GRAPHTEC

New

Compact data logger
PetitLOGGER
GL100 Series

Main body	
GL100-WL with wireless LAN	**GL100-N** without wireless LAN

Shown in actual size ▶

GL series announces support for additional sensors in volatile wireless and non-wireless environment with ability to exchange input modules.

REC   16:46
TEMP: +26.73℃
HUM. : +59.3%
DEWP: +18.10℃
                S:30.0s

PetitLOGGER GL100

QUIT · MENU · ENTER · STATUS · POWER · START STOP

Sensors

Temp./Humidity
GS-TH
Temp. (-20 to 85 ºC),
Humidity (0 to 100 % RH)

Acceleration/Temp.
GS-3AT
Tri-axial acceleration
(max. 10 G),
Temp. (-10 to 50 ºC)

Carbon dioxide (CO2)
GS-CO2
CO2 concentration
(max. 9999 ppm)

Illuminance/UV
GS-LXUV
Illuminance (max. 200 klx),
UV intensity (max. 30 mW/cm2)

Input Terminal / Adapter

Voltage/Temp.
GS-4VT
4ch Voltage (max. 50V) or Temp. (TC: K & T),
4ch Logic or Pulse

Thermistor
GS-4TSR
4ch Temperature (-40 to 120 ºC),
4ch Logic or Pulse

AC current sensor
GS-DPA-AC
Max. 2 sensors Current (50, 100, 200A RMS), Power in Single- or three-phase power system

Dual port adapter connects up to two modules for simulatenous interface

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

Example : 1.

Dual port adapter GS-DPA

Thermistor sensor
GS-103AT-4P (Normal type)
GS-103JT-4P (Ultrathin type)

AC current sensor
Example

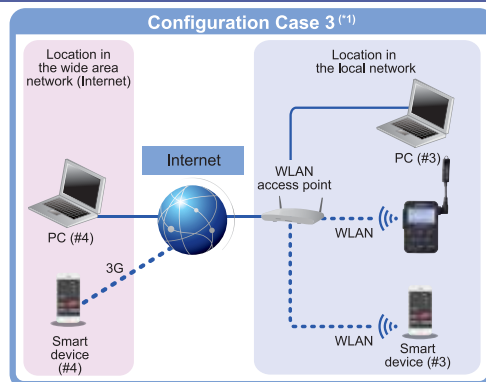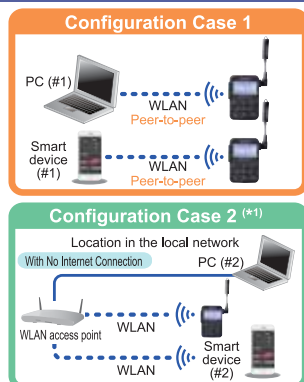## Packages will include combined models best suited for your application

GL100 will feature package solutions that combines several sensors and modules together for a one stop solution as an out-of-the-box-ready item for the specific application that best fits your need.

Combo models for GL100-WL

Temp./Humidity Set : GL100-WL-TH	Acceleration Set : GL100-WL-3AT	Voltage/Temp. Set : GL100-WL-4VT	Thermistor Set : GL100-WL-4TSR
GL100-WL & GS-TH	GL100-WL & GS-3AT	GL100-WL & GS-4VT	GL100-WL & GS-4TSR * Thermistor sensor is not included.

Combo models for GL100-N

Temp./Humidity Set : GL100-N-TH	Acceleration Set : GL100-N-3AT	Voltage/Temp. Set : GL100-N-4VT	Thermistor Set : GL100-N-4TSR
GL100-N & GS-TH	GL100-N & GS-3AT	GL100-N & GS-4VT	GL100-N & GS-4TSR * Thermistor sensor is not included.

Wireless access will support multiple configurations for both secured and world wide internet access

Configuration Case 1
PC (#1)
WLAN Peer-to-peer
Smart device (#1)
WLAN Peer-to-peer

Configuration Case 2 (*1)
Location in the local network
With No Internet Connection   PC (#2)
WLAN access point
WLAN
WLAN
Smart device (#2)

Configuration Case 3 (*1)
Location in the wide area network (Internet)
Location in the local network
PC (#3)
WLAN access point
WLAN
Internet
PC (#4)
3G
Smart device (#4)
WLAN
Smart device (#3)

Available functions	Configuration Case 1		Configuration Case 2		Configuration Case 3			
	PC (#1)	Smart device (#1)	PC (#2) (*1)	Smart device (#2)	PC (#3) (*1)	Smart device (#3)	PC (#4)	Smart device (#4)
Control of full functions	●		●		●		◐(*2)	
Control of simple functions (Start/Stop, Sampling, Alarm)		●		●		●		◐(*2)
Display Waveform/ Digital value	●	●	●	●	●	●	◐(*2)	◐(*2)
Save data to PC	●		●		●		◐(*2)	
Receive message via email			●	●	●	●	●	●

● : Function is available   ◐ : Function is available in the condition

*1 : Multiple PC cannot make connection to the GL100 simultaneously.
*2 : Assign a static global IP. Or DDNS service must be available within network and the GL100 configured as a device within the WAN.

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Includes 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.
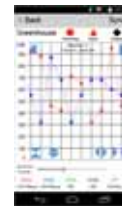
General-purpose software for PC

General-purpose software for Smart Device (Android OS/iOS)
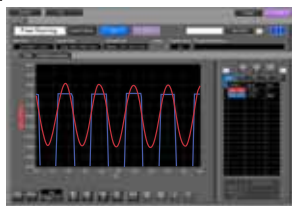
| Waveform Screen | Digital Value Screen | Digital Value Screen | Waveform Screen |

-0.0364 V

Industry-specific software (for PC and Smart Device)

Support your specific software

Specific-industry	Measurementv capability	Description	
Agriculture	• Temperature Accumulation • Humidity Deficit • Amount of solar radiation • Amount of ultraviolet rays	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 fruit growth using temperature accumulation and optimal growth environment scheme.	**Available to downlod at the autum of 2014**
Logistics	• Search and display acceleration thresholds • Temperature Accumulation • Humidity Deficit	Transportation of industrial equipment, temperature controlled transport of food, and warehouse temperature management can all be monitored to provide the safest and secured 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 measure-ment	• AC current • Power • Integrated power	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 including two-wire single-phase, three-wire single-phase, or three-wire in three-phase.	

Customize your software using the SDK (Software Development Kit) provided by Graphtec.

The SDK will be available at the beginning of 2015.

Sufficient capacity for data

Data Capturing Time

Condition	Capturing time
Built-in memory (Approx. 4.9MB)	Approx. 254 days
micro SD memory card	Over 2 years

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

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

Available battery option

Battery Operating Time

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

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

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

Specifications of GL100-WL, 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, Wireless LAN (IEEE802.11b) in GL100-WL
Functions	• Real-time data capturing • Displays the captured data value to the LCD in real-time and save the monitoring values • Set conditions using the Menu setting
	While using Wireless LAN : • Output captured data in real-time • Output the saved data from the internal memory • Full control of the GL100 from the PC application software • Send warnings via the e-mail in GL100-WL [*1]
	While using USB port : • Output captured data in real-time • Output the saved data from the internal memory • Full control of the GL100 from the PC application software
Display	LCD (backlit monochrome, graphical type)
Storage device	• Built-in RAM (Approx. 4.9 MB) • micro SD memory card * Maximum file size for captured data is 1.9 GB.
Sampling interval	0.5 to 30 seconds and 1 to 60 minutes
Output signal	Alarm (1 channel), Warnings message is sent via the e-mail in GL100-WL [*1]
Power source	• Alkaline battery (AA x 2) • USB bus-power (micro USB connector) * The required power capacity is 5V, 1A when AC adapter for microUSB drive is used. AC adapter is not included.
Operating environment	Temperature : -10 ºC to 50 ºC 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 ºC
Thermistor sensor (Ultrathin type)	GS-103JT-4P	Sensor for GS-4TSR module, 3 m, 4 pcs/set, Temp. range : -40 to 120 ºC
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 ºC Humidity : 0 to 100 % RH

Acceleration & Temperature sensor (GS-3AT)

Type of measurement	Tri-axial acceleration (X-, Y-, Z-axis), and Temperature
Measuring range	Acceleration : ±2G(20 m/s^2), ±5G (50 m/s^2), ±10G (100 m/s^2) Temperature : -10 to 50 ºC
Sampling interval	5 to 100 ms in memory mode, 0.5 s to 60 min. in direct mode [*2]

Voltage & Thermocouple input terminal (GS-4VT)

Number of channel	Analog voltage 4 channels, Logic or Pulse 4 channels [*3]
Measuring range	Voltage: 20mV to 50V, 1-5V FS Thermocouple : K type (-200 to 1370 ºC) & T type (-200 to 400 ºC) Logic (signal pattern) : 0 to 24 V (common ground) Pules (count) : Max. 200 counts/sampling intervall, accumulating up to 65535 counts

Temperature sensor input terminal (GS-4TSR)

Number of channel	Sensor 4 channels, Logic or Pulse 4 channels [*3]
Sensor	Thermistor sensor (optional)
Measuring range	Temperature : -40 to 120 ºC (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

Carbon dioxide (CO2) sensor (GS-CO2)

Type of measurement	Carbon dioxide concentration
Measuring range	0 to 9999 ppm
Operating environment	Temperature : 0 ºC to 50 ºC, Humidity: up to 80% RH (non condensed)

Illuminance & Ultraviolet sensor (GS-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^2

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)

*1 : A mail server is required for using the e-mail function.
*2 : Memory capacity is up to 128 k samples in the memory mode.
*3 : The measurement type for analog input channels can each be separately selected but also available as set of 4 channels.

* The GL100-WL uses radio waves in the 2.4GHz band. It may interfere with other devices that use radio waves in the same frequency band. Some actions are required to avoid radio interference when necessary. This equipment can be used in the USA, Canada, EU, and Japan by the regulations of the Wireless Telegraphy Act.

GRAPHTEC
Graphtec Corporation

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Compact data logger
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GL100 Series

Main body

GL100-N

Shown in actual size ▶

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

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REC 16:46
TEMP: +26.73°c
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Sensors

Temp./Humidity
GS-TH
Temp. (-20 to 85 ºC),
Humidity (0 to 100 % RH)

Acceleration/Temp.
GS-3AT
Tri-axial acceleration
(max. 10 G),
Temp. (-10 to 50 ºC)

Carbon dioxide (CO2)
GS-CO2
CO2 concentration
(max. 9999 ppm)

Illuminance/UV
GS-LXUV
Illuminance (max. 200 klx),
UV intensity (max. 30 mW/cm²)

Input Terminal / Adapter

Voltage/Temp.
GS-4VT
4ch Voltage (max. 50V) or Temp. (TC: K & T),
4ch Logic or Pulse

Thermistor
GS-4TSR
4ch Temperature (-40 to 120 ºC),
4ch Logic or Pulse

AC current sensor
GS-DPA-AC
Max. 2 sensors Current (50, 100, 200A RMS), Power in Single- or three-phase power system

Thermistor sensor
GS-103AT-4P (Normal type)
GS-103JT-4P (Ultrathin type)

AC current sensor
Example

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)

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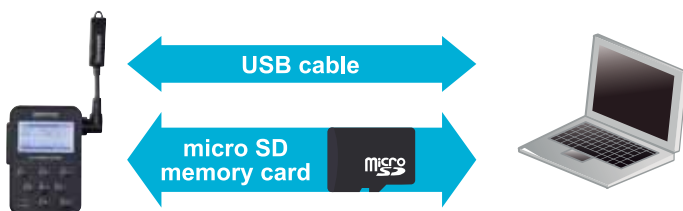
Temp./Humidity Set : GL100-N-TH
GL100-N & GS-TH

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.

Connect Easily to your PC

USB cable
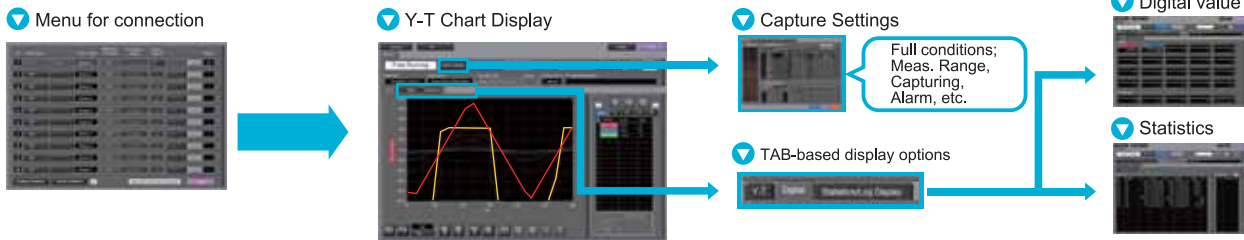
micro SD memory card

micro SD

- 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.

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Includes 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 customized software will feature targeted software in accommodating users with indicators that are specific and familiar to that industry.

General-purpose software for PC

▼ Menu for connection   ▼ Y-T Chart Display   ▼ Capture Settings

Full conditions; Meas. Range, Capturing, Alarm, etc.

▼ Digital value

▼ TAB-based display options

▼ Statistics

Industry-specific software(for PC)

Support your specific software

Specific-industry	Measurementv capability	Description	
Agriculture	• Temperature Accumulation • Humidity Deficit • Amount of solar radiation • Amount of ultraviolet rays	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 fruit growth using temperature accumulation and optimal growth environment scheme.	Available to downlod at the autum of 2014
Logistics	• Search and display acceleration thresholds • Temperature Accumulation • Humidity Deficit	Transportation 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 measure-ment	• AC current • Power • Integrated power	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 including two-wire single-phase, three-wire single-phase, or three-wire in three-phase.	

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micro SD memory card	Over 2 years

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

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

Available battery option

Battery Operating Time

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

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

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

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	• Real-time data capturing • Displays the captured data value to the LCD in real-time and save the monitoring values • Set conditions using the Menu setting
	While using USB port : • Output captured data in real-time • Output the saved data from the internal memory • Full control of the GL100 from the PC application software
Display	LCD (backlit monochrome, graphical type)
Storage device	• Built-in RAM (Approx. 4.9 MB) • micro SD memory card * Maximum file size for captured data is 1.9 GB.
Sampling interval	0.5 to 30 seconds and 1 to 60 minutes
Output signal	Alarm (1channel)
Power source	• Alkaline battery (AA x 2) • USB bus-power (micro USB connector) * The required power capacity is 5V, 1A when AC adapter for microUSB drive is used. AC adapter is not included.
Operating environment	Temperature : -10 ºC to 50 ºC Humidity : up to 80% RH (non condensed) Water resistance : IP54
External dimension	Approx. 66 x 100 x 27 mm (exclude protrusion)
Weight	Approx. 125 g

Software

Item	Description
Supported OS	Windows : 8.1 / 8 / 7 / Vista (32- or 64-bit)
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 ºC
Thermistor sensor (Ultrathin type)	GS-103JT-4P	Sensor for GS-4TSR module, 3 m, 4 pcs/set, Temp. range : -40 to 120 ºC
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 ºC Humidity : 0 to 100 % RH

Acceleration & Temperature sensor (GS-3AT)

Type of measurement	Tri-axial acceleration (X-, Y-, Z-axis), and Temperature
Measuring range	Acceleration : ±2G (20 m/s^2), ±5G (50 m/s^2), ±10G (100 m/s^2) Temperature : -10 to 50 ºC
Sampling interval	5 to 100 ms in memory mode, 0.5 s to 60 min. in direct mode [*1]

Voltage & Thermocouple input terminal (GS-4VT)

Number of channel	Analog voltage 4 channels, Logic or Pulse 4 channels [*2]
Measuring range	Voltage : 20mV to 50V, 1-5V FS Thermocouple : K type (-200 to 1370 ºC) & T type (-200 to 400 ºC) Logic (signal pattern) : 0 to 24 V (common ground) Pules (count) : Max. 200 counts/sampling intervall, accumulating up to 65535 counts

Temperature sensor input terminal (GS-4TSR)

Number of channel	Sensor 4 channels, Logic or Pulse 4 channels [*2]
Sensor	Thermistor sensor (optional)
Measuring range	Temperature: -40 to 120 ºC (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

Carbon dioxide (CO2) sensor (GS-CO2)

Type of measurement	Carbon dioxide concentration
Measuring range	0 to 9999 ppm
Operating environment	Temperature : 0 ºC to 50 ºC, Humidity : up to 80% RH (non condensed)

Illuminance & Ultraviolet sensor (GS-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^2

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)

*1 : Memory capacity is up to 128 k samples in the memory mode.
*2 : The measurement type for analog input channels can each be seperately selected but also available as set of 4 channels.