

Management Solutions



Our Power, Your Confidence

Gamatronic G-Sight and Gamatronic G-Eye

Extend your Monitoring and Controlling ability

In our ever changing and dynamic business world, data centers are the heart of every organization. In order to keep them functioning properly, we need to keep data centers free of power fluctuations, environmental changes, physical intrusions and other calamities. Even the slightest malfunctioning of vital equipment could mean chaos for a company.

As a leading manufacturer of advanced technologies, Gamatronic is proud to present the next generation in Control, Management and Monitoring systems for the operational parameters of data centers - the GSight and the G-Eye devices.

These two unique systems offer the perfect solution for business continuity, both in manned and unmanned sites. Control and management can be conducted from anywhere, anytime, 24/7, through one small, highly reliable device.

The G-Sight and G-Eye provide you with a user-friendly unit for all of your control and management requirements. Alerts can be sent by: email, SNMP system, SMS, popup window. Both units are extremely small. However don't let their size fool you - whether you choose the G-Sight or the G-Eye you receive one of the most advanced systems available for control and management in one box. Controllers G-Sight and the G-Eye focus on what is really necessary .

More advantages of G-Sight and G-Eye:

- Easy to install and operate
- Self-contained control, monitoring and management system, not dependant on a server.
- Stand alone system, unaffected by power failures.
- Attractively priced.



G-Eye main screen

Category	Status	Value
Power	✓	normal
Environment	✓	normal
Dry Inputs	✓	normal
Dry Outputs	✓	normal
IT Monitor	✓	normal
UPS	✗	requires attention!
SMS	✓	normal

31/07/2008 11:09:10 Refresh: 3 seconds Attention!

Technical Specifications

Measurement	G-Sight (max. inputs or outputs)	G-Eye (max. inputs or outputs)
AC voltage	60-450 Vac, transducer required (2) (Note 1,2)	60-450 Vac, transducer required (12) (Note 1,2)
DC voltage	60-450 Vdc, sensor required (2) (Note 2)	(+/-) 0-60Vdc (4) 60-450 Vdc, sensor required (12) (Note 2)
AC current	Current measurements from 0-100A, sensor required (2) (Note 3)	Current measurements from 0-100A, sensor required (12) (Note 3)
DC current	Optional with Hall sensor and external Gamatronic accessory (2) (Note 4)	(+/-) 0-60mV (4) Optional with Hall sensor and external Gamatronic accessory (12) (Note 4)
Frequency	--	45 Hz ~ 65 Hz, 5 ~ 40 Vac (2) (Note 5) Sensor available from Gamatronic
KWH	Kwh Meter inputs (1) (to be fed by pulses from digital meter)	Kwh Meter inputs (2) (to be fed by pulses from digital meter).
Temperature	-10 to +95°C (4) 1 sensor provided. Additional sensors can be ordered	-10 to +95°C (4) 1 sensor provided, additional sensors can be ordered
Humidity	0~100 % relative humidity (1) Signal range 0 - 5 Vdc can be ordered	0~100 % relative humidity (2) Signal range 0 - 5 Vdc can be ordered
Flood	Via dry contacts can be ordered	On/off (1) can be ordered
Liquid level	Input range:4 - 20 mA (1) , User-supplied sensor	Input range: 4 - 20 mA, 0 - 12 Vdc (1) User-supplied sensor
Dry inputs	Open/Closed (4) , software configurable	Open/Closed (32) , software configurable
Dry outputs	Open/Closed (4) 2 (N.O & N.C), 2 (N.O OR N.C) hardware selectable with jumpers Relay contacts: I _{max} = 1 A, V _{max} = 60 Vdc (all fully floating)	Open/Closed (16) , (N.O OR N.C) user define Relay contacts: I _{max} = 1 A, V _{max} = 60 Vdc
UPS reading and status	Not isolated RS232 port (1) UPS model and manufacturer, input voltage and frequency, output voltage and current, battery status	Not isolated RS232 port (1) UPS model and manufacturer, input voltage and frequency, output voltage and current, battery status
Power supply	12÷16 Vdc,0.75A	16-60 Vdc/16-40 Vac
Battery backup	--	1.5-2 hours with 12 V, 2.3 Ah battery provided
Max total measurements	AC/DC voltages and currents (2)	AC/DC voltages in range of 60-450, AC currents, DC currents with hall sensors(12). DC voltages in range of (+/-) 0-60Vdc,DC currents (+/-) 0-60mV(4)

Notes:

1. Ac voltages are measured with the use of a special ac-to-dc transducer available from Gamatronic and designed for the specific voltage ranges the customer requires. The sensor converts the ac voltage to dc voltage 0 - 5 Vdc.
2. Ac/Dc voltages can be measured with the use of a special step-down transformer available from Gamatronic. The sensor converts up to 4 DC/AC voltages to 0 - 5 Vdc.
3. AC current is measured with the use of a special Gamatronic sensor. Sensor input: up to 100Aac, output: 0-5Vdc. Current > 100A can be measured if first reduced to the sensor range (0-100A) .
4. DC current is measured with the use of a special Gamatronic sensor. Sensor input: Hall sensor, output: 0-5Vdc.
5. Line frequency sensor available from Gamatronic. Input: 110/230Vac, Output: 9Vac.

Gamatronic Control Devices Solutions

Whether you choose the G-Sight or the G-Eye, you receive one of the most advanced systems for control and management in one box, with a focus on what you really need.

Environment

Extreme environmental changes can also affect the working capabilities of electrical systems. You might get a reading that the active temperature in server room is 45C, but you failed to receive an alarm that the internal air-condition stopped work a while ago. Or the opposite - temperature sensors show air condition is working at 18C but in fact the servers are overheating because of an open window or door.

Control & management solution:

The unit can connect up to multiple temperature sensors, allowing user to read active output temperature from a number of sources. Each sensor can be configured separately by user so that unit immediately sends out an alarm when it recognizes excessive temperatures, as well as instant notification to technicians on the road to indicate the specific critical sensor.



Dry Contacts

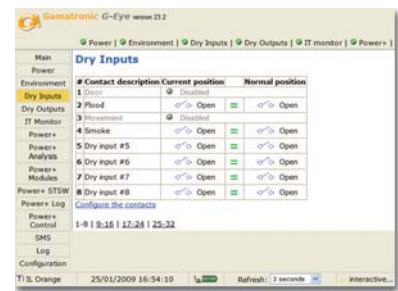
Any small malfunction at a site can lead to excessive damages and waste. A door left open, even slightly, can cause quick rise in temperature, leading to excessive activation of air conditioner, which causes generator to work overtime until it finishes all the fuel reserve - all this could be prevented if user had been notified in time.

The common denominator of all these scenarios is simple: "Head off problems before they occur".

Control & management solution:

The unit has amount of inputs and outputs dry contacts that can be configured by user as normally open/close. Devices supported by dry contacts may be connected to the unit, and also configured according to user's requirements. The unit can be arranged to notify and alert up to 10 phone numbers, although it is fully autonomous to resolve almost any problem without human intervention.

A wide range of supporting sensors, such as door/smoke/flood/motion, can also be ordered with the unit.



Power/UPS

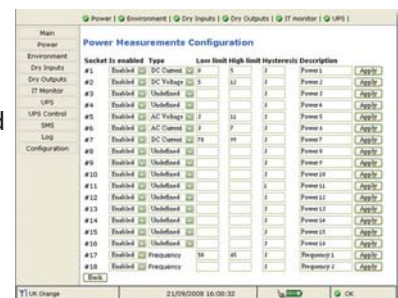
a) You need to monitor critical voltages/currents at a remote site, and want to be immediately informed of any changes in these measurements.

b) Vital electrical systems require backup units for power supply. What would you do in case of an AC failure at a remote site? How would you be involved in the status of the batteries? And no less important - how fast will a technician be notified and be able to arrive before it's too late?

Control & management solution:

a) The unit has several analog inputs that can be connected directly to voltage and current sensors available from Gamatronic. The user can set alarm thresholds, so that an alarm will be generated if the current or voltage measurement passes the threshold.

b) The unit has its internal web interface which the user can browse anytime and anywhere using an internal/external IP. The internal modem is programmed to immediately send an alert to prearranged recipients that UPS is in critical state, while servers receive UDP messages and start count-down before shutdown. Users can also check UPS's backup time in active load via the web, see helpful values such as: input/output voltage according to different phases of UPS, DC battery voltage, frequency, battery temperature and permanently be in touch with the site



IT control

Are you instantly informed of server/switch/routers that suddenly lose ping request? Can you be alerted in real-time if the CPU load, physical/virtual memory or hard disc space is over limit in one of your 40 servers? Today it is possible to remotely connect inside each server and shut down manually when the site works on UPS batteries. But after AC failure is resolved, why wait till morning and wake them manually while someone in the world needs these servers during the night?! How are you notified if the AC has recovered at all?



Control & management solution:

The unit can control and monitor up to 32 IT targets. User can configure the IP, server name, Mac address (retrieve automatically), time to count down in AC failure/low battery and time for "wake up" after AC is recovered. User can define number of rounds ping checks, CPU load, physical/virtual memory and hard disk usage limits, as well as alarm status when one of these limits is exceeded.

GSM control

User can control the unit via simple SMS commands, and receive notification depending of the event group alarm. Here are some of the control commands: temperature, dryin, dryout, shutdown, wake, It. Some of them are of course password protected.

"dryout 2 pulse admin"

Sending this text to the SIM number of the unit will pulsed the machine that is connected to dry out number 2.

"temp 3"

The unit will response the current temperature of sensor number 3 in Celsius.

Exclusive G-Eye Solution:

Backup capability:

You want to monitor devices in a remote location, and need to be alerted in the event of a power outage in the building, which has no power backup system.

Solution:

G-Eye enables you to monitor a wide range of devices and sensors remotely, and has a built-in battery backup that enables it to notify you immediately via SMS in the event of any irregularities, including during a power outage.

High number of power measurements:

You need to monitor 16 different voltages and current measurements and the frequency of two AC lines, and want to be notified instantly when any of the measurements exceed their permitted ranges.

Solution:

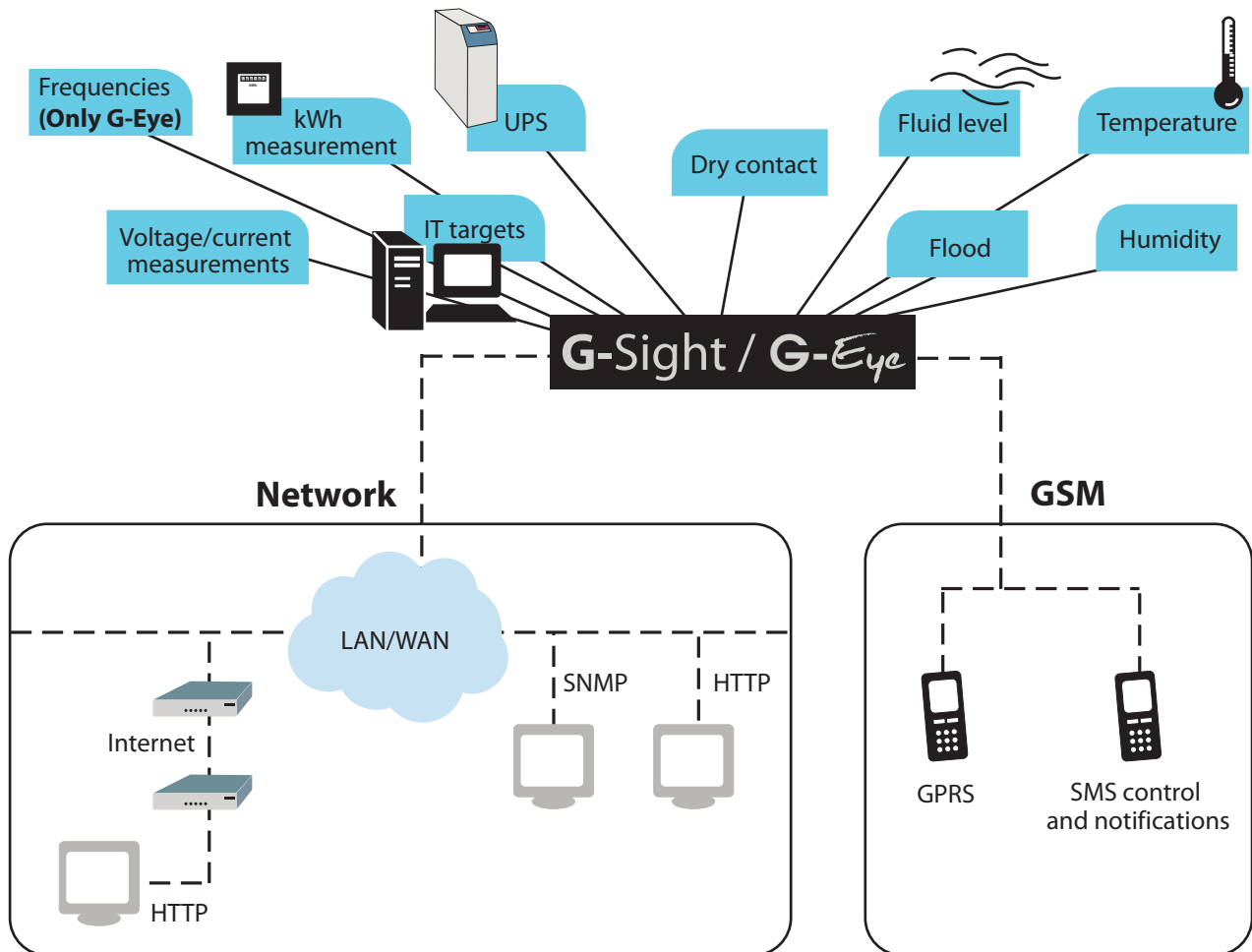
G-Eye can monitor up to 16 DC and AC voltages and currents and two AC line frequencies. The user defines the normal measurement range for each input individually. Real-time measurements can be viewed on-line at any time. The system can generate instant notification of management and technicians via email and/or SMS if any of the measurements fall outside of their user-defined acceptable ranges.

Easy migration path

You are a satisfied user of G-Sight, using it to perform multiple monitoring, measurement, and control functions, but you have exhausted G-Sight's capacities - you need additional input and output connections.

Solution:

Move up to the G-Eye - same great features as the G-Sight, but many more analog inputs for power measurements, more input and output dry contacts, plus battery backup. After configuring G-Eye for the desired alarms, simply disconnect your inputs from the G-Sight, connect them to the G-Eye, and you're ready to go.



G-Sight and G-Eye can also be used for a vast range of additional applications:

- **Smart Home control:** users can control devices within their home via cellular phone, such as an electric entrance gate, indoor air conditioning, outdoor emergency lighting, intrusion alarm and more.
- **Cellular site management and control:** Users can receive online information and alerts about events occurring on site and the site's physical access.
- **Manufacture process management:** Devices can be used for control of the manufacturing procedure at factories, detection of faults and problems along the line and product-line control.
- **Electricity rooms:** Devices can measure frequencies and currents of power grid, status of back-up batteries and readout of clocks, flooding of room, over humidity or failure of the UPS system. Any deviation from predestined parameters will send out alerts to technicians.

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