



USB Pressure Sensor System | Digital | Pa600-USB

UK-Made - Pressure measurement direct to your PC

- **Lead Time:** 3 - 5 days
- **Buy online:** <https://appmeas.co.uk/shop/pressure-sensors/pa600-usb/>



AT A GLANCE

- Ranges: 0-500mbar up to 0-700bar
- Vacuum & Compound Options
- Outputs: USB ASCII Data Stream
- Environmental Protection: IP67
- Accuracy: $<\pm 0.15\%$ /FS
- Gauge, Sealed Gauge or Absolute Reference

Versions

- **UK-Manufactured & Bulk Production Available**
- **Ideal for Both General Purpose and Industrial Applications**
- IP67 Immersible Protection as Standard
- **Monitoring/Data Logging Software Included**
- **Customised Versions**
- **Simple Setup with Custom Process Connections**

DESCRIPTION

Applied Measurements Pa600-USB digital industrial USB pressure sensor is an easy way of getting pressure measurements straight to your PC or laptop. To use you simply need to install the sensor and connect the cable, plug the USB interface DSCUSB into the USB port of your computer or laptop and download the free software to get started.

The pressure sensor itself has a high accuracy of $\pm 0.15\%$ full scale and is extremely compact. It features a high-performance ceramic sensing element and once connected to the USB interface delivers precise pressure measurements with its 24-bit digitisation circuit to a resolution of 1 part in 20,000.

The DSCUSB needs no external power cable as it takes all the power it needs directly from the USB port of your PC or laptop.

The USB Pressure Sensor system is supplied with powerful, user-friendly software which is free to download. It enables real-time monitoring as a displayed value or visually as a live graph whilst simultaneously recording pressure data into a CSV file at rates of up to 100Hz for later review and analysis in your preferred spreadsheet software.

Additionally, the software allows you to change configuration settings including:



- Measurement Units: The standard scaling units (bar) can be changed to psi, kPa, millibar and many others with just a few clicks.
- Sampling Rate: 1Hz to 100Hz is possible, with lower rates offering higher resolution
- Digital Filtering: Allows you to smooth out any unwanted pressure fluctuation from your measurements.

If you have multiple Pa600-USB pressor sensors in use, you can use our DSCLOG24 software (<https://appmeas.co.uk/products/instrumentation/data-logging-software-dsclg24/>) which allows up to 24 channels of measurement.

Each Pa600-USB pressure sensor is supplied in a compact carrying case with its USB interface module and connecting cables along with a UKAS traceable calibration certificate.

TECHNICAL SPECIFICATIONS

Input Pressure Range													
Nominal Pressure Range	Bar (gauge, absolute or sealed gauge)	0-0.5	0-1	0-2	0-5	0-10	0-20	0-50	0-100	0-250	0-400	0-600	0-700
Compound Ranges	Bar	-	-1...0 *	-1...+2 *	-1...+5	-1...+9	-1...+19	-1...+29	-	-	-	-	-
Permissible Overpressure	Bar	1	2	4	10	20	40	100	200	400	575	800	800
Burst Pressure	Bar	2	4	5	12	25	50	120	250	500	650	950	950

* $\pm 0.1\% / FS$ (BFSL) accuracy not possible in this range

Output Signal & Supply Voltage	Wiring System	Output	Supply Voltage	Input Current
Pa600-USB	USB	ASCII Data Stream	5Vdc (via USB port)	<math>< 75\text{mA}</math>

Performance		
Accuracy (non-linearity, hysteresis, repeatability)	% Full Scale Output	<math>< \pm 0.15</math> (BFSL) <math>< \pm 0.1</math> (BFSL) optional
Sampling Rate	Hz	1-100 (user selectable)
Measurement Units	-	bar (default), psi, mbar, kPa, Pa, MPa, torr, kgf/cm2 (user selectable)

Permissible Temperatures & Thermal Effects		
Media Temperature	°C	-40 to +135
Ambient Temperature	°C	-20 to +85
Storage Temperature	°C	-20 to +85
Compensated Temperature Range	°C	+20 to +80
Thermal Zero Shift (TZS)	% / FS / °C	<math>< \pm 0.02</math> typical
Thermal Span Shift (TSS)	% output / °C	<math>< -0.015</math>

Electrical Protection	
Electromagnetic Compatibility	CE Compliant

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)

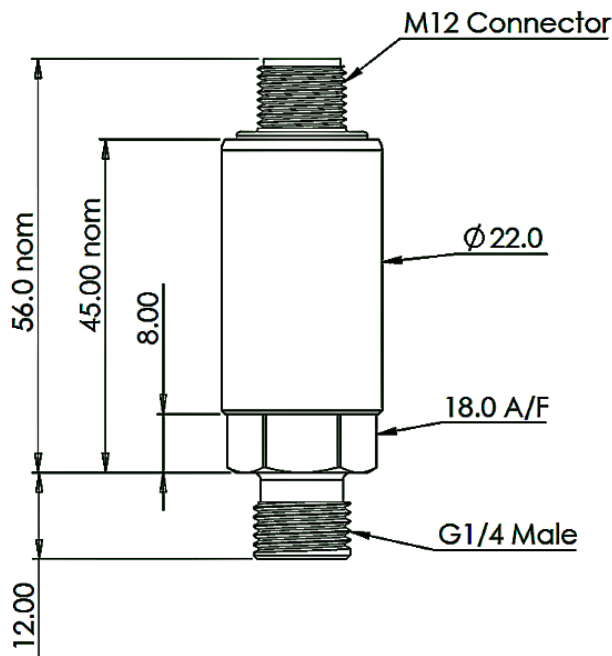


Materials	
'O' ring seals	Viton NBR/Nitrile (optional) EPDM (optional) Chemraz (optional)
Diaphragm	Ceramic Al2O3 96 %
Media wetted parts	Housing and process connection, 'O' ring seal, diaphragm

Misc		
Weight	grams	100 nominal
Installation position		Any
Operational life	pressure cycles	> 100 x 10 ⁶
Environmental Protection		Gauge Reference ≤ 50bar : IP65 / Absolute, Sealed Gauge or >50bar Range : IP67
Software Compatibility		MS Windows 7, 8, 8.1, and 10
Sensor Cable Assembly Length	metres	1.5 (standard) / 5 (optional)

Product Dimensions

USB Pressure Sensor Pa600-USB Outline



All dimensions are in mm

ORDERING CODES & OPTIONS

Pa600U-10barg-A2AV-1.5-000	Pa6	00U	-	10barg	-	A	2	A	V	-	1.5	-	000
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Pa600U-10barg-A2AV-1.5-000	Pa6	00U	-	10barg	-	A	2	A	V	-	1.5	-	000
Product Family													
Pa6	Pa6												
Electrical Output													
00U = USB		00U											
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 = $\pm 0.15\%/FS$ (standard)						-	A						
B = $\pm 0.1\%/FS$						-	B						
Zero Temperature Compensation (TZS)													
2 = $\pm 0.02\%/FS/^{\circ}C$								2					
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				
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)													
1.5 = 1.5 metres											-	1.5	
05 = 5 metres											-	05	
Specials Code													
000 = No Special Requirements												-	000

RELATED PRODUCTS & SERVICES



Low Cost Process Meter
| Panel Mount |
Intuitive-Lite4-P
(<https://appmeas.co.uk/products/instrumentation/low-cost-process-meter-il4-p/>)



Universal Process Input
Digital Indicator |
Intuitive4-P
(<https://appmeas.co.uk/products/instrumentation/universal-process-input-digital-indicator-int4-p/>)



Handheld Load Cell
Indicator | Digital
Display | TR150
(<https://appmeas.co.uk/products/instrumentation/tr150-digital-handheld-load-cell-indicator/>)



Wireless Telemetry for
Load Cells, Strain Gauge
Sensors & Transducers
(<https://appmeas.co.uk/products/instrumentation/t24-wireless-telemetry/>)



USB Load Cell Interface
| USB Strain Gauge
Digitiser |...
(<https://appmeas.co.uk/products/instrumentation/usb-load-cell-interface-strain-gauge-digitiser-dscusb/>)

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