GRAPHTEC

Compact data logger
PetitLOGGER
GL100 Series

Main body

GL100-WL	GL100-N
with wireless LAN	without wireless LAN

Shown in actual size

Simple data logging solution with various exchangeable sensors.

Sensors

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

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

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 °C),
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 simultaneous interface

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

Example : 1.

Thermistor sensor

GS-103AT-4P (Normal type)

GS-103JT-4P (Ultrathin type)

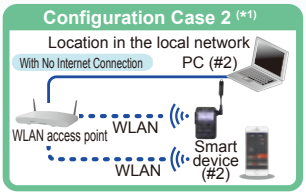
AC current sensor

Example

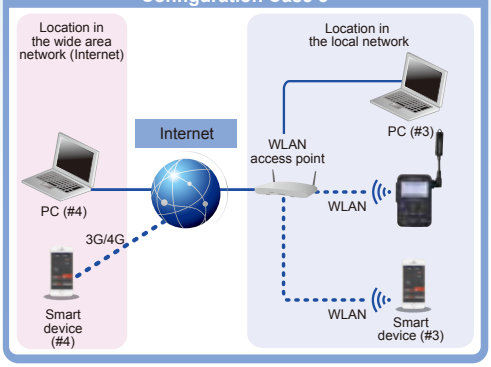
Wireless access will support multiple configurations for both secured and world wide internet access

Configuration Case 1

Configuration Case 2 (*1)



Configuration Case 3 (*1)



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 PCs cannot make connection to the GL100 simultaneously.

*2 : A static global IP. must be available within network and the GL100 configured as a device within the WAN.

GL100-WL can be connected as a remote sensor.

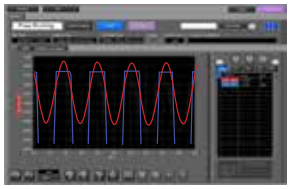
GL100-WL can be connected to the GL840 or GL240 as a remote sensor using the WLAN feature.

www.graphteccorp.com

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



Waveform Screen

Digital Value Screen

General-purpose software for Smart Device (Android OS/iOS)

Digital Value Screen

Waveform Screen

SDK
(Software development kit)
can be applied
from Graphtec Web

Industry-specific software(for PC)

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.
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.

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 °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 : 10 / 8.1 / 7 (32- or 64-bit), Android OS : 4.1 - 8.0, iOS : 9 / 10 / 11
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	Tri-axial acceleration (X-, Y-, Z-axis), and Temperature
Measuring range	Acceleration : ±2G(20 m/s²), ±5G (50 m/s²), ±10G (100 m/s²) Temperature : -10 to 50 °C
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 °C) & T type (-200 to 400 °C) 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 °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
Carbon dioxide (CO2) sensor (GS-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)
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/cm²
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 limited regions by the regulations of the Wireless Telegraphy Act.

⚠ For using equipment in correctly and safely
• Before using it, please read the user manual and then please use it properly in accordance with the description.
• To avoid malfunction or an electric shock by current leakage or voltage, please ensure a ground connection and use according to the specification.

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