### GL220 main unit specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of input terminal</strong></td>
<td>Screw terminal (M3 screw)</td>
</tr>
<tr>
<td><strong>Number of analog input channels</strong></td>
<td>10 ch</td>
</tr>
<tr>
<td><strong>Input trigger or sampling input</strong></td>
<td>1 ch, Logic or Pulse input 4 ch</td>
</tr>
<tr>
<td><strong>Input method</strong></td>
<td>Scans by the photo-MOS-relay, all channels isolated, balanced input</td>
</tr>
<tr>
<td><strong>Output trigger or sampling output</strong></td>
<td>Alarm output 4 ch</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>20, 50, 100, 200, 500 mV, 1, 2, 5, 10, 20, 50 V, and 1-5 V /F.S.</td>
</tr>
</tbody>
</table>

| Measurement range | 10-channel handy-type logger accuracy |
| **Sampling interval** | 10 ms to 1 h (in 10ms to 50ms, voltage only and limited channel), External |
| **Time scale** | 1 sec to 24 hour/division |
| **Filter** | Off, 2, 5, 10, 20, 40 (moving average in selected number) |

| Measurement | 10-channel handy-type logger accuracy |
| **Trigger source** | Start: Off, Input signal, Alarm, External *9, Clock, Week or Time |
| **Voltage** | 0.1 % of F.S. |

### Measurement range

#### Temperature
- Thermocouple: ± 3.0 °C
- OR or AND condition at the level of signal or edge of signal
- Analog: Rising, Falling, Window-in, Window-out
- Pulse: Rising, Falling, Window-in, Window-out

#### Voltage
- ± (0.05 % of reading + 2.0 °C)
- Temperature: K -200 °C /g148 TS /g148 -100 °C
- ± (0.05 % of reading + 1.0 °C)
- ± (0.1 % of reading + 1.5 °C)
- ± (0.1 % of reading + 0.5 °C)

#### Pulse
- ± (0.05 % of reading + 2.0 °C)
- Temperature: K -200 °C /g148 TS /g148 -100 °C
- ± (0.05 % of reading + 1.0 °C)
- ± (0.1 % of reading + 1.0 °C)

#### Rotation count (RPM)
- ± (0.05 % of reading + 1.0 °C)
- ± (0.1 % of reading + 1.0 °C)

### Other functions

#### Alarm output
- 4 channels, Output type: Open collector (pull-up resistor 10 k/g159)

#### Instant count mode
- Counting the number of pulses per sampling interval

#### Rotation count mode
- Function: ON/OFF, Number of capturing point: 1000 to 2000000 (size of the capture data will be limited to 1/3 of available memory)

#### Interface to PC
- USB (Full speed)

#### Maximum input pulse rate
- W 0 °C /g148 TS /g148 2000 °C

#### Calculation function
- Statistical: Select two calculations from Average, Peak, Max., Min., RMS Between + / - terminal

#### Operating environment
- 0 to 45 °C, 5 to 85 %RH

### Data saving
- Direct saving of data into built-in Flash memory or USB memory device

### Others
- Setting conditions, Screen copy

### Battery pack
- Approx. 520 g (Excluding AC adapter and battery pack)

### Software specifications

### Functions
- Control GL220, Real-time data capture, Replay data, Data format conversion

### GL220 settings control
- Input settings, Memory settings, Alarm settings, Trigger settings

### Warning functions
- Sends E-mail to the specified address when the alarm occurred

### File format conversions
- Converts the specified period data or all data to the CSV format (thinning function is available)

### Displayed
- Max. Min. Displays the maximum, minimum and current value in measurement

### Options and accessories

#### Item | Model number | Remarks |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery pack</td>
<td>B-517</td>
<td>3 m long (with power plug)</td>
</tr>
<tr>
<td>Humidity sensor</td>
<td>B-530</td>
<td>(B-530)</td>
</tr>
</tbody>
</table>

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http://www.graphteccorp.com
Handy-type Logger
with huge 2GB Flash Memory

10 isolated channels, each with multifunction input

Its compact size contains an isolated input system which ensures that signals are not corrupted by inputs to other channels, thus eliminating wiring concerns. The GL220s multi-type inputs are suitable for voltage, temperature, humidity, pulse, and logic signals; enabling combined measurements of different phenomena like temperature/humidity and voltage.

Maximum sampling rate of up to 10ms

Provides faster sampling rates for voltage measurements. Can achieve 10ms sampling interval when limiting the number of channels in use.

Sampling interval 

<table>
<thead>
<tr>
<th>Sampling interval</th>
<th>10ms</th>
<th>50ms</th>
<th>100ms</th>
<th>500ms</th>
<th>1s</th>
<th>10s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of channels</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Measuring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10ms sampling interval when using an external USB drive.

Ranges from 20mV to 50V


-40 to 100°C

Accumulating, instant or RMS

4 channels

*1 - Sends either Pulse input or Logic input and use the optional Logiemeter cable (B-513 option)

4.3-inch WVQGA TFF colour LCD

Utilises a bright clear 4.3-inch wide TFT color LCD (WVQGA: 480 x 272 dots). Makes it easy to read data in waveform or digital form and to check your measurement parameter settings.

Waveform display (Analog + Digital)

Dual display (Current + Fluid)

Waveform display (Analog only)

Digital display

Supports USB memory device

Easy connection to PC

Captured data can be saved directly to USB memory sticks when those are chosen for external storage. In addition, the GL220s can be controlled by a PC if connected by USB cable, allowing transfer of data to a PC in real-time. If you need to move large data files to your PC then the GL220 can emulate an external USB drive for quick data transfer.

Can be used with 3 types of power source

Chose from AC supply, DC supply or the optional battery pack which enables 6 hours of continuous measurement. The power source is automatically switched to the battery pack when the AC power supply is interrupted. If the capacity of the battery pack goes low then measurement is automatically terminated and the captured data file is closed and protected.

Useful functions

Alarm output function

Alarm signals can be output when alarm conditions occur. *4 - Four alarm output ports are fitted.

External sampling function

Captured data can be synchronized with external timing signals when the external sampling rate function is used.*3

Calculation function

Measured data can be compared with other channels in real-time. Four arithmetic functions can be selected. The calculation result is saved as measured data when the built-in memory or the USB memory stick is selected as the destination for the captured data.

Easy application software

Various measurement screens

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

Substantial data replay screens

The number of configuration screens can be set easily while viewing measured waveforms.

Useful functions

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

Up to 10 units can be controlled from one PC

Up to 10 units can be connected to 1 PC. Measurements can be performed simultaneously or independently.

Typical applications for the GL220 midi LOGGER

Recording data from an analysers

Capture signals from an ozone measuring device to record changes in ozone concentration over long periods.

Measuring temperature in an environmental chamber

Recording temperature of electronic components in an environmental chamber during an evaluation test.

Measuring cell voltage and temperatures of fuel cells

Evaluation tests for batteries

Suitable for measuring high-speed phenomena

4 or 8 isolated channels, each with multifunction input

High-speed simultaneous sampling up to 10ms, 16-bits resolution

Large easy-to-read 5.7-inch TFT color LCD

Includes X-Y graph display function in real-time.

Captured data can be saved to PC-friendly USB memory stick

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Temp.</th>
<th>Humidity</th>
<th>Pulse</th>
<th>Logic</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 5V</td>
<td>-40°C to 100°C</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>