

Data Sheet

Danfoss DGS

Gas Leak Detection Sensors



Standard Sensitivity Range (ppm) and Factory Set Points for different Refrigerants

Halocarbon Refrigerants (R404A/R507; R134a; R407A; R410A; R22; etc.)

Standard Range: 0-1000ppm.

Factory Set Alarm Point: 500ppm

Summary Comments: The US Workplace Environmental Exposure Level (AIHA) is 1000ppm, whereas EN378 uses the much higher values for the practical limit.

Carbon Dioxide CO₂

Standard Range: 0-10,000ppm.

Factory Set Alarm Point: 5000ppm

Summary Comments: The 5000ppm corresponds to the 8 hour exposure limit recommended by the UK (HSE EH40) and US (NIOSH/OSHA) authorities

The normal background level of CO₂ in open air is approx 400ppm, however in enclosed spaces this will typically run at 1200-1500ppm depending on the degree of ventilation, and activity. It would not be uncommon to reach 2000ppm in a room, which would be perceived as stuffy.

**Hydrocarbon Refrigerants
(Propane: R290; Butane
R600; IsoButane R600a)**

Standard Range: 0-1000ppm.

Factory Set Alarm Point: 500ppm

Summary Comments: The ASHRAE guidance is to detect at or below the 8 hour exposure limits. These are 800ppm for Butanes, 1000ppm for Propane.
In Europe EN378 recommend detecting below 20% of the Lower Explosion Limit (LEL), which for Butane is 16000ppm, so below 3200ppm is required.

General

By offering our values, we can ensure compliance with all of these standards with one product.

With all systems, we try to achieve a balance between meeting the regulatory requirements, and detecting leaks at an early stage to minimise losses, but without triggering nuisance alarms.

The range for DGS gas leak detectors should be considered as fixed (where higher range options are available from the factory only by special request).

The Alarm Level, which is when the sounder, alarm LED and relay trigger, can be adjusted on-site using a Volt Meter, in a matter of seconds. The installer/contractor takes the responsibility for this change and effect.

(See separate info sheet on this procedure)