

OSNET Strain and Water Level Data Logger

NetLG-301NE

Addition of measurement channels when necessary

- Data logger for cost-efficient observation at various measurement depths -

Correspondence with expansion unit

The number of measurement channels can be increased easily up to 90. Each expansion unit (301N+) has ten channels. The expansion unit allows flexible system configuration for various site conditions.

Versatile alarm function

This instrument allows alarm settings for upper and lower limits (water level), and accumulative change and specified-duration change amount (strain measurement).

Compatible with SD cards

It is possible to collect the recorded data onto an SD card.

Reverse polarity of strain measurement data

The use of different methods of sensor installation and sensors of different manufacturers may result in inconsistency in the polarity of strain measurement data. This instrument allows easy solution of such inconsistency.

OSNET compatibility



[Basic unit]

2-gauge/3-wire-type 120 Ω strain gauge sensor: 30 channels
Water level gauge: 1 channel



Expansion unit for NetLG-301NE: 301N+

301N+

Max. of 60 additional measurement channels

Up to six expansion units with 10 measurement channels can be connected to the base unit. The measurement of 90 channels is possible in total.

No need for power supply

As power is supplied from the basic unit, the expansion unit does not need a battery or other power source.

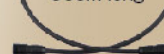
[Expansion unit]

2-gauge/3-wire-type 120 Ω strain gauge sensor: 10 channels

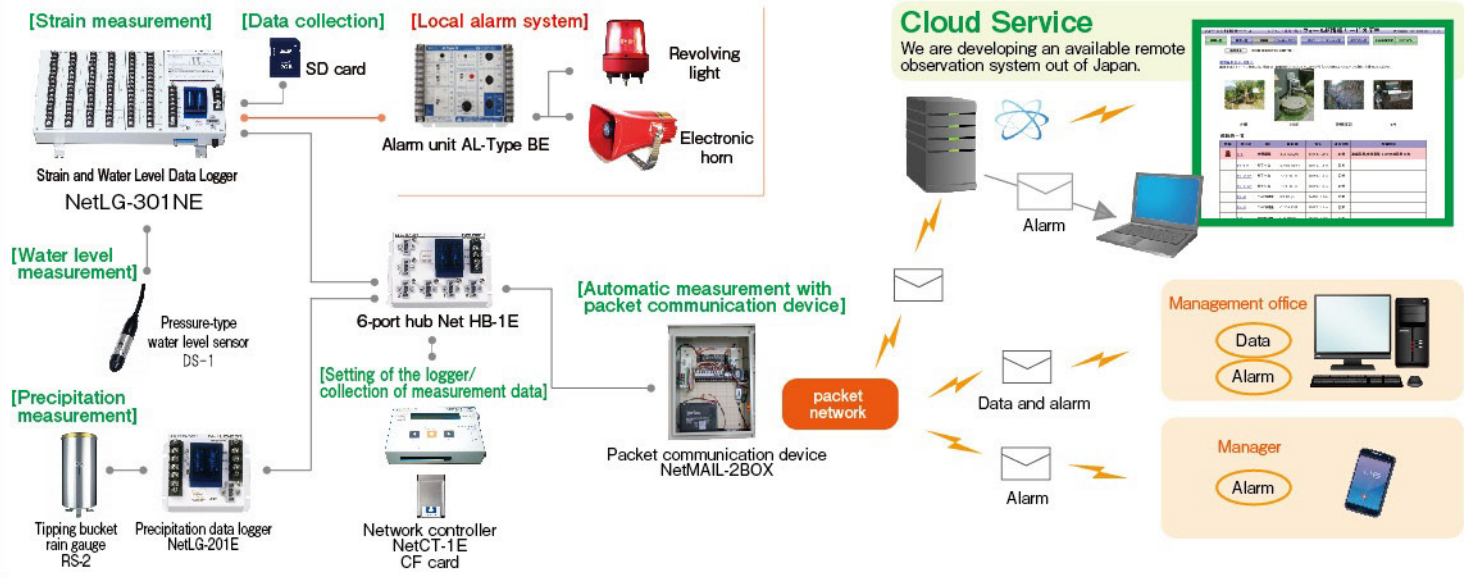
*A specialized cable supplied with the expansion unit is used to connect it to the basic unit or to another expansion unit.

Standard cable
60cm long

Optional cable
3m long



Example of system configuration



NetLG-301NE Specifications

Power supply	External power supply: DC 5 V - 15 V, or Two CR123 A lithium batteries (one main and one auxiliary)	
Current consumption	During standby: 0.1 mA or less (on average), During water level measurement: 20 mA or less, During communication with OSNET: 35 mA or less, During strain measurement: 50 mA or less	
External dimensions / Weight	223H×355W×90.5D (mm) / 2.5kg	
Usable temperature range	-20°C to +55°C (no condensation)	
Number of input channels	Water level sensor: one channel (To be used exclusively with OSASI Technos water level sensors) 2-gauge/3-wire-type 120 Ω strain gauge sensor: 30 channels	
Water level sensor	Power supply to sensor	Constant voltage: DC 3.75 V ± 1%
	Measurement range	Same as the water level sensor connected to the data logger
	Resolution	Select 1 cm or 1 mm
	Accuracy of water level measurement	± 0.1% F.S. (in the entire operating temperature range)
Strain sensor	Power supply to sensor	Constant current DC 5.00 mA ± 0.4%
	Gauge factor	Fixed at 2.00
	Measurement range	± 25,000 μ strain
	Resolution	1 μ strain
	Strain measurement accuracy	Within ± 100 μ strain (including linearity, reproducibility and temperature drift in the entire operating temperature range)
Recording interval	Water level: Select from 1 min, 2 min, 5 min, 10 min, 20 min, 30 min, 1 hr, 2 hr, 3 hr, 6 hr, 12 hr, daily and none Strain: Select from 5 min, 10 min, 20 min, 30 min, 1 hr, 2 hr, 3 hr, 6 hr, 12 hr, daily and none	
Recording capacity	Water level sensor: 30,240 measurements, Strain sensor: 6,300 measurements/ch.	
Memory used	Flash memory (non-volatile memory)	

301N+ Specifications

Power supply	Supplied from NetLG-301NE	
External dimensions / Weight	223H×95W×82.5D (mm) / 0.9kg	
Usable temperature range	-20°C to +55°C (no condensation)	
Number of input channels	2-gauge/3-wire-type 120 Ω strain gauge sensor: 10 channels	
Strain sensor	Power supply to sensor	Constant current DC 5.00 mA ± 0.4%
	Gauge factor	Fixed at 2.00
	Measurement range	± 25,000 μ strain
	Resolution	1 μ strain
	Strain measurement accuracy	Within ± 100 μ strain (including linearity, reproducibility and temperature drift in the entire operating temperature range)



OSNET is the generic name for a network in accordance with the specification of OSASI Technos. An OSNET network can be configured with a maximum of 64 instruments. A maximum distance between each instrument is 1km (twisted pair of single cable 0.9mm or larger). The major feature is its operation on lithium batteries in mountainous areas where there is no power supply. Also, it is possible to collect the data remotely, to output alarms, etc. by adding communication devices to the network.

We pass on voices of the earth

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