MetScan Nano 1 & Nano 2 Brochure

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MetScan Nano 1F

Miniature UAV Methane Screening



Detection Principle:	Open-Path Diffuse-Reflection Tunable Diode Laser Absorption Spectroscopy (OP-TDLAS)
Target Gas:	Methane (CH_4) only, with no cross-interference from other gases
Laser Class:	Class 3R (avoid direct eye exposure)
Measurement Range	300 ~ 99,999 ppm·m
Measurement Accuracy:	≤ ±10% relative error (measured at 20 m distance for methane plumes between 1,000 ~ 50,000 ppm·m)
Measurement Frequency:	> 10 Hz (more than 10 measurement points per second)
Typical Detection Distance:	150 m (for 30,000 ppm·m methane plume, static level detection) 50 m (for 1,000 ppm·m methane plume, static level detection)
Operating Temperature:	-20℃~55℃
Operating Humidity:	< 95% RH
Gimbal:	Two-axis stabilization and adjustment (Roll + Pitch)
Weight:	< 240 g

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MetScan Nano 1D

Miniature UAV Methane 3D Screening



Detection Principle:	Open-Path Diffuse-Reflection Tunable Diode Laser Absorption Spectroscopy (OP-TDLAS)
Target Gas:	Methane (CH_4) only, with no cross-interference from other gases
Laser Class:	Class 3R (avoid direct eye exposure)
Measurement Range:	300~99,999 ppm·m
Measurement Accuracy:	≤ ±10% relative error (measured at 20 m distance for methane plumes between 1,000 ~ 50,000 ppm·m)
Measurement Frequency:	> 50 Hz (more than 50 measurement points per second)
Typical Detection Distance:	150 m (for 30,000 ppm·m methane plume, static vertical detection) 50 m (for 1,000 ppm·m methane plume, static vertical detection)
Operating Temperature:	-20℃~55℃
Operating Humidity:	< 95% RH
Gimbal:	Two-axis stabilization and adjustment (Roll + Pitch)
Scanning Mode:	Supports Belt-Scan mode, ideal for pipeline inspection
Laser Spot Aiming System:	Dedicated laser spot visualization camera