

Environmental Sensor Station

iRam's Environmental Sensor Station is designed to address the growing needs of air quality monitoring all across India. Due to growing air pollution, Air Quality monitoring has become essential part for human living. The existing legacy solutions requires large infrastructure to measure all required air quality & weather parameters, which makes them impossible to deploy on road side where space is a premium. iRam has developed portable & modular IoT based solution to measure the gases CO, CO₂, NO₂, O₃, SO₂ along with Particle Matter, and Noise levels. If required in future, the device can be easily expanded to measure additional



polluting gases or weather parameters as required by the customer. If required, any existing sensor module can be removed or replaced without affecting the function of rest of the system. It houses all the sensors, power module, thermal management system, controller etc., in a single unit. It supports multiple connectivity options like 2G/3G/4G/LTE or WiFi or Ethernet to transmit the data to the Central Monitoring System. This portable system is ruggedized and can be mounted outdoors on any pole. The live information captured can be stored & analyzed on continual basis by the authorities to create better policies to reduce the poisonous gas emissions below permissible limits. The real time information can be displayed at Digital Display Boards, Web-portal and mobile applications for environmental awareness of the citizens.

#779, 1G2, 2nd Floor, Kaikondrahalli, Sarjapura Road, Bengaluru -560035.

Phone:+91-80-42011550

www.iramtech.com

CO SENSOR SPECIFICATIONS

Parameter	Value
Range	0-1000 ppm
Resolution	0.01 ppm
Lower Detectable Limit	0.040 ppm
Precision	3% of full scale reading
Linearity	1% of full scale reading
Response Time	60 sec
Repeatability	± 0.5 % FS
Zero Drift	± 1.0 % FS per week
Span Drift	± 1.0 % FS max per three month
Operating Temperature	-30°C to 60°C
Operating Pressure	80kPa to 120kPa (±20%)
Operating Humidity	15% to 90% RH

CO2 SENSOR SPECIFICATIONS

Parameter	Value
Range	0-5000 ppm
Resolution	1 ppm
Lower detectable limit	10 ppm
Precision	3% of full scale reading
Linearity	2% of full scale reading
Response Time	60 sec
Repeatability	± 0.5 % FS
Zero Drift	± 2.0 % FS per month
Span Drift	± 1.0 % FS max per three month
Operating Temperature	-30°C to 60°C
Operating Pressure	80kPa to 120kPa (±20%)
Operating Humidity	15% to 90% RH

NO2 SENSOR SPECIFICATIONS

Parameter	Value
Range	0-10 ppm
Resolution	0.001 ppm
Lower Detectable Limit	0.001 ppm
Precision	3% of full scale reading
Linearity	1% of full scale reading
Response Time	60 sec
Repeatability	± 0.5 % FS
Zero Drift	± 1.0 % FS per month
Span Drift	± 1.0 % FS max per three month
Operating Temperature	-30°C to 60°C
Operating Pressure	80kPa to 120kPa (±20%)
Operating Humidity	15% to 85% RH

O3 SENSOR SPECIFICATIONS

Parameter	Value
Range	0-1000 ppb
Resolution	10 ppb
Lower Detectable Limit	10 ppb
Precision	2% of full scale reading
Linearity	1% of full scale reading
Response Time	60 sec
Repeatability	± 0.5 % FS
Zero Drift	± 1.0 % FS per month
Span Drift	± 1.0 % FS max per three month
Operating Temperature	-20°C to 60°C
Operating Pressure	80kPa to 120kPa (±20%)
Operating Humidity	15% to 85% RH

SO2 SENSOR SPECIFICATIONS

Parameter	Value
Range	0-20 ppm
Resolution	0.001 ppm
Lower Detectable Limit	0.009 ppm
Precision	3% of full scale reading
Linearity	1% of full scale reading
Response Time	60 sec
Repeatability	± 0.5 % FS
Zero Drift	± 2.0 % FS per month
Span Drift	± 1.0 % FS max per three month
Operating Temperature	-30°C to 60°C
Operating Pressure	80kPa to 120kPa (±20%)
Operating Humidity	15% to 90% RH

PM SENSOR SPECIFICATIONS

Parameter	Value
Measures	PM10, PM2.5
Range PM2.5	0 - 250 µg/m ³
Range PM10	0-450µg/m ³
Resolution	1 µg/m ³
Lower Detectable Limit	1 µg/m ³
Accuracy	±5 µg/m ³
Flow rate	1.0 LPM
Response time	10 sec
Repeatability	± 0.5 % FS
Operating Temperature	-20°C to 60°C
Operating Pressure	80kPa to 120kPa (±20%)

NOISE SENSOR SPECIFICATIONS

Parameter	Value
Range	30 to 100 dBA
Resolution	0.1 dBA
Repeatability	± 0.5 % FS
Response Time	10 sec

ENVIRONMENT SENSOR STATION SPECIFICATIONS

Parameter	Value
Model	ENV-PAC-08
External Power Supply	220 to 240V, 50Hz
Enclosure Protection	IP64
Operating Temperature	0°C to +50°C