

Announcement



TO: Global Sales Offices and Channel Partners

FROM: Edward Naranjo

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SUBJECT: Open Path Long Range Configuration

General Monitors has resumed production of the IR5500 long range configuration, and as a result, is able to accept new sales orders for the product. Current lead time is eight weeks. Due to changes in certain components, the long range configuration has a revised open path length specification of 80 to 150 meters in both LEL-m and ppm-m scales. Both the manual and electronic data sheets have been revised to reflect this change.

As usual, sales territory managers are asked to guide end users through sensor selection. Too often clients purchase long range open path detectors where a standard unit could do. Operators may mistakenly believe a detector that measures gas concentrations at a maximum open path length of 150 meters is more immune to the adverse effects of dust, fog, rain, and snow than the standard or short range model. They may also select the long range configuration, because with an open path length that spans 100 meters (from 50 m to 150 m in the LEL-m scale) it offers a wide range of application. Such advantage sometimes has unintended consequences. End users are liable to forego the labor and expense of determining application distances, knowing well the versatile detector will be suitable. Convenience in this case comes at a cost. Since open path detectors are calibrated at the factory at half their maximum detection range, instruments selected based on the targeted monitored distance are often more accurate than those chosen simply on the grounds of versatility.

No doubt interest on the long range configuration is partly due to cost. After all, long range configurations have a lower cost per monitored length than their short range and standard counterparts. Nonetheless, such interest must be tempered by safety, given that as the length of the line of sight increases, it becomes increasingly difficult to identify the potential leak source. In addition, open path detectors become more prone to produce false alarms. (Why? Because, for a given alarm set point, a lower gas concentration dispersed over the entire expanse of the open path produces the same response as a large leak over short segment of the monitored distance.) Not surprisingly, Shell's recommended maximum monitored distance is 60 meters for onshore facilities and 30 meters for offshore facilities^[1]. Similarly, Total specifies maximum open path distances of 25 m (offshore) and 50 m (onshore)^[2]. It seems these considerations are not lost entirely on end users; on interviewing clients that purchased long range models, General Monitors finds many of them use the detectors at application distances of 100 meters or less.

References

[1] DEP 32.30.20.11-Gen. Fire, Gas and Smoke Detection Systems. 2010. Shell: UK.

[2] GS EP SAF 312, General Specification – Safety: Fire and Gas Detection Systems. 2011. Total: France.