






# Compact data logger GL100 Series




Main body  
**GL100-N**

Shown in actual size 




GL series announces support for additional sensors in volatile LAN and stand-alone environments with the ability to exchange input modules.


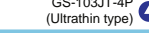



Sensor			
 <p><b>Temp./Humidity</b> GS-TH Temp. (-20 to 85 °C), Humidity (0 to 100 % RH)</p>	 <p><b>Acceleration/Temp.</b> GS-3AT Acceleration in 3-axis (max. 10 G), Temp. (-10 to 50 °C)</p>	 <p><b>Carbon dioxide (CO2)</b> GS-CO2 CO2 concentration (max. 9999 ppm)</p>	 <p><b>Illuminance/UV</b> GS-LXUV Illuminance (max. 200 klx), UV intensity (max. 30 mW/cm<sup>2</sup>)</p>

Input Terminal / Adapter		
 <p><b>Voltage/Temp.</b> GS-4VT 4ch Voltage (max. 50V) or Temp. (TC: K &amp; T), 4ch Logic or Pulse</p>	 <p><b>Thermistor</b> GS-4TSR 4ch Temperature (-40 to 120 °C), 4ch Logic or Pulse</p>	 <p><b>AC current sensor</b> GS-DPA-AC Current (50, 100, 200A RMS), Power in Single- or three-phase power system</p>

Dual port adapter connects up to two modules for simultaneous interface

1. Temp./Humidity & Illuminance/UV	2. Temp./Humidity & Carbon dioxide (CO2)	3. Illuminance/UV & Carbon dioxide (CO2)
		

<p><b>Thermistor sensor</b></p> <p>GS-103AT-4P (Normal type)</p>  <p>GS-103JT-4P (Ultrathin type)</p> 	<p><b>AC current sensor</b></p>  <p>Example</p>
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## Line-up includes combined models best suited for application base

GL100 will feature combo solutions that are packaged together and will be offered as a one stop solution as an out-of-the-box-ready item for the specific application that best fits your need.

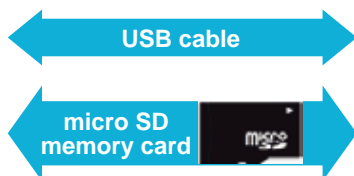
**Temp./Humidity Set: GL100-N-TH**  
GL100-N & GS-TH

**Acceleration Set: GL100-N-3AT**  
GL100-N & GS-3AT

**Voltage/Temp. Set: GL100-N-4VT**  
GL100-N & GS-4VT

**Thermistor Set: GL100-N-4TSR**  
GL100-N & GS-4TSR  
\* Thermistor sensor is not included.

## Easy connection to PC

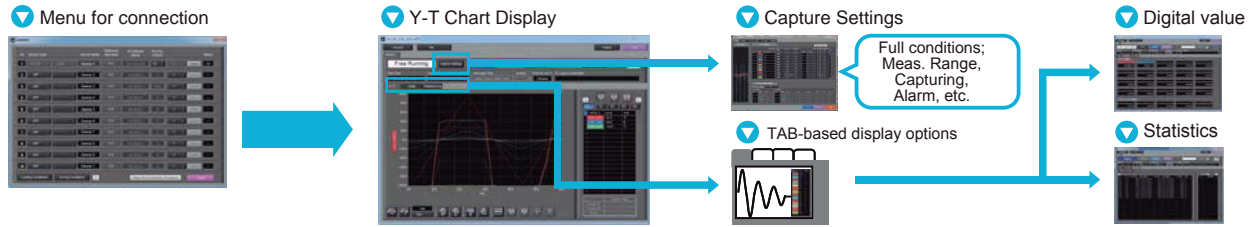


- USB connection is also available through the GL100 with real-time control from the PC software. Historical data can also be viewed by directly accessing the internal memory of the GL100 from the PC software.
- Data stored on the GL100 can be easily transferred to the PC using a microSD memory card and replay in the PC software.

## Incorporate Application Software for General-Purpose or Industry-specific Customized Platform

General purpose application software will continue to have the ability to view in Y-T chart, waveform, and digital values. The new industry-specific customize software will feature targeted software in accommodating users with indicators that are specific and familiar to that industry.

### General-purpose software for PC



### Industry-specific software (for PC)

Specific industry	Measurement capability	Description	Availability
Agriculture	<ul style="list-style-type: none"> <li>Temperature Accumulation</li> <li>Humidity Deficit</li> <li>Amount of solar radiation</li> <li>Amount of ultraviolet rays</li> </ul>	Confirm temperature accumulation, humidity deficit, solar radiation, ultraviolet rays as part of the vital indicators for healthy plant growth. Measure optimal saturation deficit by understanding the best conditions applied for growth, flowering, and fruiting using temperature accumulation and optimal growth environment analysis.	Available to download in end of 2014
Logistics	<ul style="list-style-type: none"> <li>Search and display acceleration thresholds</li> <li>Temperature Accumulation</li> <li>Humidity Deficit</li> </ul>	Transpiration of industrial equipment, temperature controlled transport of food, and warehouse temperature management can all be monitored to provide the safest and most secure operation. Safety measurements through monitoring the vibration of the transport vehicles can be vital to heavy-industrial and vibration sensitive equipment. Accumulated temperature monitoring and humidity levels will be vital to keeping food fresh in a controlled environment.	
Power measurement	<ul style="list-style-type: none"> <li>AC current</li> <li>Power</li> <li>Integrated power</li> </ul>	Power and electric energy levels will be displayed on the graph using measured AC current locally at the factory, buildings and industrial equipment. Corresponds to three power systems such as two-wire single-phase, three-wire single-phase, or three-wire in three-phase.	

### Support your peculiar software

Customize your software using the SDK (Software Development Kit) provided by Graphtec.  
The SDK will be available at beginning 2015.

## Sufficient capacity for data

### Data Capturing Time

Condition	Capturing time
Built-in memory (Approx. 4.9MB)	Approx. 296 days
micro SD memory card	Over 2 years

\* File size for captured data is up to 1.9GB on the micro SD memory card.

Condition Example:  
Temp./Humidity sensor (GS-TH),  
1 minute sampling interval

## Available battery option

### Battery Operating Time

Condition	Operating time
When saving data to the Built-in memory	Approx. 2 weeks

\* USB power source will be required for Voltage/Temperature (GS-4VT), and CO2 sensor (GS-CO2).

Condition Example:  
Temp./Humidity sensor (GS-TH),  
1 minute sampling interval,  
using Alkaline battery (AA size x 2)

Specifications of GL100-N		
Item	Description	
Number of channel	Up to 4 channels (varies by the type of input module used, and measurement type is fixed with each input module.)	
Interface to PC	USB 2.0	
Functions	<ul style="list-style-type: none"> <li>Real-time data capturing</li> <li>Display the captured data value to the LCD in real-time and save the monitoring values</li> <li>Set conditions using the Menu setting</li> </ul> While using USB port: <ul style="list-style-type: none"> <li>Output captured data in real-time</li> <li>Output the saved data from the internal memory</li> <li>Full control of the GL100 from the PC application software</li> </ul>	
Display	LCD (backlit monochrome, graphical type)	
Storage device	<ul style="list-style-type: none"> <li>Built-in RAM (Approx. 4.9 MB)</li> <li>micro SD memory card</li> <li>* Maximum file size for captured data is 1.9 GB.</li> </ul>	
Sampling interval	0.5 to 30 seconds and 1 to 60 minutes	
Output signal	Alarm (1 channel)	
Power source	<ul style="list-style-type: none"> <li>Battery (AA x 2)</li> <li>USB bus-power (micro USB connector)</li> <li>* The required power capacity is 5V, 1A when AC adapter for microUSB drive is used. AC adapter is not included.</li> </ul>	
Operating environment	Temperature: -10 °C to 50 °C Humidity: up to 80% RH (non condensed) Water resistance: IP54	
External dimension	Approx. 66 x 100 x 27 mm (exclude protrusion)	
Weight	GL100-N: Approx. 125 g, GL100-WL: Approx. 130 g	
Software		
Item	Description	
Supported OS	Windows: 8.1 / 8 / 7 / Vista (32- or 64-bit), Android OS: 4.3 or later, iOS: 7 or later	
Controlled units	Up to 10 units	
Accessories		
Item	Model number	Description
Thermistor sensor (Normal type)	GS-103AT-4P	Sensor for GS-4TSR module, 3 m, 4 pcs/set, Temp. range: -40 to 105 °C
Thermistor sensor (Ultrathin type)	GS-103JT-4P	Sensor for GS-4TSR module, 3 m, 4 pcs/set, Temp. range: -40 to 120 °C
AC Current sensor	GS-AC50A	For GS-DAP-AC module, Cable 200 mm, Current range : 50 A AC
AC Current sensor	GS-AC100A	For GS-DAP-AC module, Cable 200 mm, Current range : 100 A AC
AC Current sensor	GS-AC200A	For GS-DAP-AC module, Cable 200 mm, Current range : 200 A AC
Dual port adapter	GS-DPA	Connect up to two (2) sensors
Module Extension Cable	GS-EXC	Extension cable for input module, 1.5 m long

Specifications of input module	
Temperature & Humidity sensor (GS-TH)	
Type of measurement	Temperature, and Humidity Accumulated temp. (calculated value), Dew-point temp. (calculated value)
Measuring range	Temperature: -20 to 85 °C Humidity: 0 to 100 % RH
Acceleration & Temperature sensor (GS-3AT)	
Type of measurement	Acceleration in 3-axis (X-, Y-, Z-axis), and Temperature
Measuring range	Acceleration: ±2 (20 m/s <sup>2</sup> ), ±5 (50 m/s <sup>2</sup> ), ±10G (100 m/s <sup>2</sup> ) Temperature: -10 to 50 °C
Sampling interval	5 to 100 ms in memory mode, 0.5 s to 60 min. in direct mode (**)
Illuminance & Ultraviolet sensor (GL-LXUV)	
Type of measurement	Illuminance, and UV intensity Accumulated Illuminance (calculated value), Accumulated UV intensity (calculated value)
Measuring range	Illuminance: 0 to 200 klx UV intensity: 0 to 30 mW/cm <sup>2</sup>
Carbon dioxide (CO2) sensor (GL-CO2)	
Type of measurement	Carbon dioxide concentration
Measuring range	0 to 9999 ppm
Operating environment	Temperature: 0 °C to 50 °C, Humidity: up to 80% RH (non condensed)
AC Current sensor adapter (GS-DPA-AC)	
Type of measurement	Current Power (calculated value), Electric energy (calculated value)
Application circuit	Single-phase two-wire, Single-phase three-wire system, or Three-phase three-wire
Sensor	Clamp-on current probe (optional), Two (2) sensors are able to connect
Measuring range	50, 100, 200 A RMS (varies by the sensor)
Voltage & Thermocouple input terminal (GL-4VT)	
Number of channel	Analog voltage 4 channels, Logic or Pulse 4 channels (**)
Measuring range	Voltage: 20mV to 50V, 1-5V FS Thermocouple: K type (-200 to 1370 °C) & T type (-200 to 400 °C) Logic (signal pattern): 0 to 24 V (common ground) Pulses (count): Max. 200 counts/sampling interval, accumulating up to 65535 counts
Temperature sensor input terminal (GL-4TSR)	
Number of channel	Sensor 4 channels, Logic or Pulse 4 channels (**)
Sensor	Thermistor sensor (optional)
Measuring range	Temperature: -40 to 120 °C (varies by the type of sensor) Logic (signal pattern): 0 to 24 V (common ground) Pulse (count): Max. 200 counts/sampling interval, accumulating up to 65535 counts

\*1: Memory capacity is up to 128 k samples in the memory mode.

\*2: The measurement type for analog input channels can each be separately selected but also available as set of 4 channels.

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