BFSL) <±0.1 (BFSL) optional
Zero Balance	±% of Rated Output	<1.0
Setting Errors (offsets)	2-wire + 3-wire	Zero & Full Scale, <±0.5% / FS
Permissible Load	2-wire 3-wire	Rmax = [(VS - VS min) / 0.02] Ω Rmin = 10 kΩ
Influence Effects	Supply Effects Load Effect	0.5 to 4.5V - Ratiometric, Other Voltage Outputs - <0.005 % FS / 1V 4-20mA = <0.05 % FSO / kΩ
Response Time (10% - 90%)	ms	≤10
Warm-Up Time (amplified versions only)	ms	2 typ.
Permissible Temperatures & Thermal Effects		
Media Temperature	°C	-20 to +135 (150 with integrated cooling element)
Ambient Temperature	°C	-20 to +80
Storage Temperature	°C	-40 to +125
Compensated Temperature Range	°C	+20 to +80
Thermal Zero Shift (TZS)	% / FS / °C	<±0.04 (standard) <±0.02 (option)
Thermal Span Shift (TSS)	% output / °C	<-0.015
Electrical Protection		
Reverse Polarity Protection		No damage but also no function
Electromagnetic Compatibility		CE Compliant
Insulation Resistance	Megohms Ω at 50V dc	>500
Mechanical Stability		
Shock		100 g / 11 ms
Vibration		10 g RMS (20 ... 2000 Hz)
Materials		
Housing & process connection		303 Stainless Steel 316L Stainless Steel (optional) High Grade DUPLEX Stainless Steel UNS S31803 (optional)
'O' ring seals		Viton NBR/Nitrile (optional) EPDM (optional) Chemraz (optional)

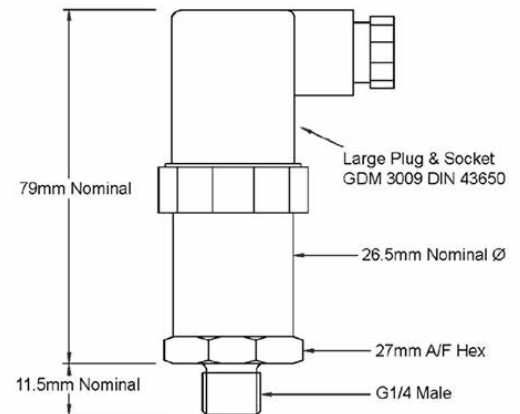


Diaphragm		Ceramic Al ₂ O ₃ 96 % (316L Stainless Steel below 1 bar)
Media wetted parts		Housing and process connection, 'O' ring seal, diaphragm
Misc		
Weight	grams	100 nominal
Installation position		Any
Operational life	pressure cycles	> 100 x 10 ⁶
Environmental Protection		IP65, IP67 or IP68 See dimension drawings below for details.

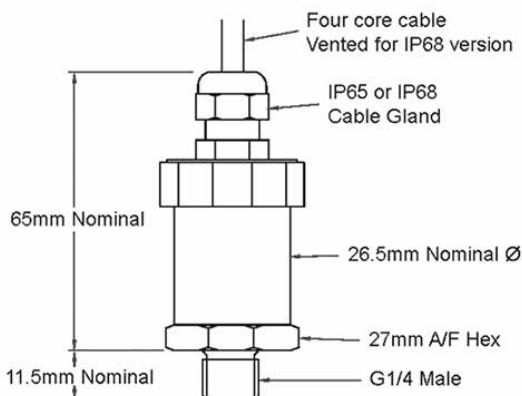
Dimensions (mm):



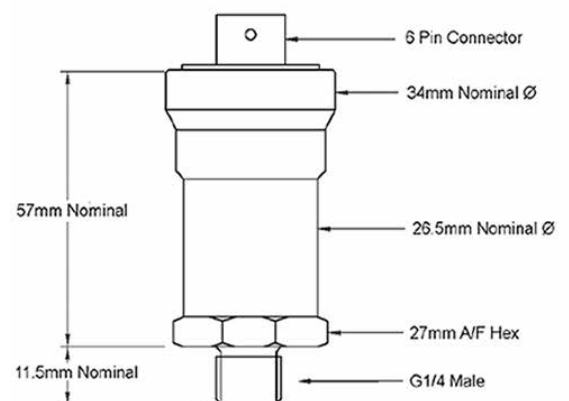
Small Plug & Socket (Pi6xxxP)
IP65, GDS 307 DIN 43650



Large Plug & Socket (Pi6xxxLP)
IP65, GDM 3009 DIN 43650



Cable Gland Assembly
IP65 Cable (Pi6xxxC)
IP68 Vented Cable (Pi6xxxCS)



6-Pin Bayonet-Lock Connector to MIL-C-26482, Shell Size 10
IP67 (IP54 on gauge versions)
(Pi6xxxBL + Pi6xxxBLP)



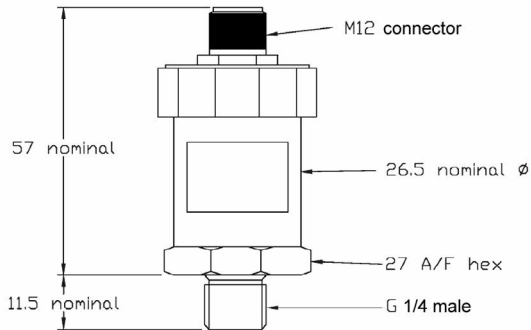
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M12x1, 4 Pin Connector (Pi6xxxM)

Wiring Designation:

		Small Plug & Socket (Code A)	Large Plug & Socket (Code B)	IP65 Cable (Code C)	AMP 6-pin Bayonet (Code D)	IP68 Vented Cable (Code E)	Binder 6-pin Connector (Code F)	M12 x 1, 4-pin Connector (Code G)
2 - wire	+ve Supply -ve Supply Ground	Pin 1 Pin 2 Earth Pin	Pin 1 Pin 2 Earth Pin	Red Blue Green	Pin 1 Pin 2 Earth Pin	Red Blue White	Pin 1 Pin 2 Pin 3	Pin 1 Pin 2 Pin 3
3 - wire	+ve Supply -ve Supply +ve Output Ground	Pin 1 Pin 2 Pin 3 Earth Pin	Pin 1 Pin 2 Pin 3 Earth Pin	Red Blue Green Yellow	Pin 1 Pin 2 Pin 3 Earth Pin	Red Blue White Yellow	Pin 1 Pin 2 Pin 3 Pin 4	Pin 1 Pin 2 Pin 3 Pin 4
4 - wire	+ve Supply -ve Supply +ve Output -ve Output	Pin 1 Pin 2 Pin 3 Earth Pin	Pin 1 Pin 2 Pin 3 Earth Pin	Red Blue Green Yellow	Pin 1 Pin 2 Pin 3 Pin 4	Red Blue White Yellow	Pin 1 Pin 2 Pin 3 Pin 4	Pin 1 Pin 2 Pin 3 Pin 4

Associated Products:



[TR150 Handheld Indicator](#)



[T24 Wireless Telemetry Range](#)



[Intuitive4-L Panel-Mount Indicator](#)



[DSC-USB USB Signal Digitiser](#)



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



[FUSION Large Digital Display](#)



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Ordering Codes:

Pi642BLP-BARO-A2AV-00-000	Pi6	42	B	LP	-	BARO	-	A	2	A	V	-	00	-	000
Product Family															
Pi6--B	Pi6		B												
Electrical Output															
42 = 4-20mA (2-wire)		42													
45 = 0.5-4.5Vdc (5V excitation)		45													
05 = 0-5Vdc		05													
010 = 0-10Vdc		010													
16 = 1-6Vdc		16													
Electrical Connection / ATEX Certification															
P = Mini DIN Plug & Socket				P											
LP = Large DIN Plug & Socket				LP											
C = IP65 Cable Gland + Screened, Un-Vented PVC Cable				C											
CS = IP68 Cable Gland + Screened, Vented PUR Cable				CS											
M = M12x1 4-pin Connector				M											
MM = M12x1 4-pin Connector + Mating Half				MM											
BL = 6-pin Bayonet-Lock Mil-Spec Connector				BL											
BLM = 6-pin Bayonet-Lock Mil-Spec Connector + Mating Half				BLM											
Pressure Range															
BARO = 750 to 1250mbar absolute						BARO									
Accuracy (Non-Linearity & Hysteresis)															
A = $\pm 0.25\%/FS$ (standard)								A							
B = $\pm 0.1\%/FS$								B							
Zero Temperature Compensation (TZS)															
2 = $\pm 0.02\%/FS/^{\circ}C$									2						
4 = $\pm 0.04\%/FS/^{\circ}C$									4						
Process Connection															
A = G1/4" Male DIN 3852 in 303 St/Steel											A				
B = G1/4" Male DIN 3852 in 316L St/Steel											B				
C = 1/4" NPT Male 303 St/Steel											C				
D = 7/16 UNF-20 Male											D				
E = G1/4" Female in 303 St/Steel											E				
F = G1/2" Male DIN 3852											F				
G = 1/2" NPT Male											G				
H = F-250-C Autoclave (9/16 UNF Internal)											H				
I = G1/4" Male DIN 3852 in High Grade Duplex St/Steel (UNS31803/SAF2205)											I				
Continued on next page															



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Pi642BLP-BARO-A2AV-00-000	Pi6	42	B	LP	-	BARO	-	A	2	A	V	-	00	-	000
J = G1/4" Male DIN 3852 with Integrated Snubber											J				
K = G1/2" Male DIN 3852 with Integrated Snubber											K				
L = M20 x 1.5 Male											L				
M = G1/8" Male DIN 3852											M				
N = 1/8" NPT Male											N				
O = G3/8" Male DIN 3852											O				
P = G1/4" Male DIN 3852 with 150°C Integrated Cooling Coil											P				
Q = G1/2" Male DIN 3852 with 150°C Integrated Cooling Coil											Q				
R = 1/4" NPT Male 150°C Integrated Cooling Coil											R				
S = 9/16 UNF Internal (no bleed hole)											S				
T = 1/4" NPT Female											T				
U = G1/4" Male DIN 3852 in Hastelloy C276 (MOQ = 10 pieces)											U				
V = G1/4" Male in PEEK (Polyether Ethyl Ketone)											V				
O-Ring Material															
V = Viton (FKM)															V
N = Nitrile (NBR)															N
E = EPDM (Ethylene Propylene Diene Monomer)															E
C = Chemraz (Perfluoroelastomer)															C
Cable Length (in metres)															
00 = None															00
01 = 1 metre															01
Specials Code															
000 = No Special Requirements															000