

Relaying the voices of the earth

The next generation in network data logging

The NetLG-401E enables accurate, automatic data collection from up to four strain gauges. The logger was developed to enable data collection through a network of devices and is equipped with all necessary functions for data collection in a simple, light, and compact package. Each channel can be configured to output alarm signals at upper or lower limits or in response to a set amount of change in a given time period (one minute to 30 days), and the system can be easily modified for fully automatic data collection.

Example sensor types



NetLG-401E

FOUR-CHANNEL STRAIN GAUGE DATA LOGGER

(4-gauge method strain gauge)

Key Features

Data Collection on Four Independent Channels

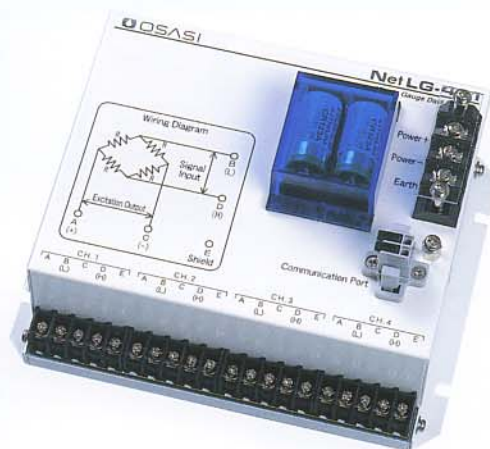
Each of the four channels can be connected to a strain gauge with sensor input resistance of 100-500Ω. Each sensor input receives an independent power supply and is isolated to protect data against shorts or damage occurring on other sensors. The four channels can be configured independently, so simultaneous measurement from different types of sensor is possible.

Measurement Interval

Sensor sampling intervals can be set from 1 minute to one day and data recording can also be set at various intervals. If sampling is set to a one-day interval, an offset time can be set to record data to memory at any defined time.

Low Power Consumption

Thorough attention to energy efficient circuit design allows long continuous periods of data collection from the internal lithium battery or an external power supply. Two internal lithium batteries are supplied; if the main battery loses charge the logger switches to the sub-battery.



OSNET Network Compatible

This logger is suitable for use in a network with other OSASI network devices. Data retrieval can be easily switched from semi-automatic to fully automatic.

Environmentally Durable

Surge protection is provided on all external entry points. The device is also resistant to static electricity and external signal noise. And in pursuit of reliability, the instrument design and choice of components make stable operation possible over a wide temperature range, from -20°C to 55°C.

Large Data Capacity

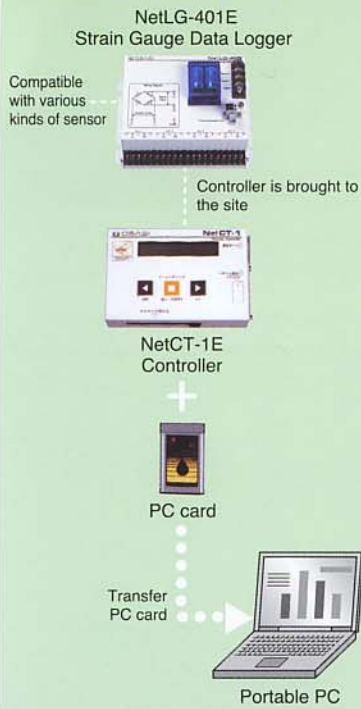
Data is stored in the logger's flash memory and new data can be retrieved to a PC card using the network controller NetCT-1E or to a personal computer through the NetGW-1E device.

Alarm Output Function

Independent alarm settings can be configured for each of the four channels. Three types of alarms can be concurrently set on each channel: upper limit, lower limit and change per time period (from one minute to 30 days).

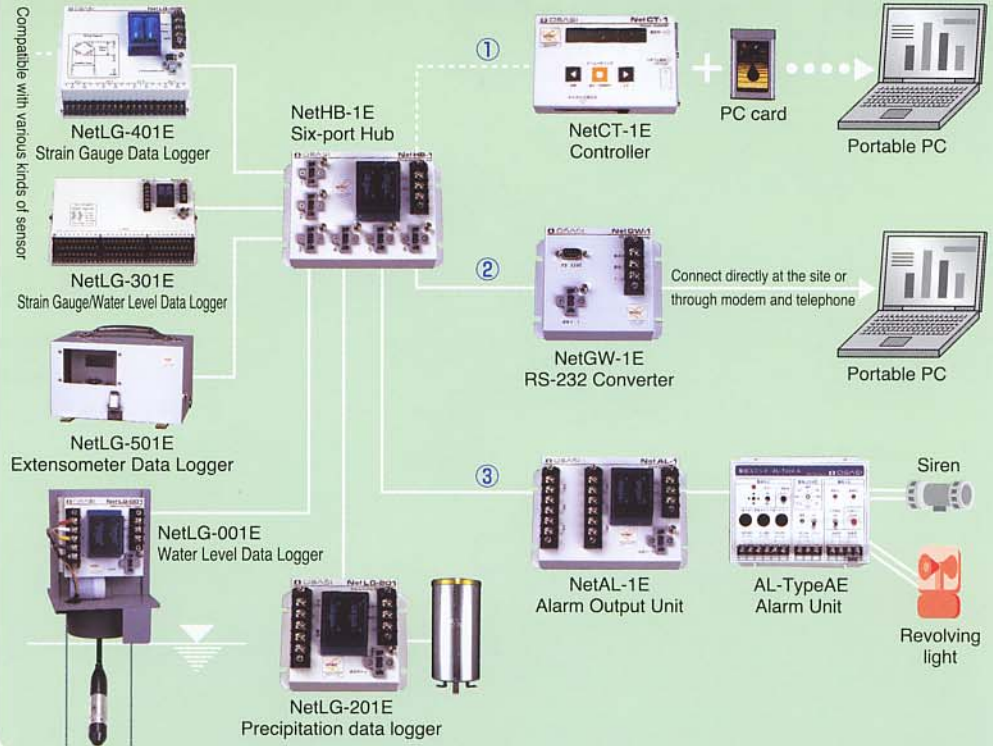
EXAMPLE SETUP 1

semi-automatic (one unit)



EXAMPLE SETUP 2

① Semi-automatic (multiple sensors); ② Fully automatic; ③ With alarms



Specifications

● Name / Four-channel Strain Gauge Data Logger

● Model / NetLG-401E

● Strain Sensor

Input channels / Four strain channels

Sensor power source / DC 5.7mA (for each independent channel)

Measurable range / $\pm 30,000 \mu\text{strain}$ ($\pm 15\text{mV/V}$)

Resolution / $1 \mu\text{strain}$

Compatible sensor / strain gauge (4-gauge method, 4-line system; 350Ω)

Input resistance / normally 350Ω ($100 \sim 500 \Omega$)

Channel definitions / input resistance, initial imbalance, Coefficient, physical units, pre-heat time, physical offset value

Measurement accuracy / $\pm 0.04\%FS$

Recording interval / 1-min, 2-min, 5-min, 10-min, 15-min, 20-min, 30-min

1-hourly, 2-hourly, 3-hourly, 6-hourly, 12-hourly, daily

(Recording time offset possible when recording at greater than 6-hourly intervals)

Alarm types / upper limit, lower limit, change per time period (settable period from 1 min. to 30 days) (user-definable hysteresis)

Alarm output / Alarm packet sent over network

● Main Functions

Digital noise filter, battery voltage check, Coefficient setting, Physical offset setting, clock change function, stored data check, alarm output function, internal temperature check

● Communication Ports

Application / For connecting and communicating with OSNET network and network devices

Number of ports / 1

Distance between devices / 1 km (using >0.9 mm single twisted pair shielded cable)

● Power Supply

CR123A lithium battery (one main and one sub)

External power source / DC12V (5V~15V)

Standby mode power use / 0.1 mA or less (on average)

Strain gauge sampling power use / 60 mA or less (for approx. 10.5 sec.)

※ Pre-heating for approx. 1 sec.

Communication power use / 35 mA or less

Operating Temperature / -20 to $55 \text{ }^\circ\text{C}$ (in the absence of condensation)

● Dimensions / $143\text{H} \times 183\text{W} \times 77.5\text{D}$ (dimensional tolerance ± 1 mm)

● Weight / Approx. 1.1 kg



OSNET is a network solution for disaster prevention monitoring developed by OSASI Technos. OSNET devices have an in-built lithium battery so that they can be reliably used in remote mountainous areas lacking power supply. Networks of up to 64 devices with up to 1 km between hub units can be created. Optional communication equipment is available to enable remote data collection and/or alarm output functions.

OSASI
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* Please note that specifications for the equipment are subject to improvement or change without notice.

* For further detailed specifications, please visit our homepage at <http://www.osasi.co.jp/en/>