



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

<https://appmeas.co.uk>

Pa600-USB Digital Industrial Pressure Sensor

Key Features:

- Ranges 0-500mbar up to 0-700bar + Vacuum & Compound Options
- USB Powered
- Sealed to IP67
- Accuracy: $<\pm 0.15\%$ /FS
- Gauge, Sealed Gauge or Absolute Reference Versions
- Excellent Chemical and Abrasion Resistance
- Quick & Easy to Use
- Up to 100Hz Sampling / Logging Rate
- UKAS Traceable Calibration Certificate Included
- 3 Year Warranty
- Free Downloadable Software
- Supplied in Smart Carry Case - Sensor, USB Interface + 1.5m Cable



The Pa600-USB brings simple, flexible, fast and fuss-free pressure measurement to any modern PC or Laptop; install the sensor, connect the cable, plug the USB interface into your computer, install the free software and you're ready to start taking accurate pressure measurements!

The pressure sensor itself is very compact and utilises a high performance ceramic sensing element, this is then teamed with a high stability USB digitiser which features a 24-bit digitisation circuit to provide precise and accurate measurements with resolution of up to 1 part in 20,000. Everything is powered via the USB port so no external power supply is required.

Easy-to-use and powerful Toolkit software is provided as a free download and allows you monitor readings in real time, either as a display value or 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.

You can also take measurements from multiple Pa600-USB pressure sensors simultaneously using a separate piece of software called DSCLOG24. As the name suggests it provides up to 24 channels of measurement, giving a live display of the reading from each sensor along with the ability to log the data to a CSV file.

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.



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

<https://appmeas.co.uk>

Pa600 USB Pressure Sensor with DSCUSB



USB Pressure Sensor & DSCUSB in Carry-Case



Options:

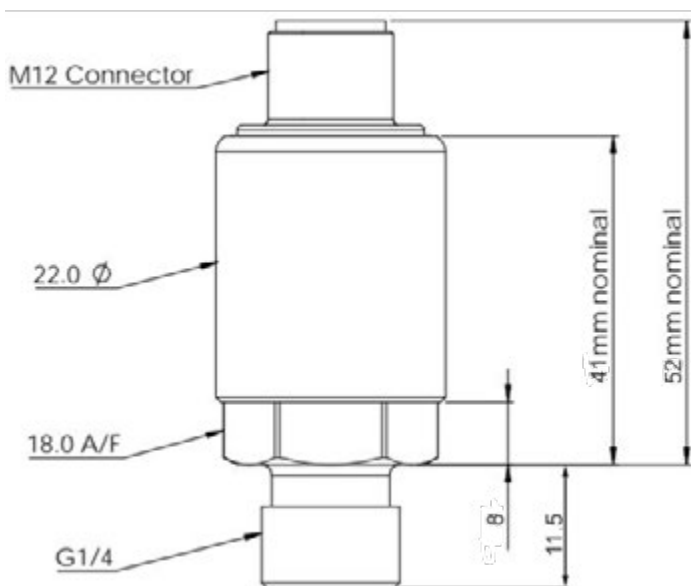
- Interim & Custom Pressure Ranges
- 316L Stainless Steel Case
- UKAS Accredited Calibration Certificate

Applications:

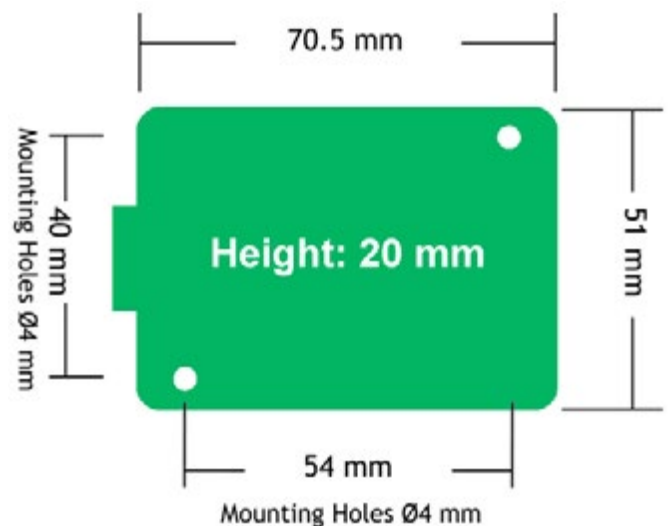
- Hydraulics
- Research & Development
- Food Processing
- Plant and Machine Engineering
- Energy Industry
- Environmental Engineering (Water/Sewage/Recycling)
- Medical Technology
- Meteorology
- Lab Research
- Aerospace Testing

Dimensions (mm):

Pa600-USB



DSCUSB





APPLIED MEASUREMENTS LTD.

Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

<https://appmeas.co.uk>

Specification:

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
* $\leq \pm 0.1\%$ / 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)			<75mA					
Performance													
Accuracy (non-linearity, hysteresis, repeatability)		% Full Scale Output			< ± 0.15 (BFSL) < ± 0.1 (BFSL) optional								
Sampling Rate		Hz			1-100 (user selectable)								
Measurement Units		-			bar (default), psi, mbar, kPa, Pa, MPa, torr, kgf/cm ² (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			< ± 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					Ceramic Al ₂ O ₃ 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 \leq 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)								



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

<https://appmeas.co.uk>

DSCUSB Toolkit - Supplied as Standard

Key Features:

- Free DSCUSB strain gauge to USB converter toolkit software
- View Live Data from One DSCUSB Device
- Allows PC-Based Calibration
- Configure Channels, Communication Settings, Title & Descriptions
- Allows Saving of Settings
- Log Data to CSV file for Spreadsheet Import
- Works With ASCII or MantraBus Protocols & USB Versions
- FREE to Download

The DSCUSB Toolkit is supplied free of charge when buying a DSCUSB and can be easily downloaded from our website. It is designed for the connection of a single DSCUSB. The data from the pressure sensor can be extracted then read on a PC.

The DSCUSB toolkit allows PC-based configuration, calibration, data review, parameter management and recording of the DSCUSB.

PC-based calibration of the USB pressure sensor interface is very easy to perform using the DSC-USB Toolkit software. The pressure sensor signal can be read directly from the sensor or input numerically using the figures from the pressure sensor calibration certificate. Other features includes linearization and temperature compensation.

The free Toolkit software also features a data logging function that allows the user to log data to a spreadsheet compatible CSV file at rated up to 100Hz.

If you require more than one channel of data logging, we can also supply the DSCLog24 which provides up to 24 channels of live monitoring and data logging (see next page for details).





DSCLOG24 Free Downloadable Software (Optional for Multi-Channel Setups)

Key Features:

- View Live Data from up to 24 DSCUSB Devices
- Configure Channels, Communication Settings, Title & Descriptions
- Allows Saving of Settings
- Log Data to CSV file for Spreadsheet Import
- Works With ASCII or MantraBus Protocols & USB Versions
- FREE Downloadable Software

The FREE downloadable DSCLOG24 software enables up to 24 channels of data to be viewed and logged to a CSV file for MS Excel and other spreadsheet and data analysis programs.

The software allows you to configure the main title, number of channels, the communication settings for each individual channel and the channel descriptions to make it easier for you and your specific application. In addition, these settings can be stored on the software ready to be loaded at any time.

The DSCLOG24 software allows you to log the data at timed intervals which can be easily adjusted as required. This data can be logged to a CSV file for viewing and data manipulation in MS Excel, allowing you to create reports and develop custom projects to suit your needs.

Log Data to CSV File for Easy Viewing and Manipulation in MS Excel:

Date	Time	Elapsed ms	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8	Channel 9	Channel 10	Channel 11	Channel 12
29/06/2016	15:53:52	1021	-0.045	-0.067	-0.045	-0.045	-0.045	-0.031	-0.045	-0.045	-0.045	-0.045	-0.001	-0.045
29/06/2016	15:53:53	2030	-0.030	-0.06	-0.024	-0.024	-0.024	-0.01	-0.024	-0.024	-0.024	-0.024	0.02	-0.024
29/06/2016	15:53:54	3142	-0.009	-0.03	-0.009	-0.009	-0.009	0.004	-0.01	-0.01	-0.01	-0.01	0.034	-0.01
29/06/2016	15:53:55	4228	-0.018	-0.041	-0.019	-0.019	-0.019	-0.005	-0.012	-0.012	-0.012	-0.012	0.033	-0.012
29/06/2016	15:53:56	5341	-0.024	-0.046	-0.024	-0.025	-0.025	-0.011	-0.025	-0.025	-0.025	-0.025	0.02	-0.025
29/06/2016	15:53:58	6549	-0.033	-0.054	-0.033	-0.033	-0.033	-0.018	-0.032	-0.032	-0.032	-0.032	0.013	-0.032
29/06/2016	15:53:59	7598	-0.03	-0.052	-0.03	-0.03	-0.03	-0.016	-0.03	-0.03	-0.03	-0.03	0.014	-0.03
29/06/2016	15:54:00	8703	-0.03	-0.052	-0.03	-0.031	-0.031	-0.016	-0.031	-0.031	-0.031	-0.031	0.014	-0.031
29/06/2016	15:54:01	9759	-0.035	-0.057	-0.035	-0.035	-0.035	-0.021	-0.036	-0.036	-0.036	-0.036	0.009	-0.036
29/06/2016	15:54:02	10862	-0.045	-0.067	-0.045	-0.045	-0.045	-0.031	-0.045	-0.045	-0.045	-0.045	-0.001	-0.045
29/06/2016	15:54:03	11896	-0.046	-0.067	-0.046	-0.046	-0.046	-0.031	-0.046	-0.046	-0.046	-0.046	-0.001	-0.046

Screenshot of a 12 channel report in MS Excel.

The DSCLOG24 software enables you to log the data to a CSV file for import into MS Excel and other spreadsheet and data analysis programs for evaluation and manipulation as required.

Here you can create reports and graphs for you and/or your customers and also develop custom projects.



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

<https://appmeas.co.uk>

Configurations Options to Suit Your Application:

Main title can be customised.

Adjustable number formatting to suit your preferred resolution.



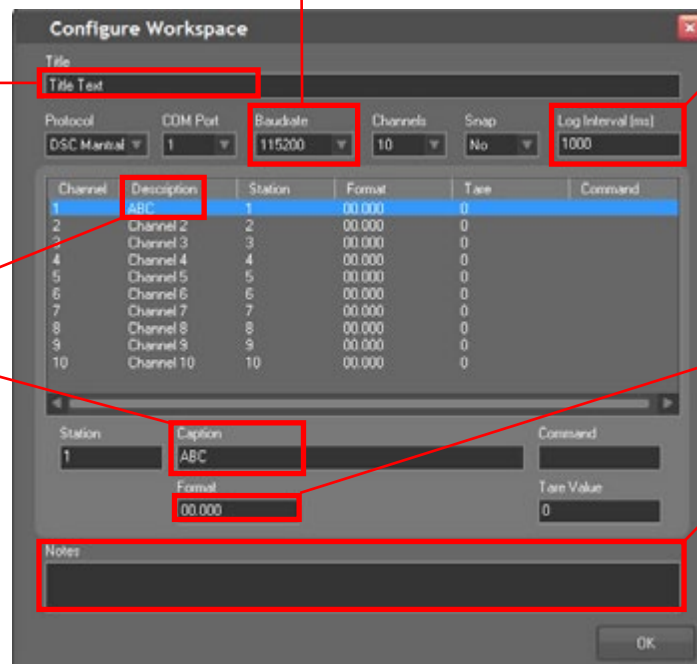
Number of channels can be adjusted (up to 24) to suit your application.

Channel description can be tailored to match your requirements.

You can configure your workspace even further!

Baudrate can be set for individual channels ranging from 9600 to 460800.

Log Intervals allows you to adjust the period between data capture.



Channel descriptions enable you to quickly and easily identify individual channels of data.

Additional detailed notes can be added if required.

All these settings can be saved and loaded at any time.



APPLIED MEASUREMENTS LTD.

Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

<https://appmeas.co.uk>

Ordering Codes:

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/°C							2						
Process Connection													
A = G $\frac{1}{4}$ " Male DIN 3852 in 303 St/Steel								A					
B = G $\frac{1}{4}$ " Male DIN 3852 in 316L St/Steel								B					
C = $\frac{1}{4}$ " 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