



bar

AGD4200HUSB

Digital Pressure Transmitter for Hydrogen



FEATURES

- Compatible for use within Hydrogen based environments
- Sample rate software selection up to 1,000 Hz
- Silicon-on-Sapphire pressure sensor technology
- Pressure ranges from vacuum to 5,000 bar
- Free USB® downloadable software with auto update
- Measure & record up to 16 pressure inputs together
- Create customised test certificates
- Automatic temperature compensation
- Support for easy integration with applications created by C#, VB, Labview and Excel VBA (api dll library)
- 2m lead & carry case included



Materials used in the manufacture of the Hydrogen range have been tested based on ISO 11114-2:2017 in accordance to the European Regulations EC 79/2009 and EU 406/2010 to determine an „embrittlement index“ of the material when placed in a saturated environment over an extended period of time.

Results have provided a Pass rating to the compatibility of the specialist Titanium Alloy of the range against Hydrogen.

SPECIFICATIONS (DYNAMIC AGD4200HUSB DIGITAL PRESSURE TRANSMITTER)

The AGD4200HUSB digital pressure transmitter offers reliable and accurate pressure measurement from vacuum to 5000 bar. It is specifically designed to measure, analyse and record pressure directly to your PC without the need of costly I/O interface board. The easy „plug and play“ nature of the unit allows the user to easily download the free USB software and view live pressure data in as little as 10 minutes.

The unique Silicon-on-Sapphire sensor technology provides outstanding performance and gives excellent stability over a wide temperature range. Excellent measurement accuracy provides high resolution with a precision greater than 1 in 10,000. Ten pressure ranges have been carefully selected to enable the user to cover any pressure that the application requires, from vacuum up to 5,000 bar, via the use of the USB digitally self-scaling software.

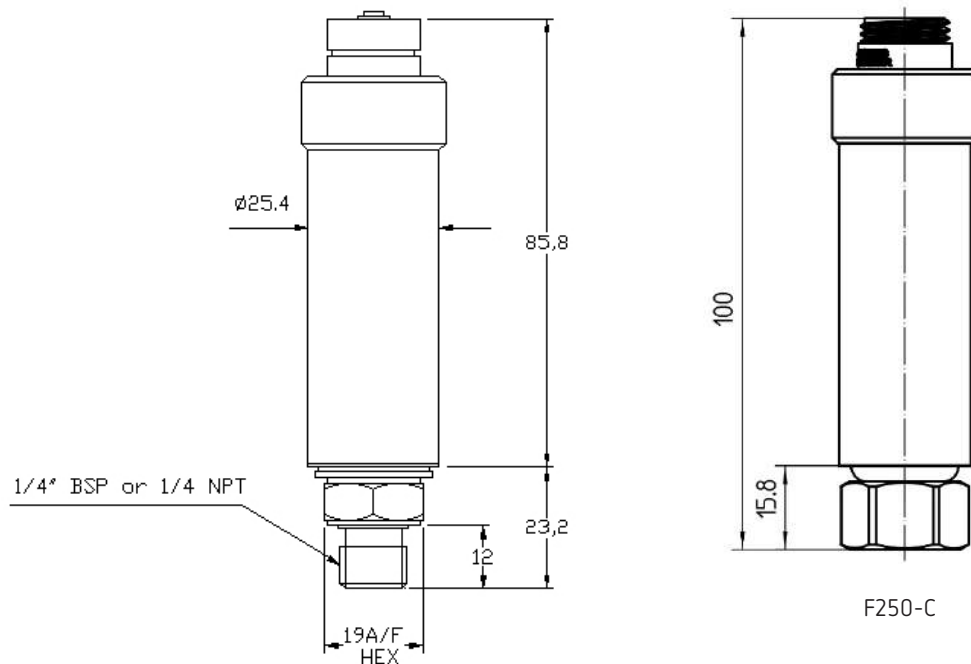
Each unit is supplied with 2m USB lead (rated to IP68), and a convenient carry case.

Typical applications include:

- Test and Measurement
- Laboratory or process measurement
- Leak testing and continuous monitoring



DIMENSIONS (in mm)



ELECTRICAL CONNECTIONS

- USB Mini B Socket

USB-SOFTWARE (DYNAMIC GD4200H-USB DIGITAL PRESSURE TRANSMITTER)

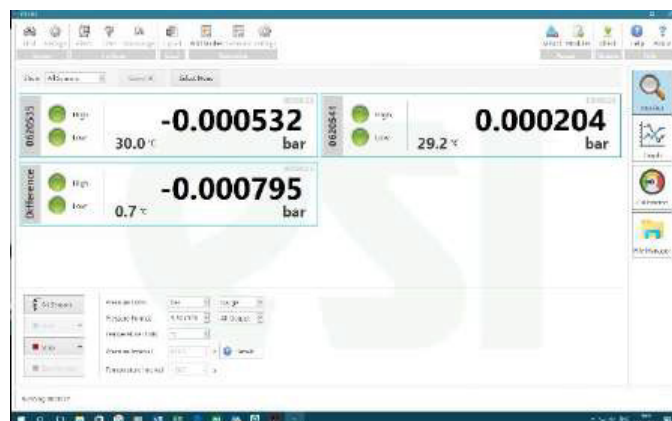
Data is presented on the PC via the USB fully configurable Windows Interface software. It has instant connection with auto-detection, and will configure automatically with your desktop, laptop or Windows tablet via USB protocol. The sample rate enables dynamic pressures to be measured with up to 21 bit resolution at user selectable speeds up to 1,000 Hz.

For real-time analysis, data transferred to the PC is achieved without loss of accuracy or bandwidth. Compatible with computers with USB 2.0/3.x type A ports, the USB interface configuration and analysis software runs on Windows 8, 10 and 11. Data can be displayed in graphical or tabular form, with a choice of pressure units and fully adjustable scales. Data can be saved to a file or exported to Excel/PDF.

The USB software has many features including custom certificate generation, customisable certificate templates, leak testing, record and view up to 16 sensors at

the same time, virtual differential pressure measurement, set automatic test start and stop times, and alarm levels for each individual sensor. Excellent measurement accuracy provides high resolution with a precision greater than 1 in 10,000.

Each unit requires free download of the USB software and is supplied with 2m USB lead, with an option 4.5m lead also available.





■ HYDROGEN COMPATIBILITY AND SILICON- ON- SAPPHIRE ((DYNAMIC GD4200H-USB DIGITAL PRESSURE TRANSMITTER)

The Hydrogen pressure transmitters are turned from a special titanium alloy for the measuring cell and the wetted parts from a single piece of titanium. Thus the sensor is manufactured without seals, high pressure cells from 1000 bar are , which helps to avoid any weak points. This is especially important for the use with hydrogen due to the embrittling qualities of the media. Our materials have successfully passed the hydrogen compatibility testing based on ISO1114-2:2017 in accordance with the European regulations EC 79/2009 and EU 406/2010.

The combination of titanium sensing elements with SOS sensors has a long tradition, this material choice allows the construction of a long term stable sensor that has a high accuracy. Our measurement ranges up to 5000 bar which makes this transmitter the preferred choice for use on hydrogen storage tanks and pipelines. An additional offer of the same technology for low pressures and also in vacuum measurement applications is also available.

Each Hydrogen approved unit also includes a certificate of conformity verifying Hydrogen compatibility.

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TECHNICAL DATA

Type	AGD4200HUSB	
Sensor Technology:	Silicon-on-Sapphire (SOS)	
Output Signal:	USB 2.0 compatible	
Supply Voltage:	5 Vdc via USB bus	
Pressure Reference:	Gauge (default); Absolute reference input by user	
Standard Pressure Ranges (bar):	-1 to 2.5 bar; 0-16 bar; 0-100 bar; 0-400 bar; 0-1000 bar; 0-1500 bar; 0-2000 bar; 0-4000 bar; 0-5000 bar	
Standard Pressure Ranges (other):	User selectable for psi and other measurement units	
Overpressure Safety:	2x up to 400 bar; 1.5x for 1,000 bar; 1.1x for 1,500 bar; 1.5x for 2,000 bar; 1.25x for 4,000 bar; 1.2x for 5,000 bar	
Accuracy NLHR:	Ranges to 3,000 bar: $\leq \pm 0.15$ % of span BFSL	Ranges above 3,000 bar: $\leq \pm 0.35$ % of span BFSL
Sample Rate:	User selectable to 1,000 samples per second (1,000 Hz) Resolution: 21 bits for ≤ 5 Hz; 16 bits for $> 5 - 1,000$ Hz	
Operating Ambient Temperature:	-20 °C to +85 °C (-4 °F to +185 °F)	
Operating Media Temperature:	-50 °C to +125 °C (-58 °F to +257 °F)	
Storage Temperature:	+5 °C to +40 °C (+41 °F to +104°F) Recommended Best Practice	
Temperature Effects:	± 1.5 %FS total error band for -10 °C to +80 °C. Typical thermal zero and span coefficients ± 0.015 %FS/ °C	
Electromagnetic Compatibility:	EN61326-1, EN61326-2-3 (Laboratory equipment)	
Wetted Parts:	Titanium alloy	
Pressure Media:	All fluids compatible with titanium alloy	
Pressure Connection:	1/4" BSP male (G1/4); 1/4" NPT male or F250-C (Autoclave)	
Electrical Connection:	Standard version supplied with USB mini B to USB A 2m cable Heavy Duty version supplied with MIL-26482-1 8-4P to USB A 2m cable	
Software Compatibility:	Windows 8 8.1 10 11	
Net. Weight (Kg):	0.4 Kg	



ORDER MATRIX

Output	Type	Electrical Connection	Pressure Range	Process Connection
Dynamic (1000 Hz)	AGD4200HUSB			
Electrical Connection				
USB Mini B				
MIL-26482-1 8-4P		B		
Pressure Range				
-1 to 2.5 bar		02.5		
0-16 bar		0016		
0-100 bar		0100		
0-400 bar		0400		
0-1000 bar		1000		
0-1500 bar		1500		
0-2000 bar		2000		
0-3000 bar		3000		
0-4000 bar		4000		
0-5000 bar		5000		
Process Connection				
1/4" BSP male (G1/4)				AB
1/4" NPT male				AM
Autoclave F-250-C female (for pressures above 1500 bar)				DE
Order Number Example		AGD4200-USB1500AB		
For options not listed please contact the sales team				

DISCLAIMER: We reserve the right to change specifications without prior notice. specifications without prior notice. All manufactured products are calibrated with precision calibration equipment that is traceable to national measurement standards.