Gas detection and measurement equipment is used to keep workers safe. Fixed gas detection systems continuously measure the concentration at specific points. Portable instruments are used to monitor the atmosphere in the vicinity of the worker.

Traditionally there has been very little integration between fixed and portable instruments used at the same site. Traditionally, there has been very little integration between fixed and portable instruments used at the same site. This has been due to limitations in communication technologies.

For example, communication between portable devices and a central monitoring system was either through a wired connection or using a radio frequency transmitter. This meant that the information could only be sent at specific intervals and was not available in real-time.

The invention of ACDC has significantly changed this situation. ACDC is a technology that allows portable gas detection devices to be integrated into a network. This means that data from the portable devices can be transmitted in real-time, allowing for a more efficient and effective monitoring system.

ACDC technology is particularly useful in hazardous locations where the use of wireless communication is required. This is because ACDC technology is classified as an intrinsically safe technology, meaning that it is designed to prevent the explosion of hazardous gases.

Adding ACDC communication lets you raise the informational content of transmitters in direct wired analogue (4–20 mA) systems to the level of bus systems – and beyond. This means that you can use ACDC to increase the amount of information that is available from a transmitter, allowing for a more detailed and comprehensive monitoring system.

A particular advantage of the patent pending ACDC technology is that it can be incrementally added to existing systems, without the need to replace all of the existing equipment. This makes it a cost-effective solution for businesses that want to improve their monitoring systems.

Adding ACDC communication also allows for two-way communication between the portable devices and the central monitoring system. This means that not only is data transmitted from the portable devices to the central system, but also from the central system to the portable devices.

This two-way communication allows for real-time data transmission, allowing for immediate response to any potential hazards. It also allows for the remote activation of personal instrument alarms, which can be used to warn workers of potential hazards.

In summary, ACDC technology provides a more efficient and effective way to monitor gas concentrations. It allows for real-time transmission of data, two-way communication between portable devices and a central system, and the ability to add to existing systems without the need to replace all of the equipment. This makes it a valuable addition to any monitoring system.
Integration of fixed and portable gas detectors even in 4-20 mA systems

**The Cloud**

Isolated data sets and “silos” are bad! Data gains value as a function where it is needed, when it is needed, and processed in the most useful possible way. The cloud is the useful possible way.

**The controller**

Controllers house the local control center and data hub of integrated gas detection systems. They are the local processing of data inputs from the sensors. In real-time, they collect, store, assess and transmit the measurement information. In turn, controllers allow the collected data to be integrated with other data systems.

**The transmitter**

Transmitters are the hardware that becomes the intelligence of the system, providing the necessary feedback to the controller to receive the necessary data from the local network. The transmitter can be a fixed station which measures the concentration of gas in a location or a portable gas detector that measures the concentration of gas in a single location for a short period of time. The transmitter can be connected via a wired signal or a wireless signal to the controller. The transmitter can then be used to measure the concentration of gas in a location for a longer period of time, such as in a fixed system, or for short periods of time, such as in a portable gas detector.

**Fixed gas detection device**

Portable and wireless gas detection devices are invaluable in scenarios where the need for replacement or changing the method of wiring is a concern. Retrofitting existing systems with AC/DC is easily possible without the need for repairing or changing the method of wiring.

**Portable gas detection device**

Portable gas detection devices are available from GfG! They are an intrinsically safe, self-contained wireless server used to display, coordinate and manage monitoring and status for groups of up to 10 wirelessly enabled portable gas detector users. No computer required!

**The TeamLink**

The TeamLink is an intrinsically safe, self-contained wireless server which acts as a base station for the portable instruments. The server can be connected to a single central processing center. Connection may be made via a wired connection or through a wireless connection.

**The team**

GfG would be delighted to help design a gas detection integration solution that fits seamlessly into your existing security concepts and production processes.