

esi

GENSPEC® GD4200-USB Digital Pressure Transmitter

- Pressure ranges from vacuum to 5,000 bar
- Sample rate software selection up to 1,000 Hz
- Silicon-on-Sapphire pressure sensor technology
- Free ESI-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



The award winning GD4200-USB digital pressure transmitter is facilitated by the ESI-USB® Windows interface software, giving the user full control of the monitoring, recording, and analysis of pressure data.

The digitally self scaling software provides accurate, high resolution measurement at a precision greater than 1 in 10,000 and is compatible with Windows 8 | 8.1 | 10 | 11.

Specifications

The **GENSPEC Dynamic GD4200-USB** 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 boards. The easy "plug and play" nature of the unit allows the user to easily download the free ESI-USB© software and view live pressure data in as little as 10 minutes.

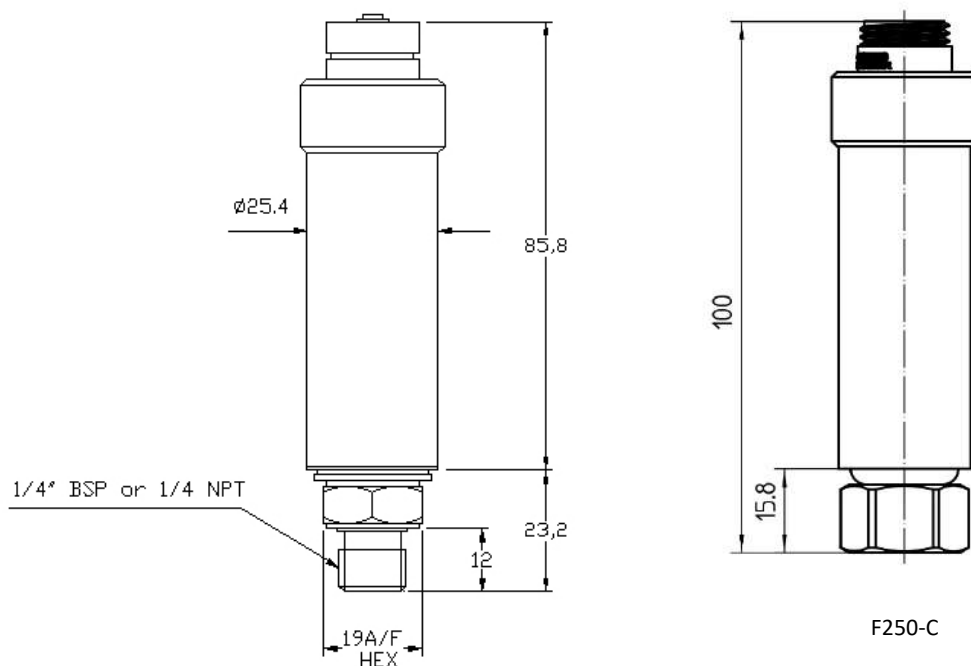
The unique Silicon-on-Sapphire sensor technology provides outstanding performance and gives excellent stability over a wide temperature range. Excellent measurement accuracy provides high resolution with a precision greater than 1 in 10,000. Ten pressure ranges have been carefully selected to enable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

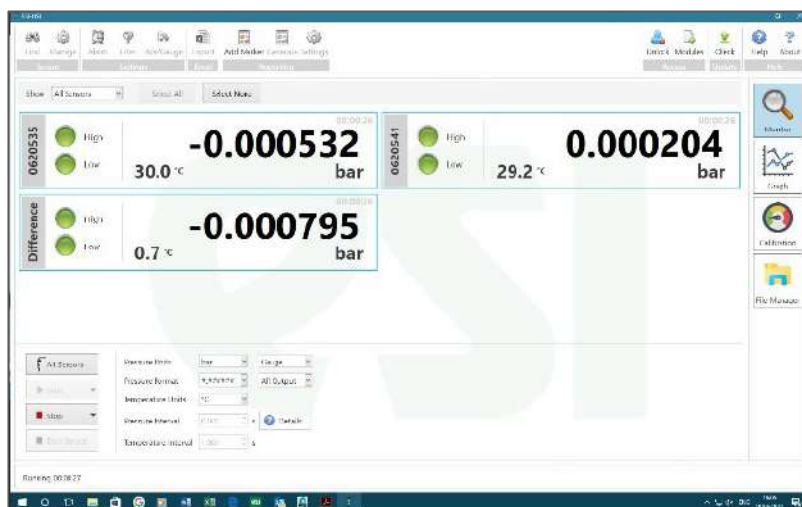
| |
|-------------------------------|
| Electrical Connections |
| USB Mini B Socket |

ESI-USB Software

Data is presented on the PC via the ESI-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 2.0/3.0x type A ports, the ESI-USB® interface configuration and analysis software runs on Windows 8, 8.1, 10 and 11. Data can be displayed in graphical or tabular form, with a choice of pressure units and fully adjustable scales and saved to a file or exported to Excel/PDF/CSV.

The ESI-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, alarm levels for each individual sensor and excellent measurement accuracy which provides high resolution with a precision greater than 1 in 10,000. We are continually enhancing the ESI-USB software, and the auto-update feature means that you will never miss a new version.



The advanced sensor design consists of a piezoresistive silicon strain gauge circuit, which is epitaxially grown onto the surface of a sapphire diaphragm to form a single crystalline structure. The sapphire sensor element is then molecularly bonded to a titanium alloy sub-diaphragm.

This enables the sensor to endure higher over-pressures and provides superb corrosion resistance. The sensor exhibits virtually no hysteresis and excellent long-term stability over wide temperature ranges.



Technical Data

| Type | GD4200-USB | |
|-----------------------------------|--|--|
| 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; 0-3000 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 3,000+ 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: | $\pm 1.5\%$ FS total error band for -10 °C to +80 °C. Typical thermal zero and span coefficients $\pm 0.015\%$ 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 | Options | Pressure Range | Process Connection |
|---|------------|---------|----------------|--------------------|
| Dynamic (1000 Hz) | GD4200-USB | | | |
| Options | | | | |
| 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 GD4200-USB1500AB

For options not listed please contact the sales team

DISCLAIMER : ESI Technology Ltd operates a policy of continuous product development. We reserve the right to change specification without prior notice. All products manufactured by ESI Technology Ltd are calibrated using precision calibration equipment, traceable to national measurement standards.