



Product Highlights:

- Pressure ranges from 2.5 up to 5,000 bar
- Accuracy $<\pm 0.15\%$
- Media temperature measurement data
- Titanium wetted parts, high corrosion resistance
- Sample rate up to 1 kHz, user selectable
- USB 2.0 Interface to PC / Laptop
- User friendly software with reporting, data logging and creation of test certificates
- Choice of mechanical connections
- Fully temperature compensated
- Integrates with C#, VB, Labview, Excel VBA (api dll library)
- Complete kit with 2m USB cable & robust plastic carry case

Applications include, but not limited to:

- Laboratory & Research testing
- Hydraulic & Pneumatic pressure logging
- Medical testing / prototyping
- Autoclave / Steriliser validation
- Hydraulic network analysis
- Pressure surge detection
- Leak testing
- Test & Measurement
- Pump & Compressor monitoring
- Bilge pump servicing
- Aerospace test and research
- Automotive component testing
- Academic research

Description:

The UPS-HSR has been designed and developed for ease of use, reliable data collection and real time monitoring, to cover the majority of applications where a simple interface to a computer is required. Without the fuss of complicated interfaces, converters, external power supplies and USB driver issues, the UPS-HSR interface is simply a USB cable that powers the pressure sensor, self installs on the computer and has automatic recognition of the sensors that connect to the software.

Each UPS-HSR is supplied with a USB mini B socket, when properly connected to the supplied mating cable assembly with USB connection it provides IP66 protection to the pressure sensor which is ideal if you are installing the pressure sensor in wet or arduous conditions. Power is provided to the sensor from the computer's USB port so no additional connections are required. The USB cable is 2m in length as standard, or alternatively this can be extended if required.

Using the software, the sample rate can be adjusted to suit the requirements of the application, from a high sample rate capability of 1kHz for dynamic applications to slower rates for static applications.

The software includes a 'Certificate Generator' which enables the user to upload their company logo, enter details about the test, site location, date and add a signature. Whilst running the test in certificate generator mode, markers can be placed along the graph for reporting on significant events or points of interest. Once the test is complete you can freely print the certificates or export the data to excel or other spreadsheet/database program.

In addition to the pressure measurement, the temperature can also be read and recorded in the software and scaled in either °C or °F.

Every UPS-HSR is supplied in a robust ABS plastic carry case and comes complete with the software and interface USB cable so you are ready to plug & play.

The sensing technology used in the UPS-HSR is Silicon-On-Sapphire (SoS), which produces outstanding performance, stability, repeatability and thermal stability. This level of accuracy enables the UPS-HSR to provide resolution with a precision of 1 in 100,000. With a wide range of pressures from -1 bar (-14.5 psi) through to 5,000 bar (72,500 psi), this device should cover every pressure measurement requirement in a multitude of applications. Other engineering units can be selected by using the software such as bar, mbar, psi, MPa, Pa, mH₂O, mmHg, atm or kg/cm².

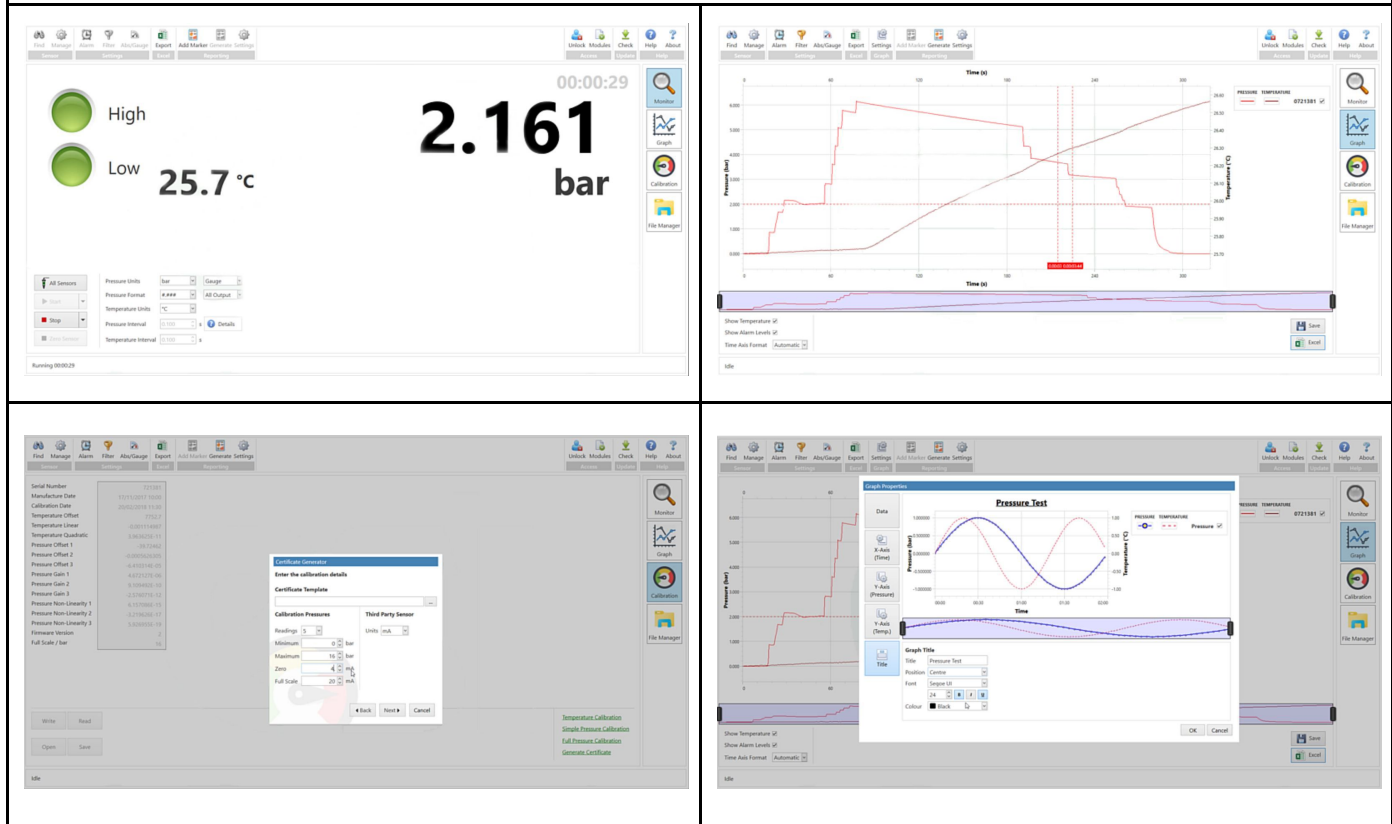
Media compatibility is enhanced due to the wetted parts being constructed from Titanium Alloy, this gives the UPS-HSR excellent corrosion resistance, lightweight and the ability to withstand extreme temperatures. There is a choice of G1/4" male or 1/4" NPT male pressure connections for pressures up to 1500 bar, and thereafter it is an Autoclave Engineers F-250-C female pressure connection. For alternative connections a wide range of adaptors can be provided to suit.

Specification:

UPS-HSR		
Sensor technology	Silicon-on-Sapphire (SoS)	
Output	USB 2.0 compatible	
Supply voltage	5V dc (from USB port)	
Pressure reference	Sealed Gauge (standard), Absolute (selectable in the software)	
Pressure ranges	Standard High range	-1 to 2.5 bar; 0-16 bar; 0-100 bar; 0-400 bar; 0-1,000 bar; 0-1,500 bar; 0-2,000 bar; 0-4,000 bar, 0-5,000 bar
Engineering units	bar, mbar, psi, MPa, Pa, mH ₂ O, mmHg, atm, kg/cm ²	
Safe over pressure	1.5x up to 1,000 bar; 1.2x for up to 5,000 bar;	
Accuracy (NL&H)	≤ ±0.15 % of span BFSL	
Sampling 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	
Ambient temperature	-20 °C to +85 °C (-4 °F to +185 °F)	
Media temperature	-50 °C to +125 °C (-58 °F to +257 °F)	
Storage temperature	+5 °C to +40 °C (+41 °F to +104°F)	
Temperature effects	±1.5 %FS total error band for -10 °C to +80 °C. Typical thermal zero and span coefficients ±0.015 %FS/ °C	
Media wetted parts	Titanium alloy	
Permissible media	All fluids compatible with titanium alloy	
Electrical connection	Mating to USB mini B socket for cable connection to PC. Supplied with 2m USB lead rated to IP66 as standard.	
Pressure connection	≤1500 bar >1500 bar	1/4" BSP male (G1/4); 1/4" NPT male F250-C (Autoclave)
Electromagnetic compatibility	EN61326-1, EN61326-2-3 (Laboratory equipment)	
Software compatibility:	Windows 7, Windows 8, Windows 8.1 and Windows 10	
Application compatibility	C#, VB, Labview and Excel VBA (api dll library)	

Software:

You can download the software free of charge from the website.



Below are some features of the software:

- ☐ Monitor in real time
- ☐ Data log and select desired data for monitoring and analysis
- ☐ Set alarm levels
- ☐ Up to 21 bit resolution
- ☐ Adjustable sampling rate up to 1kHz
- ☐ Automatic software version update
- ☐ Adjustment of engineering units for both pressure and temperature readings
- ☐ Automatic detects number of sensors and range of sensors connected
- ☐ Create customised test reports and certificates
- ☐ Data presented in graphical or tabular format
- ☐ Data & configuration saved or exported to Excel spreadsheets & other database software or PDF
- ☐ Option to calibrate sensor, tare any zero offsets and generate calibration certificates

Part Numbering system:

UPS-HSR Dynamic Pressure Transmitter with USB interface	UPS-HSR	-	X	X	X	X	X	-	X
Pressure Range									
-1 to 2.5 bar			B	0	2	P	5		
0-16 bar			B	0	0	1	6		
0-100 bar			B	0	1	0	0		
0-400 bar			B	0	4	0	0		
0-1,500 bar			B	1	5	0	0		
0-2,000 bar			B	2	0	0	0		
0-4,000 bar			B	4	0	0	0		
0-5,000 bar			B	5	0	0	0		
Pressure Connection									
G1/4" male, pressures ≤1500bar									G
1/4" NPT male, pressures ≤1500bar									N
Autoclave F-250-C female, pressures ≥1500bar									F

Example: UPS-HSR-B0400-N

Model: UPS-HSR

Pressure Range: 0 - 400 Bar

Pressure Connection: ¼" NPT male

Accessory: Free PC software, USB to Mini USB cable and robust carry case included as standard.

