## Analog Input Specifications

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Measurement Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>20, 50, 100, 200, 500 mV, 1, 2, 5, 10, 20, 50 V, and 1-5 V/F.S.</td>
</tr>
<tr>
<td>Resistance Temperature Detectors</td>
<td>Pt100, JPt100 (JIS), Pt1000 (IEC751)</td>
</tr>
<tr>
<td>Humidity</td>
<td>0 to 100%</td>
</tr>
</tbody>
</table>

### Trigger and Sampling Input
- **1 ch, Logic or Pulse input 4 ch**
- **External input/output**
- **Measurement options**
  - Filter: Off, 2, 5, 10, 20, 40 (moving average in selected number)
  - Action: Isolated input, multi-channel logger
  - Source: Filter Off, 2, 5, 10, 20, 40 (moving average in selected number)
  - Condition: OR or AND condition at the level of signal or edge of signal

### Thermocouple Measurement Accuracy
- Analog: Rising, Falling, Window-in, Window-out
- Pulse: Rising, Falling, Window-in, Window-out

### Alarm Function
- Detecting method: Level or edge of signal
- Condition: Analog: Rising, Falling, Window-in, Window-out
- Pulse: Rising, Falling, Window-in, Window-out
- Temperature Range:
  - $-200 ^\circ C$ to $500 ^\circ C$, $700 ^\circ C$ (FS)
  - $0 ^\circ C$ to $100 ^\circ C$:
    - $TS \leq 100 ^\circ C < TS$: $300 ^\circ C$ ± 3.0 °C
    - $TS > 100 ^\circ C$: $300 ^\circ C$ ± 3.0 °C
  - $-100 ^\circ C < TS$: $600 ^\circ C$ ± 3.5 °C

### Accumulating Count
- **Instant count mode**
  - **Range:** 50, 500, 5 k, 50 k, 500 k, 5 M, 50 M, 500 M counts/F.S.
- **Range:** 50 rpm, 500 rpm, 5 krpm, 50 krpm, 500 krpm, 5 Mrpm, 50 Mrpm, 500 Mrpm/F.S.

### Calculation
- Addition, Subtraction, Multiplication and Division for analog input
- Select two calculations from Average, Peak, Max., Min., RMS

### Storage Device
- Built-in Flash memory (2 giga-bytes), USB memory device
- Direct saving of data into built-in Flash memory or USB memory device

### Other Features
- Ring capturing mode: Function: ON/OFF, Number of capturing point: 1000 to 2000000 (size of the type, 16 bits (effective resolution: 1/40000 of measuring full range)
- Battery pack (B-517): Operating environment: -25°C to 80°C

### Options and Accessories
- **Logic alarm cable (B-513)**: 2 m long (no clip on end of cable)
- **Extension terminal base kit (B-537)**: terminal set (B-538)
- **Humidity sensor (B-530)**: *requires DC drive cable (B-514) or battery pack (B-517)

### Additional Information
- Operating environment: -25°C to 80°C
- Huge built-in 2GB Flash memory
- Large easy-to-read 5.7-inch TFT colour LCD
- PC-friendly, supports USB memory stick, has USB and LAN ports

---

**New Features**
- Modular system allows expansion up to 200 channels
- All channels are isolated, each with multifunction input
- Huge built-in 2GB Flash memory
- Large easy-to-read 5.7-inch TFT colour LCD
- PC-friendly, supports USB memory stick, has USB and LAN ports

---

**Website**
http://www.graphteccorp.com
Huge 2GB Flash Memory, modular system allows expansion up to 200 channels

Isolated channels, each with multifunction input

It contains an isolated input system which ensures that signals are not corrupt by inputs to other channels, thus eliminating wiring concerns. The GL820’s multi-type inputs are suitable for voltage, temperature, humidity, pulse, and logic signals, enabling combined measurements of different phenomena like temperature/humidity and voltage.

Isolated channels:
- Each channel has its own isolated input system.
- Signals are not corrupted by inputs to other channels.

Digital display:
- Each channel has a digital display.
- Multifunction input includes temperature, humidity, pulse, and logic signals.

Built-in 2GB Flash Memory for reliable long term measurement

The 2GB Flash Memory ensures secure long-term data measurement without using an external storage device. Data is retained even when power is turned off because flash memory is used. Also, supports USB memory sticks for external storage. The GL820 saves measured data directly to USB memory sticks. USB memory sticks can be replaced during measurement without data loss.

Ring memory function:
- The most recent data is saved when internal memory or external memory becomes full.

Supports USB memory devices, easy connection to PC via USB or Ethernet

Captured data can be saved directly to USB memory sticks when these are chosen as the saving device. Data can be transferred to the GL820 from the PC via USB when these are chosen as the saving device. Data can also be transferred to the PC via Ethernet when these are chosen as the saving device.

Easy application software

Various measurement screens
- Select from 4 screens such as the 1-Y (waveform + digital), VT (large-scale waveform), digital view and report view to display measurements in real time. The desired Excel function enables captured data to be read directly to an Excel file.

Informative data replay
- Three screens are available to view measurements in replay mode. The X-Y (waveform) display, the digital display and the X-Y graph can be selected to display your specified data. The maximum, minimum, average and peak-to-peak values between cursors are shown when using the digital display screen.

Useful functions
- Post-process your captured data with useful functions for arithmetic calculation, statistical calculation, search, and file format conversion.

Up to 500 channels can be controlled from one PC
- Up to 500 channels or 10 units*7 can be connected to 1 PC through LAN or USB. Measurements can be performed simultaneously or independently.
- For the display and data display screens from individual GL820s in either simultaneous measurement or independent measurement mode.

Typical applications for the GL820 midi LOGGER

- Site testing of construction vehicles
- Evaluation testing of office equipment
- Evaluation test of household equipment
- Suitable for measuring high-speed phenomena

5.7-inch VGA TFT colour LCD

Utilises a bright clear 5.7-inch wide TFT color LCD monitor (VGA: 640 x 480 dots). Makes it easy to read data in waveform or digital form and to check your measurement parameter settings.

Standard unit has 20 analogue input channels, expandable up to 200 channels

The standard configuration has 20 analogue input channels. It can be expanded up to 200 channels by adding optional 20 channel extension terminal kits. The following shows how a standard configuration is expanded to 80 channels.

- 1. The terminal unit is removed from the GL820.
- 2. The extension terminal base (B-537) is connected to the GL820, and the terminal unit is removed from the GL820.
- 3. The terminal unit that was removed from the GL820 is connected to the extension terminal base (B-537).
- 4. Two additional 20th extension terminal sets (B-538) are also connected to the extension terminal base (B-537).

Configuration for additional channels

Number of channels:
- 20ch, 40ch, 100ch, 200ch

GL820 unit:
- 1set
- 2sets
- 4sets

Extension terminal base kit (B-537):
- 1set
- 2sets
- 4sets

20ch extension terminal set (B-536):
- 1set
- 2sets
- 4sets

Alarm output function

- Alarm signals can be output when alarm conditions occur.
- Four alarm output ports are fitted.

Report display
- Provides faster sampling rates for voltage measurements. Can achieve maximum sampling rate of up to 10ms sampling interval when limiting the number of channels in use.

*1: Select either Pulse input or Logic input, and use the optional Logic/Alarm cable (B-513 option).
*2: The above figure is approximate.
*3: The sampling rate is limited by the number of channels in use.
*4: Up to 500 channels can be controlled from one PC.