GAS NETWORKS

HWM

Experts in Gas Monitoring

innovation, quality and service for gas network energy management

PRODUCT CATALOGUE

MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL

Who are **HWM?**

We are experienced and respected manufacturers of monitoring and telemetry equipment for water, wastewater and gas networks, together with telemetry AMR and facilities optimisation products.

Having serviced the clean water industry for nearly 40 years, we have combined advanced cellular communications technology with rugged, purpose-designed hardware to deliver a wide variety of robust and efficient network monitoring solutions.

We are dedicated to achieving our aim of **helping customers to save natural resources and reduce CO_2 emissions**.

Based out of our Head Office in South Wales, which incorporates a 400 year old, Grade II listed farmhouse, we design, test and manufacture all of our network monitoring solutions in-house.

We boast an innovative research, development and manufacturing facility and dedicated engineering and production teams, allowing us to deliver our industry-leading products to customers quickly.

Our unique Head Office also houses our advanced testing and development equipment. This includes our complex new test rig and our industry-renowned external leak site.

The test rig, which was developed to meet our own specifications, is built in three parts and allows the replication of a variety of network conditions. Our team of engineers and technical specialists use the test rig to support development of new technologies and to test upgrades of current products.

Our leak site is an underground network of pipes and valves designed to simulate leaks and generate authentic leak noise. While our technical teams use the leak site for product development, it is also a great facility to help train customers in leak noise detection.

Why monitor **Gas Networks?**

Within the gas industry there is a requirement to reliably monitor the gas pressure in the medium and low-pressure distribution networks. It ensures that customers are receiving the correct supply pressures whilst guarding against over pressurisation, associated leakage and public reported escapes.

In the UK, the installation of pressure monitoring devices is a critical component of the gas networks obligation to meet the Uniform Network Code (UNC).

Failure to do so could mean that OFGEM removes their license to operate. In addition to the general network monitoring sites there are also network validation points. The data collected from these sites is used to model the demand on the network.

The data is particularly useful during the winter period when demand is at its greatest. In the past the networks have used manually downloaded data loggers and cycled them around the various monitoring points on an annual basis.

How do we monitor **Gas Networks?**

Thanks to multi-input functionality, Intelligens can be supplied with multiple digital pressure inputs, in addition to temperature, flow and state recording. Intelligens has been designed to reliably and securely transmit continuous data via NBIoT or LTE-M with a 2G backup (additional modem variants are available).

Dial in and sample regimes are user defined and give the user the ability to finely analyse and monitor their gas network. Users can set alarm limits which can be uploaded to enable an alert to be sent to multiple recipients when alarm parameters are exceeded.

When an alarm event occurs, the unit's accelerated sampling frequency and data transmission options allow the user to monitor and respond to changing conditions with much greater confidence.

Intelligens gas loggers provide an up-to-date view of your gas network and will be alerted to any changes, allowing for fast response and fault resolution.

Our user-friendly software platform allows the user to monitor and configure loggers remotely with the ability to graph and fully download current and historical data.

Intelligens GNS
ATEX Certified Data Logger

Intelligens GNS: NBIoT-enabled data logger engineered for pressure point monitoring

Developed to reliably and securely transmit continuous data, Intelligens GNS ensures that maximum design pressures are not exceeded, without ever compromising a reliable supply.

Intelligens GNS can be used in combination with a variety of digital sensors, making it an effective gas network monitoring solution.

Key Features and Benefits

- NBIoT LTE-based cellular communication standard with fallback 2G capability
- Intrinsically safe and certified for use in Zone 0 hazardous areas
- IP68 rated, making it fully waterproof under pressured immersion

Intelligens PRS
ATEX Certified Data Logger

Intelligens PRS is an ATEX approved data logger developed to monitor district pressures, supporting the maintenance of a statutory minimum supply and keeping network pressure losses to a minimum.

Certified ATEX/IEC to Zone 0, Intelligens PRS is designed to work safely and efficiently in hazardous areas, making it well suited to monitoring regulating stations and extremity points.

Intelligens PRS, with its versatile telemetry options, is well suited to 'fit and forget' operations in remote or hard to access locations.

Key Features and Benefits

- NBIoT LTE-based cellular communication standard with fallback 2G capability
- Intrinsically safe and certified for use in Zone 0 hazardous areas
- IP68 rated, making it fully waterproof under pressured immersion

Case Study: Intelligens GNS highlights pressure fluctuations in gas supply

C&F Quadrant came to HWM for help when they had completed an 1,800kW boiler installation but were repeatedly being called to site as the boilers were cutting out.

Their engineers attended site to service and carry out checks on the boilers but could not find an issue. The customer was concerned that the boilers were faulty or incorrectly installed.

HWM recommended our portable, ATEX approved, Intelligens GNS logger, which has been developed to remotely monitor gas network pressures. The logger can be left in situ and easily programmed to log and transmit the data from a user defined logging regime. By setting alarm limits, the user can also be alerted as soon as the gas pressure falls outside their predefined thresholds.

C&F Quadrant used the Intelligens GNS logger to monitor the incoming gas supply to the installation. Within a matter of days, the Intelligens logger highlighted an intermittent fall in gas pressure which caused the boilers to shut down as they did not have the required pressure to function.

As a result of using the Intelligens GNS logger, C&F Quadrant's reputation was maintained and costly visits to the customer's site and engineer call-outs were eliminated. The problem was traced to a faulty gas meter which was duly replaced by the supply company and the heating installation was returned to full capacity.

External Pressure Input
ATEX Certified Pressure Box

The ATEX certified External Pressure Input is an adapter that provides our Intelligens data loggers with up to two additional pressure channels.

Connecting an ATEX External Pressure Input to your Intelligens logger will provide three channels in total.

COMlog 2 IS
ATEX Certified Data Logger

COMlog 2 IS is the intrinsically safe, highly versatile data logger designed to be a multi-application solution

Developed for flexibility, COMlog 2 IS is compatible with any sensor or meter that has a volt-free pulsed output.

Particularly effective for smart metering, COMlog 2 IS provides businesses with an efficient way of managing gas and energy consumption and reducing costs.

Key Features and Benefits

- NBIoT LTE-based cellular communication standard with fallback 2G capability
- Intrinsically safe and certified for use in Zone 0 hazardous areas
- IP68 rated, making it fully waterproof under pressured immersion
- Compatible with a wide range of meters and sensors

COMlog IS
Intrinsically Safe Data Logger

COMlog IS is an intrinsically safe data logger designed for a wide variety of data logging solutions.

Designed to be mounted in close proximity to either a commercial or domestic gas meter, COMlog IS can also be used on any other utility meter that has a pulsed output.

Particularly effective in smart metering, COMlog IS provides businesses with an efficient way of managing gas and energy consumption and reducing costs.

COMlog IS uses accumulative pulse counting technology to calculate index readings against a known volume.

COMlog IS transmits data through an integral modem with NBIoT or LTE-M with a 2G backup.

The robust system is supplied with many features, including fast logging for high-level consumption analysis, a range of comprehensive alarms, the ability to upgrade and programme over-the-air without the cost of an onsite visit and the device being fully sealed and submersible to IP68.

SEVERN TRENT

About COMlog IS

COMlog IS is an advanced data logger that provides businesses, asset managers and service providers with a cost-effective way to manage energy consumption, reduce energy costs and cut carbon emissions.

This innovative logger uses the latest integral cellular telemetry technology to provide rapid data transmission at low cost.

Low power electronics enable a long battery life that can be maintained even with increased transmission rates.

HWM
www.hwmglobal.com

COMlog IS streamlines data flow for Severn Trent

delivering a more effective, time-saving process and removing the manual data collection element

As one of the UK's largest water and sewerage companies, Severn Trent proactively implements technological solutions to enhance the service it provides to its customers.

With a focus on sustainability, Renewable Energy Generation is a rapidly expanding part of Severn Trent's business.

While working with Severn Trent recently on a project, we identified an opportunity to streamline a process of data collection using a **COMlog IS** device.

At their Minworth sewage treatment works, the anaerobic digestion process generates a substantial amount of Biomethane gas. This gas is harvested and injected back into the National Grid, meaning the gas is not wasted.

Previously, a flow computer was used to record the amount of gas being injected back into the Grid, although the process was slow and manual, as engineers had to record the data from the computer screen and calculate the totals.

By introducing COMlog IS into the system, data is now recorded by the device and is automatically exported to engineers in an accessible, easy to view format.

This is a much more effective, time-saving process, removing the manual data collection element.

This application demonstrates the versatility of the COMlog IS device as it is most typically deployed for monitoring and recording gas consumption.

The success of this installation can be replicated at Severn Trent's other BTG plants, and the versatility of COMlog IS means it can also be used to monitor the main biogas and propane meters also.

In the last year, Severn Trent has created enough renewable energy to power 60,000 homes (which is approximately the size of the city of Gloucester).

Severn Trent is focussed on developing additional sites for biogas injection and the solutions provided by HWM can help to deliver the biogas used to power homes into the future.

We are experienced and respected manufacturers of monitoring and telemetry equipment for water, wastewater and gas networks, together with telemetry AMR and facilities optimisation products.

CLEAN WATER   **WASTE WATER**   **GAS NETWORKS**   **AUTOMATED METER READING**   **FACILITIES MANAGEMENT**

Clean Water Network Monitoring

With over 30 years in the water industry, HWM is skilled at addressing the challenges of water network monitoring. With increased pressure on water globally, we can solve the problems of effective water network management, providing data on performance and enabling effective network management.

Waste Water Network Monitoring

Control of waste water networks is a key public health challenge. Effective monitoring of waste water networks reduces both frequency and impact of pollution events. Permanent installation of remote monitoring equipment helps to alert network operators to immediate problem sites.

Gas Network Monitoring

Effective monitoring of gas networks has traditionally been a challenge, due to a lack of on-site power and deployment difficulty. Our gas products address these concerns, using our expertise in ATEX and low power design capabilities. This enables users to collect data about this critical infrastructure.

Automated Meter Reading

Accurate and consistent data is the foundation for effectively controlling energy usage and reducing waste. AMR delivers precise and timely consumption data for investigation and analysis of energy usage as well as exact billing.

Facilities Management

HWM has pioneered the development of wireless monitoring solutions for fixed network deployment. These can be combined with a variety of sensors, providing our partners with 'near real-time' data that they need to help their customers to eliminate waste, cut costs and reduce carbon emissions.

A **Halma** company

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