



BOREAL



END-OF-LIFE (EOL)
What to expect during the End-of-Life change over
from the GasFinder2-MC to the GasFinder3-MCr.

INFORMATION PACKAGE



PRE-JOB WALK THROUGH

BEFORE SITE WORK IS COMPLETED

It is strongly suggested that the following work be performed by Factory Authorized Technicians.

ANALYZER CABINET

Visual inspection of the Analyzer Cabinet to ensure suitable space to allow for both Analyzers to run in parallel during the transition. Both the GasFinder3-MCr and GasFinder2-MC utilize the same 3U 19" Rack Mounted Enclosure.

Visual inspection of the Power + Communication Cabling to ensure there are sufficient lengths of the existing cables required for the change over.

The Analog and Relay outputs on the GasFinder3-MCr are now din-rail mounted, it will be important to identify a location to mount the Analog and Relay Modules.

Pictures of the Analyzer Cabinet are strongly suggested.

MEASUREMENT HEADS

During the pre-job walkdown, it is to be confirmed which Measurement Heads are installed (i.e., OP1, OP2, OP3, MDP, V1, etc.).

Now is a good time to inspect the X-Y Mount for cleanliness and functionality.

Note the length of the patch cable connecting the Measurement Head to the Junction Box. Pictures of the Measurement Heads on their mounting structures are strongly suggested.

RETRO-REFLECTORS

During the pre-job walkdown, it is to be confirmed the dimensions of the Retro-Enclosure and which Retro-Arrays are being used (e.g., Grey Tape, IMOS, # of Cornercubes). With the door opened on the Retro-Enclosure, it is strongly recommended to take a picture of how the Retro-Window is fashioned to the Retro-Enclosure.

Do you often experience misalignment? If so, increasing the size of the Retro-Enclosure may be the easiest and most cost effective solution.

PLC/DCS SETTINGS

How does your GasFinder2-MC communicate with the PLC/DCS? Does it have Analog, Relay, Modus, or Serial Outputs?

Analog Outputs:

Do you currently utilize the sub-4mA Outputs for Beam Block (2.7mA) and Fault (3.6mA)?

The GasFinder3-MCr now has HART7 over Analog Outputs. The Light Level variable can be communicated over the Secondary Digitized Variable.

With the GasFinder3-MCr comes with a default Beam Block Time Delay of 30-seconds. This is user configurable from 0-300 seconds.

Relay Outputs:

What are your current Alarm Thresholds? The GasFinder3-MCr comes with a default Alarm Threshold Time Delay of 3-seconds. This is user configurable from 0-5 seconds.



PLANNING FOR BEING ON-SITE

FORMING THE SCOPE OF WORK

It is recommended to run the End-of-Life'd GasFinder2-MC and the new GasFinder3-MCr in parallel while the transition is occurring. The benefit of doing so allows for only one (1) channel to be down at a time.

It is strongly recommended to have at least two (2) Factory Authorized Technicians perform this work.

ANALYZER CABINET

With the GasFinder2-MC running as-found, the GasFinder3-MCr will be mounted in the rack, powered, and the Analog/Relay Modules will be installed. At this time, program the GasFinder3-MCr to have similar parameters as the GasFinder2-MC.

For the one (1) Measurement Head selected to be modified:

- 1) Disconnect the fiber optic and coaxial cable from the GasFinder2-MC.
- 2) Connect the same fiber optic and coaxial cable to the same channel on the GasFinder3-MCr.

IN THE FIELD

There will be modifications required to both the Retro-Window and Measurement Head.

For the Retro-Windows, it is recommended to remove the Retro-Enclosure from the field and bring to the instrument shop. While best efforts are made to supply the appropriate window for a simple change over, there might be the requirement to cut and/or modify the thin Mylar/Teflon window to fit with scissors.

For the Measurement Head, it will need to be removed from the field and brought to the instrument shop. There it will be disassembled to make the soldering alteration required for the new digital signal. It is recommended to bring the modified Measurement Head to the GasFinder3-MCr to test the functionality before being re-installed in the field.

Once installed carefully re-connect the fiber/coax cables – old fiber optic patch cable may be brittle. Beware that you will need to use the new Remote Light Meter to perform alignment procedure. Once aligned, confirm on the GasFinder3-MCr that the specific channel has Laser Light.

While neither of these modifications are difficult, they may be time consuming – especially the first ones. If there are two (2) personnel performing this activity, it can be assumed that two to four (2-4) Measurement Head/Retro-Window modifications can take place during an eight (8) hour day.

PLC/DCS

Once you have the modified Measurement Head installed and re-aligned, you will transition the Analog and Relay Outputs from GasFinder2-MC to the GasFinder3-MCr.

FUNCTION TESTING

The (In-Line) Response Cell can be used to 'bump', 'test', or 'challenge' that the system responds to the target gas and exceed the Alarm Thresholds. Via the HMI Touchscreen on the GasFinder3-MCr, you can easily force the outputs.

It is recommended to plan for extra day to re-visit the facility to review the logfiles and provide end-user training.