COMPARISON OF METHANE DETECTION SENSORS

Sensors are compatible with **UgCS SkyHub** and **UgCS** software.

UgCS software has 2 license levels:

- UgCS PRO – default level for survey mission planning
- UgCS ENTERPRISE – adds video recording capability

For more information send a message to ugcs@ugcs.com or visit industrial.ugcs.com/ch4detector

Feature	Laser Methane Copter (LMC) DL edition	Laser Falcon
Target gas	Methane (Ch4) and methane containing gasses (natural gas)	Methane (Ch4) and methane containing gasses (natural gas)
Compatibility with UgCS SkyHub	Yes It is also possible to convert handheld and Microdrones-compatible sensors into LMC DL contact ugcs@ugcs.com for information	Yes
Weight	1kg	0.3kg
Operating temperature	from -15 to +50 C	from -15 to +50 C
Sensitivity	0-50 000 ppm x m	0-50 000 ppm x m
Georeferenced data recording	Yes with UgCS SkyHub	Yes with UgCS SkyHub
Video recording with georeferencing and methane sensor data fusion	Yes requires UgCS SkyHub + UgCS ENTERPRISE software license	Yes requires UgCS SkyHub + UgCS ENTERPRISE software license
Recommended survey height above ground with sensor looking straight down (NADIR)	15-20 m	20-30 m
Max. detection distance	30 m	100 m
Min. detection distance	0.5 m	0.5 m
Sampling frequency	10 Hz	10 Hz
Recommended speed	3-5 m/s	3-5 m/s
Real-time data transmission	Yes requires UgCS SkyHub	Yes requires UgCS SkyHub
Embedded battery	Yes	No
Power from drone	No	Yes, 5-18V provided by UgCS SkyHub
Handheld mode (Display)	Yes	No
Laser safety class	Guide light (Green)": Class 3R Measurement light (Infrared): Class 1	Guide light (Red)": Class 2 Measurement light (Infrared): Class 1

	Safe for humans	Safe for humans
Error	(+/-)10% distance to object up to 30m max. speed 5 m/s	(+/-)10% distance to object up to 50m max. speed 5 m/s
Detected value from distance 30m	125 ppm x m	125 ppm x m
Detected value from distance 50m	-	250 ppm x m
Internal Gas-cell for self calibration	Yes	Yes
DJI M210 / M210 v2 support	Yes requires UgCS SkyHub	Yes requires UgCS SkyHub
M 600 / 600 Pro	Yes requires UgCS SkyHub	Yes requires UgCS SkyHub
Custom built drone with DJI A3 autopilot	Yes requires UgCS SkyHub	Yes requires UgCS SkyHub
Custom built drone with Pixhawk (Ardupilot/Px4)	Yes requires UgCS SkyHub contact ugcs@ugcs.com for more information	Yes requires UgCS SkyHub contact ugcs@ugcs.com for more information

Frequently asked questions

> Can a methane detector detect other gases?
No, each device is designed to detect a specific gas. This provides a 100% probability of leak detection of methane and not any other gas.

> Is laser radiation hazardous for eyes?
Laser radiation is completely safe, it corresponds to class 1.

> Can the remote laser detector be used at night, in rain, fog and snowfall?
Yes. It is an active device, it emits at a certain narrow wavelength, so it does not need additional signal sources.

> Do I need to calibrate detectors before commissioning?
No. The detector contains a reference container with methane inside and calibration is performed at each start-up and during operation.

> How often do detectors need to be verified?
The detector does not need to be verified because it is not a measuring tool.

> Why is a laser detector better than a common sniffer?
It works remotely. There is no direct contact with the hazardous environment.

> Can the detector detect methane through glass?
Yes, because glass transmits the near infrared radiation well.

Useful videos

- How to plan methane detection survey with UgCS >>>
- Webinar: landfill and pipeline monitoring >>>