



Low Range Digital Pressure Sensor | USB | Pa600-USB-LR

Low range pressure measurement direct to your PC via USB

- **Lead Time:** 5 - 7 days
- **Buy online:** <https://appmeas.co.uk/shop/pressure-sensors/pa600-usb-lr/>



AT A GLANCE

- Ranges: 0-25mbar up to 0-450mbar
- Gauge Reference
- Outputs: USB ASCII Data Stream
- Environmental Protection: IP67
- Accuracy: $<\pm 0.15\%/FS$

- **Simple Setup with Custom Process Connections Ideal for Low Range Pressure Applications**
- **IP67 Immersion-Proof Protection**
- **Bulk Production Available**
- **Customised Versions**

DESCRIPTION

Applied Measurements digital low range pressure sensor Pa600-USB-LR enables pressure measurements to be sent directly to your PC or laptop via the USB interface. Simply install the sensor, 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 software is user-friendly and free to download and allows real-time monitoring and simultaneous recording of the pressure data to a CSV file for analysis, of up to 100Hz. The USB interface (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 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 up to 1 part in 20,000 depending on the chosen data acquisition rate.

Additionally, the Toolkit 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.

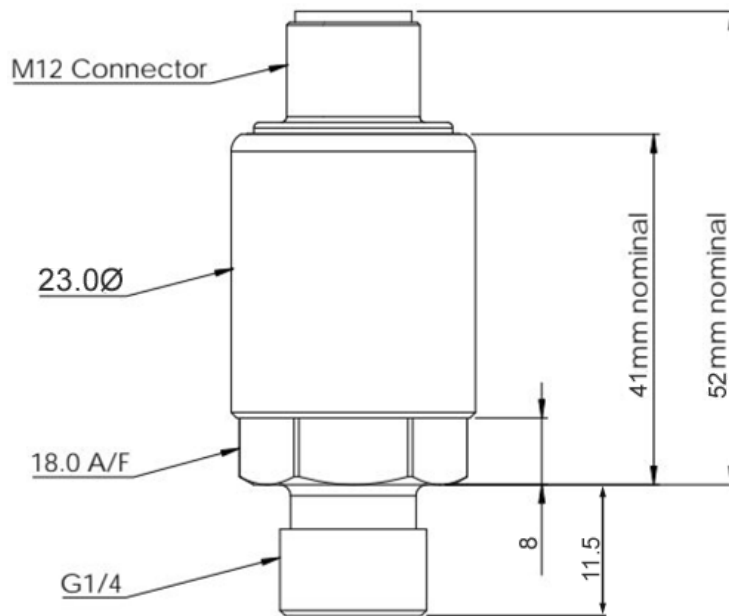
If you have multiple digital pressure sensors in use, you can use our DSCLOG24 software which allows up to 24 channels of measurement.



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

TECHNICAL SPECIFICATIONS

Digital Low Range Pressure Sensor Pa600-USB-LR Outline



Input Pressure Range							
Nominal Pressure Range	mbar gauge	0 - 25	0 - 50	0 - 100	0 - 200	0 - 300	0 - 450
Compound Ranges	mbar	-25...+25*	-50...+50*	-100...+100*	-200...+200	-300...+300	-450...+450
Permissible Overpressure	mbar	100	100	300	300	550	1000
Burst Pressure	Bar	0.2	0.2	0.6	0.6	1	2
* $\pm 0.1\% / FS$ (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	mbar (default), psi, bar, kPa, Pa, MPa, torr, kgf/cm ² (user selectable)

Permissible Temperatures & Thermal Effects		
Media Temperature	°C	-40 to +125



Permissible Temperatures & Thermal Effects		
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	<±0.02 typical
Thermal Span Shift (TSS)	% output / °C	<-0.015

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)
'O' ring seals		Viton NBR/Nitrile (optional) EPDM (optional) Chemraz (optional)
Diaphragm		316L Stainless Steel
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 106
Environmental Protection		IP67
Software Compatibility		MS Windows 7, 8, 8.1, and 10
Sensor Cable Assembly Length	metres	1.5 (standard) / 5 (optional)

ORDERING CODES AND OPTIONS

Pa600ULR-25mbarg-A2AV-1.5-000	Pa6	00ULR	-	25mbarg	-	A	2	A	V	-	1.5	-	000
Product Family													
Pa6	Pa6												
Electrical Output													
00U = USB		00ULR											
Pressure Range													
25mbarg = 0 to 25mbar gauge			-	25mbarg									



Pa600ULR-25mbarg-A2AV-1.5-000	Pa6	00ULR	-	25mbarg	-	A	2	A	V	-	1.5	-	000
M50P50barg = -50 to +50mbar gauge			-	M50P50barg									
3psig = 0 to 3psi gauge			-	3psig									
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
[\(https://appmeas.co.uk/products/instrumentation/low-cost-process-meter-il4-p/\)](https://appmeas.co.uk/products/instrumentation/low-cost-process-meter-il4-p/)



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



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



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



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

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