



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

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<https://appmeas.co.uk>

Pi600DD Pressure Sensor with Display

Key Features:

- Ranges 0-50mbar up to 0-700bar
- Outputs: Volts / mA
- Sealed to IP65
- Accuracy: $<\pm 0.25\%/FS$ (0.1% option)
- 1 or 2 PNP Switch Outputs
- Gauge or Absolute Versions
- 4 Digit Red LED Display
- 1 or 2 Set-Points
- Excellent Chemical and Abrasion Resistance
- Rugged Construction
- UKAS Traceable Calibration Certificate Included (UKAS Laboratory Certificate Optional)
- 3 Year Warranty



The [Pi600DD series of pressure sensors](#) with an integrated display are designed for measurement of gas and liquid pressures where local monitoring and control is required. The Pi600DD provides a local 4-digit readout of the measured pressure in your preferred engineering units. Typical applications include: Hydraulics, Pneumatics, Agriculture, Marine, Sewage, Gas, Medical, Chemical, Food Processing, Barometers.

Pressure ranges between 0-50mbar and 0-700bar are available in gauge or absolute (Minimum absolute range 0-500mbar) models with a wide choice of electrical output signals to meet operational requirements.

Constructed from stainless steel with a ceramic diaphragm (316 Stainless Steel diaphragm below 500mbar), the Pi600DD series of transducers are extremely rugged yet of compact design. As standard a G $\frac{1}{4}$ " male process connection is offered along with a wide variety of alternatives and custom connections can also be provided.

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

Why not take a look at our [battery powered pressure sensor with display](#).

Options:

- Interim Pressure Ranges
- Manufacturing Materials - Manufactured from Different Materials for Different Application, compatibility (316 St/Steel or High Grade Duplex St/Steel)
- Improved Accuracy (NL&H): $<\pm 0.10\%/span$ BFSL
- Improved Accuracy (TZS): $<\pm 0.02\%$ or $<0.01\%/span/^{\circ}C$ (Thermal Zero Shift)
- Supplied with Instrumentation and Calibrated as a complete system with traceable certificate

Applications:

- Hydraulics
- Pneumatics
- Agriculture
- Marine
- Sewage
- Gas
- Medical Technology
- Chemical
- Food Processing
- Barometers



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Specification:

Input Pressure Range						
Nominal Pressure Range	mbar (gauge, absolute or sealed gauge)	50	100	160	250	500
Compound Ranges	bar	-	-	-	-	-
Permissible Overpressure	bar	2	2	2	2	5
* $\lt\pm 0.1\%$ / FS (BFSL) accuracy not possible in this range						

Input Pressure Range													
Nominal Pressure Range	Bar (gauge, absolute or sealed gauge)	1	2	5	10	20	50	100	250	400	600	700	
Compound Ranges	Bar	1...0*	1...2*	1...5	1...9	1..19	1..29	-	-	-	-	-	
Permissible Overpressure	Bar	2	4	10	20	40	100	200	400	650	880	880	
Burst Pressure	Bar	4	5	12	25	50	120	250	500	650	880	880	
* $\lt\pm 0.1\%$ / FS (BFSL) accuracy not possible in this range													

Output Signal & Supply Voltage	Wiring System	Output	Supply Voltage	Input Current	Input Resistance	Output Resistance
Pi642DD	2 - wire	4 - 20 mA	16 - 32 Vdc		<500	<500
Pi6010DD	3 - wire	0 - 10 Vdc	21 - 32 Vdc		<500	<500

Performance		
Accuracy (non-linearity, hysteresis, repeatability)	% Full Scale Output	$\lt\pm 0.25\%$ / FS (BFSL) $\lt\pm 0.1\%$ / FS (BFSL) optional
Zero Balance	$\pm\%$ of Rated Output	<1.0
Setting Errors (offsets)	2-wire, 3-wire	Zero & Full Scale, $\lt\pm 0.5\%$ / FS
Permissible Load	2-wire 3-wire	$R_{max} = [(V_S - V_S \text{ min}) / 0.02] \Omega$ $R_{min} = 10 \text{ k}\Omega$
Influence Effects	Supply Effects Load Effect	Voltage Outputs = $\lt 0.005\%$ FS / 1V 4-20mA = $\lt 0.05\%$ FSO / k Ω
Warm-Up Time (amplified versions only)	ms	2 typ.
Permissible Temperatures & Thermal Effects		
Media Temperature	$^{\circ}\text{C}$	-20 $^{\circ}\text{C}$ to +135 $^{\circ}\text{C}$ (150 $^{\circ}\text{C}$ with integrated cooling element)
Ambient Temperature	$^{\circ}\text{C}$	-20 $^{\circ}$ to +80
Storage Temperature	$^{\circ}\text{C}$	-40 to +125
Compensated Temperature Range	$^{\circ}\text{C}$	+20 to +80
Thermal Zero Shift (TZS)	% / FS / $^{\circ}\text{C}$	$\lt\pm 0.04$ (standard) $\lt\pm 0.02$ (option) $\lt\pm 0.01$ (option)
Thermal Span Shift (TSS)	% output / $^{\circ}\text{C}$	$\lt -0.015\%$ / $^{\circ}\text{C}$
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)



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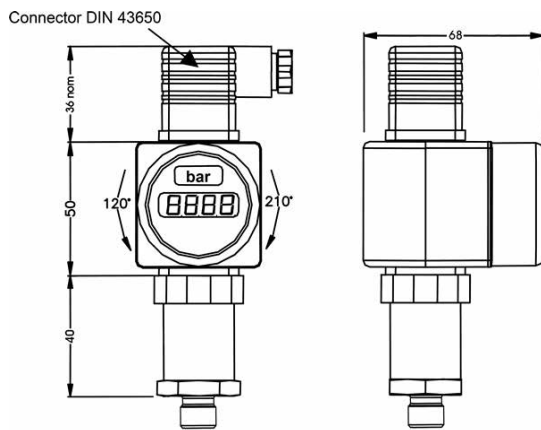
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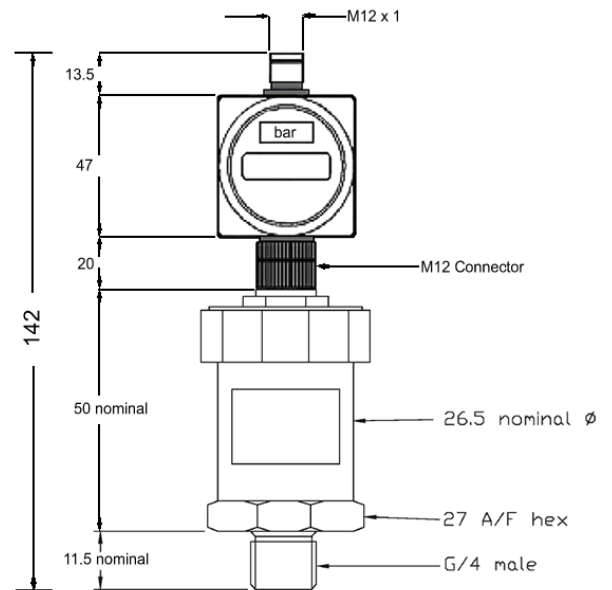
Materials		
Housing & process connection		303 Stainless Steel 316L Stainless Steel (optional) High Grade DUPLEX Stainless Steel UNS S31803 (optional)
'O' ring seals		Viton NBR/Nitrile (optional) EPDM (optional) Chemraz (optional)
Diaphragm		1bar > = Ceramic Al ₂ O ₃ 96 % / <1bar = 316L St/Steel
Media wetted parts		Housing and process connection, 'O' ring seal, diaphragm
Misc		
Weight	grams	Approx... 250
Installation position		Any
Operational Life	Pressure Cycles	> 100 x 10 ⁶
Environmental Protection		IP65 (IP40 on versions below 500mbar)

Dimensions (mm):

DIN Connector Version



M12x1 5-Pin Connector Version



Associated Products:



[FUSION Large Digital Display](#)



[T24 Wireless Telemetry Range](#)



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



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



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Ordering Codes:

Pi642DDL-10barg-A4AV-00-000	Pi6	42	DD	LP	-	10barg	-	A	4	A	V	-	00	-	000
Product Family															
Pi6--DD	Pi6		DD												
Electrical Output															
42 = 4-20mA (2-wire)		42													
010 = 0-10Vdc		010													
Electrical Connection / ATEX Certification															
LP = Large DIN Plug & Socket				LP											
M = M12x1 5-pin Connector				M											
MM = M12x1 5-pin Connector + Mating Half				MM											
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 = <±0.25%/FS (standard)								A							
B = <±0.1%/FS								B							
Zero Temperature Compensation (TZS)															
4 = <±0.04%/FS/°C									4						
2 = <±0.02%/FS/°C									2						
1 = <±0.01%/FS/°C (not available on ranges below 500mbar)									1						
Process Connection															
A = G¼" Male DIN 3852 in 303 St/Steel											A				
B = G¼" Male DIN 3852 in 316L St/Steel											B				
C = ¼" NPT Male 303 St/Steel											C				
D = 7/16 UNF-20 Male											D				
E = G¼" Female in 303 St/Steel											E				
F = G½" Male DIN 3852											F				
G = ½" NPT Male											G				
H = F-250-C Autoclave (9/16 UNF Internal)											H				
I = G¼" Male DIN 3852 in High Grade Duplex St/Steel (UNS31803/SAF2205)											I				
J = G¼" Male DIN 3852 with Integrated Snubber											J				
K = G½" Male DIN 3852 with Integrated Snubber											K				
L = M20x1.5 Male											L				
M = G1/8" Male DIN 3852											M				
N = 1/8" NPT Male											N				
O = G3/8" Male DIN 3852											O				
<i>Continued on next page</i>															



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Pi642DDLp-10barg-A4AV-00-000	Pi6	42	DD	LP	-	10barg	-	A	4	A	V	-	00	-	000
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 with 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
010 = Cleaned for Oxygen Service															006