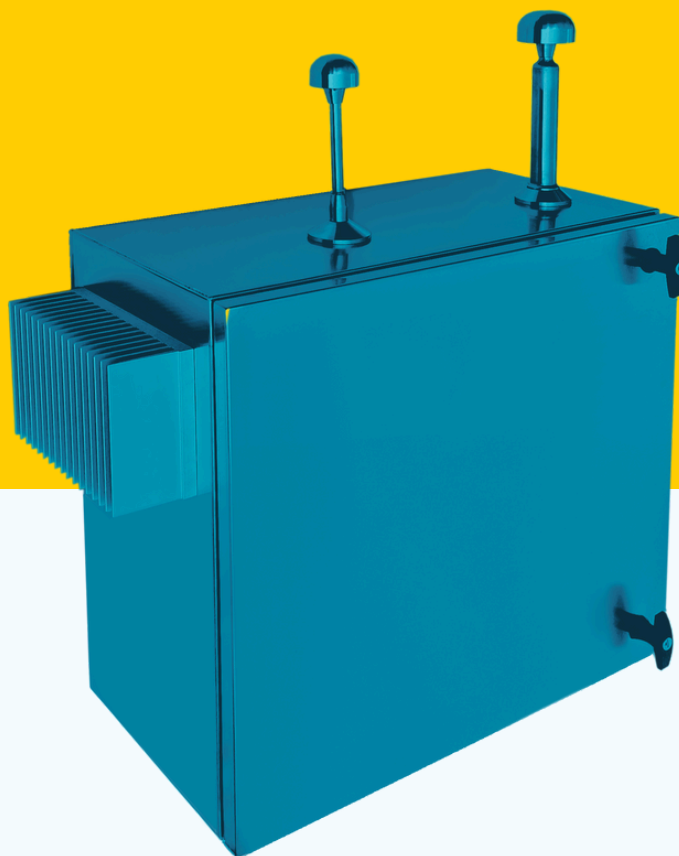# FARDATA

Sentinel
Environmental Monitoring Station
FD-OM100

Professional near-reference+ station for measuring gases, particulate matter, VOCs, and environmental noise. Offers high accuracy, low-cost operation, climate-controlled stainless steel enclosure, air sample conditioning, and dedicated acoustic measurement module. Real-time data transmission via multiple communication interfaces.

Features

› Real-time measurement of fractions PM_1, $PM_{2.5}$, PM_4, and PM_{10}

› Simultaneous monitoring of up to 7 gases

› Integrated VOC and noise sensors (Class 1 IEC 61672)

› Resistance to harsh weather conditions

› Remote access via wired or wireless network

› Maintenance-free operation and easy integration with telemetry systems

› Continuous 24/7/365 operation with automatic data logging

Applications

› Urban air quality monitoring

› Smart City and ITS Projects

› Industrial zones

› Scientific research and educational projects

FARDATA

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Gases

Measurement method	Electrochemical/NDIR/PID
Standard	O_3, NO_2, CO, SO_2, TVOC, NO, NOx, CO_2, H_2S, HCl, NH_3, CH_4
Max gases per station	7
Sample Inlet	omni-directional inlet
Air sampling	Pump with controlled air flow, climate-controlled chamber

Particulate Matter

Measurement method	Optical Particle Counter (OPC) laser 660 nm
Fractions	PM_1 $PM_{2.5}$ PM_4 PM_{10}
Range	0…2000 µg/m³
Resolution	1 µg/m³
Accuracy	5 µg/m³
Sample Inlet	omni-directional heated inlet

Noise

Urban Noise Monitoring Terminal	Class 1

Communication & Data Handling

Communication Interfaces	RS232 (2)
	RS485 (2)
	Ethernet (2)
	Wi-Fi (RP-SMA female connector)
	Bluetooth (RP-SMA female connector)
	GSM/LTE (FME male connector)
	GPS (SMA female connector)
	USB-A
Control Outputs	6 programmable output channels
Data storage	internal memory
	SD card
	USB

Operating System

Linux	OpenWRT

Power Supply

Supply voltage	230 VAC or 12 VDC
Power consumption	200 W with heating inlet
Surge protection	Yes

Environmental

Operating temperature range	-35…60 °C
Operating humidity range	<99% RH (non-condensing)
Compliance	CE Declaration

Physical

Ingress Protection (IP)	IP65
Dimensions	600x600x300 [mm] (without collectors)
Weight	40 kg

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Dimensions

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