



Benefits of Digital fixed systems & Remote visibility

April 2020

Outline

- Fixed gas detection system communications.
 - Benefits of digital communications
- Crowcon's Digital solution
 - Introduction to GM controller
 - GM controller operation & navigation video
- Remote visibility
 - Benefits of remote visibility
 - GM controller remote visibility functionality
 - GM controller remote visibility operation & navigation video

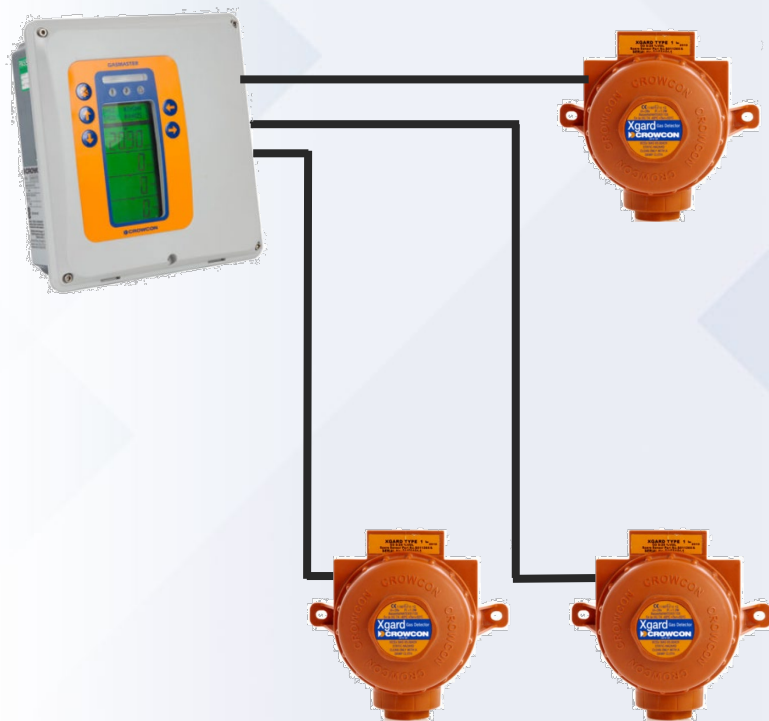
Fixed gas detection - Communications

Conventional analogue 'point to point systems have been around for many years and for many gas detection operators, is still their first choice. Using a gas detection system that has familiar technology and functionality benefit a busy operator and provide a level of peace of mind.

The emergence of digital and communications technologies means much more information can be communicated to a control system, with the added benefit of reduced cabling costs.

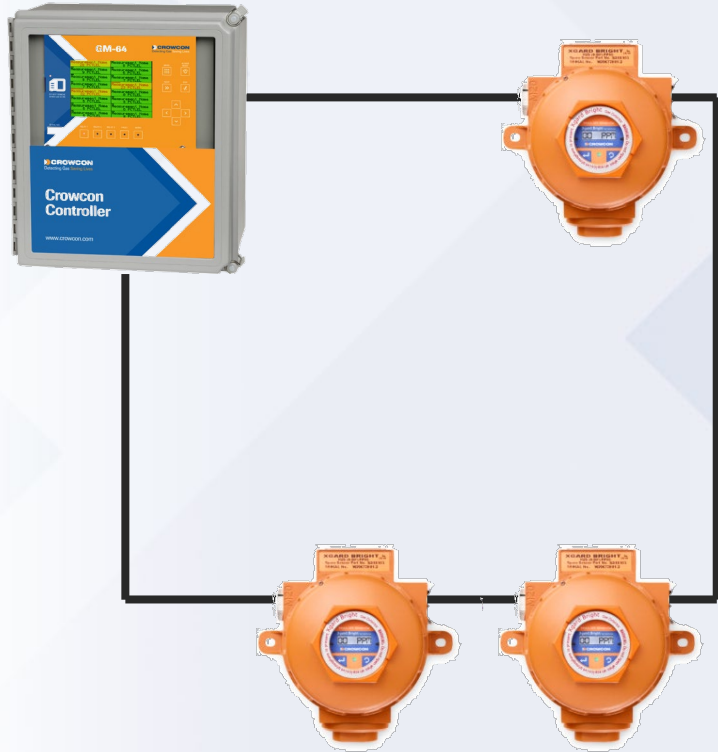


Traditional 4-20mA (Point to point)



- **Analogue 4-20mA systems can only communicate a limited amount of information from the detector.**
 - Less than 3 mA = Fault
 - More than 21.5 mA = Gas reading over-scale
 - Alarm triggers at pre-defined mA setting.
- **Point to point cables from controller to each detector**
 - Significant cable usage for multiple detector applications.
 - Cable costs (dependent on application) can often cost more than complete fixed head detector cost.

Digital addressable



- **Digital addressable loop communications can connect multiple fixed detector heads on one or multiple loops.**
 - Results in significant reduction in cable requirements and installation time.
 - On average, estimated cable usage reduced by 70%
- **Advanced data transfer via digital communications.**
 - Actual gas readings
 - Diagnostic data
 - Service data
 - Calibration history
 - Temperature
- **They can allow a user to change calibration and device configuration**
 - Ability to complete tasks remotely. Task usually completed by operator visiting gas detection system in potentially hazardous location.
 - Reduce risk, improve safety

Crowcon's Solution

GM controller range -

There are 3 digital addressable controller options all identical functionality but with different channel input capabilities.

GM16: 1-16 Channel inputs

GM64: 1-64 Channel inputs

GM128: 1-128 Channel inputs



3 fixed head detectors available possess digital communications -

Xgard Bright : Versatile detector with digital comms and non-intrusive operation via OLED display window.

Xgard IQ : Intelligent Gas Detector and Transmitter, with smart sensor modules with SIL2 certification.

IRmax : Infrared (IR) gas detector that delivers rapid, fail-safe detection of hydrocarbon gases and vapours

Introduction to controllers

The GM controller range are Crowcon's new easy to configure and user friendly up to 64 channel addressable controller.

- Options for 16 / 64 / 128 channel capability controller which provides simultaneous display and alarm functions for up to 64 input variables on one screen (GM128 has twin screens)
- 4-20mA analog, RS-485 MODBUS & HART enabled communications as standard.
- Addressable functionality enabled
- Direct to web page live feed communication
- Local non-intrusive operation or via direct web page configuration
- Colour LCD display – Monitor live data & trends. Colour change to indicate alarm
- Available in rack or enclosure mountings



GM controllers, improved functionality?

Additional benefits

- Increased channel capability through one controller.
- Addressable RS-485 MODBUS & 4-20mA analog communication as standard
- Simultaneous display and alarm functions for up to 64 input variables on one Colour LCD display screen.

Cost benefits – Modular design

- New controllers are all modular, so controller configuration can be designed exactly to user requirements to reduce cost and complexity

(Can be upgraded. Channels, functionality and capability can all be added after installation.)



Currently to achieve 60 channel capability 5 Vortex units would need linking together.

Single GM64 with 64 channel capability and additional benefits could cost up to 45% less! (dependent on configuration)

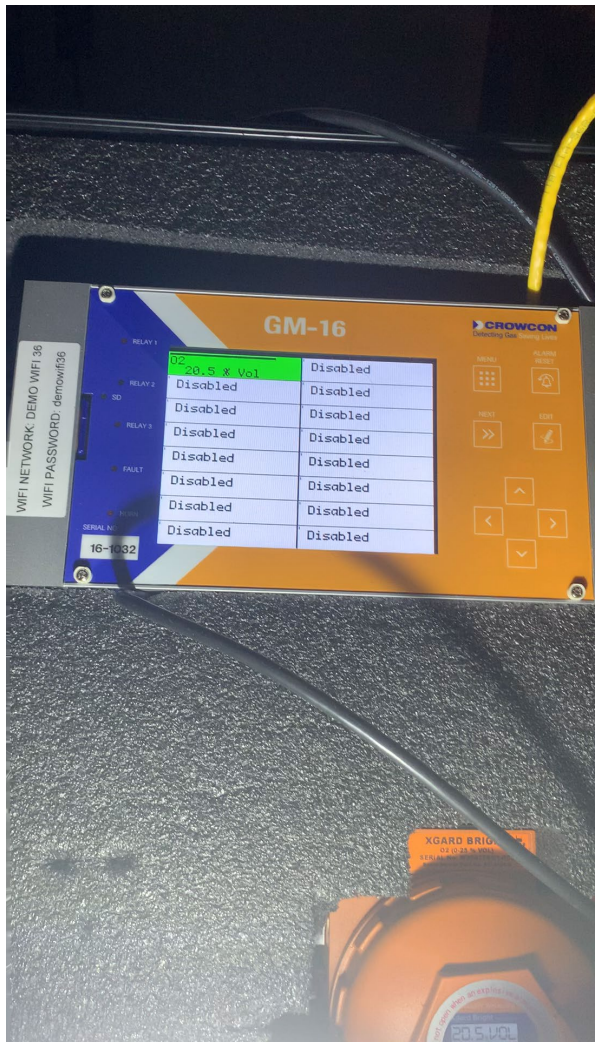
End user – Operational improvements

- Improved user interaction, functionality & control.
 - Alternate display options
 - Record events, alarms and trends
 - Configure & name channel, zone and relay trips
 - Direct to webpage communication
- View & action controller information from any device with internet capability remotely.

5 Display options

- Complete channel
- Zones
- 30 min trend
- 24hr trend
- Bar chart

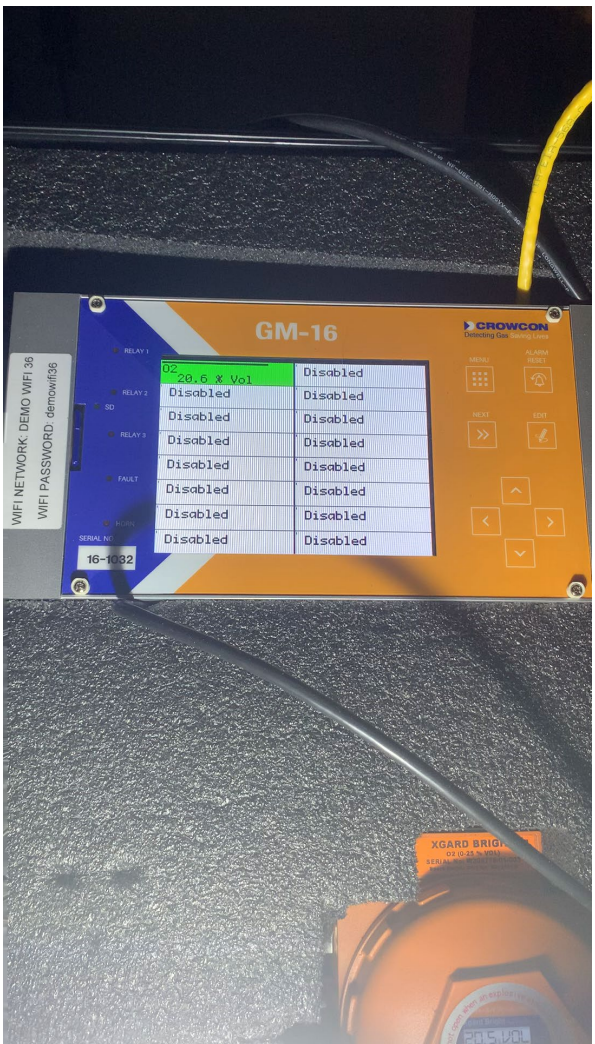
Easy scroll screen change, configured to your requirements.



Configuration

- Quick & easy
- Multiple options
- Tailor to requirements
- Reduces time needed to complete tasks

Be in controller of your controller



Remote visibility & control

Fewer risks, improved safety & time saved

Gas detection system can be mounted in potentially hazardous locations, and access to the system is necessary for general maintenance and key task completion.

Remote access improves operations in various ways:

- Operator can view environmental conditions before entering location.
- Actions can be completed without the need to enter location.
- Control room operative can react to evacuate or activate process in order to reduce risk.
- Operator can instantly review gas detection system rather than arranging a visit and potentially requiring a work permit to enter location.



Remote visibility & operation

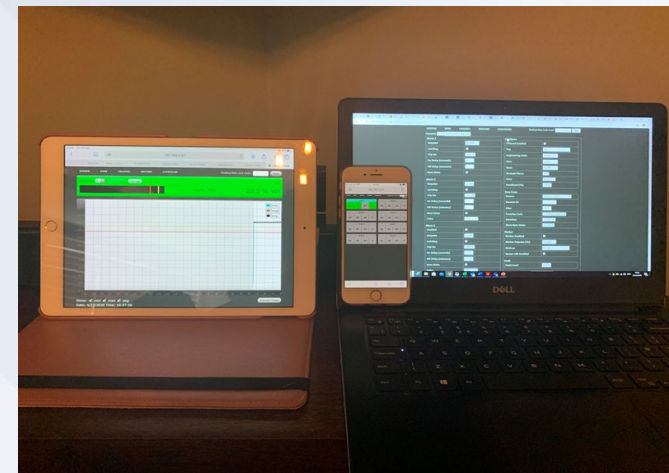
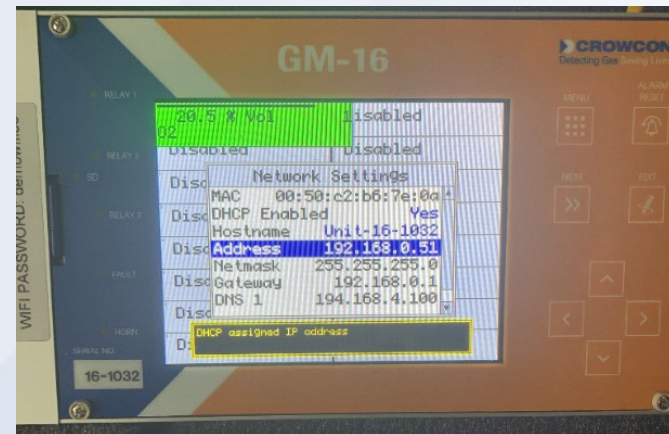
GM controller range once connected to a network allows access to a 'Direct to webpage' feature.

A unique to controller IP address can be located in the controller network settings.

By entering IP address into any device with internet browser, remote access to all functionality that is available at the controller panel.

- Visibility to various display screens options.
- Ability to configure channel, zone and controller options.
- Inhibit detector
- Change or update settings
- Review & export data

Multiple devices can remotely view data at the same time. Any changes can be kept secure with login password requirement.



What's Next?

- Seek out opportunities where addressable systems or remote visibility will provide solution or benefit to site installation or operations.
- Let us know what you need to win these opportunities
- We are here to help, feel free to get in touch



Questions?

