DATA SHEET

Check-Air

checkup
OBJECTS WITH LIFE INSIDE

CAMPI APPLICATIVI

- ❑ Outdoor ambient air quality monitoring
- ❑ Industrial areas and urban monitoring
- ❑ Construction sites, landfills, and emission-sensitive locations
- ❑ Integration into IoT monitoring networks with LoRaWAN connectivity

CARATTERISTICHE CHIAVE

MONITORAGGIO MOLTEPLICI GAS

The device integrates four AQ7 sensors dedicated to CO, SO_2, NO_2, and O_3, with measurements in ppb/ppm and a built-in compensation algorithm to ensure long-term signal stability and accuracy.

SENSORE DI PARTICOLATO

The NextPM optical sensor measures PM1, PM2.5, and PM10, with a range of 0–1000 µg/m³, a detection limit below 1 µg/m³, and a selectable refresh rate of 1/10/60 seconds.

TEMPERATURA E UMIDITA'

The system includes temperature and relative humidity measurement, also used for environmental compensation and correlation of air quality data.

CONNESSIONE LoRaWAN

Data transmission is carried out via LoRaWAN in the Sub-GHz 868 MHz band, with transmission power up to 14 dBm and sensitivity down to -137 dBm.

PENSATO PER OUTDOOR

The electronics are housed in a Fibox ABS enclosure, with IP45 protection rating, dimensions 120 × 200 × 75 mm, suitable for outdoor applications.

DESCRIZIONE

The Check-Air system is a monitoring unit designed for continuous outdoor ambient air quality monitoring. The device combines four electrochemical channels for the detection of CO, SO_2, NO_2, and O_3 with an optical sensor for particulate matter (PM1, PM2.5, and PM10), along with temperature and humidity measurements for environmental compensation of the readings.
Data transmission is carried out via a LoRaWAN network, making the product suitable for distributed sensor networks in smart cities, industrial monitoring, and remote environmental control applications.
The ABS enclosure, with an IP45 protection rating, allows for outdoor installation, while the 220V AC power supply ensures continuous system operation.

SPECIFICHE TECNICHE

Sensori Gas

SENSORE	INTERVALLO	LIMITE INFERIORE DI RILEVAMENTO	RISOLUZIONE
CO	0-20 ppm	40 ppb	10 ppb
NO_2	0-1 ppm	5 ppb	5 ppb
O_3	0-1 ppm	5 ppb	5 ppb
SO_2	0-1 ppm	5 ppb	2 ppb

Sensore di Particolato

tecnologia	optical
outputs	PM1. PM2.5, PM10
concetrazione	da 0 a 1000 µg/m³
limite di rilevamento	>1 µg/m³
intervallo dimensioni particelle	da 0.3 a 10 µm
errore lineare	<5%
errore ripetitibilità	<3%
frequenza aggiornamento	1 / 10 / 60 s
tempo di attivazione	10 s
tensione	5 VDC
alimentazione	<80 mA, 300 mA max
condizioni di funzionamento	-20°C to 70°C, 0-95% RH senza condensa
dimensioni	62 x 52 x 23 mm
peso	45 g

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TECHNICAL SPECIFICATIONS

Caratteristiche del Sistema

AQ7 alimentazione scheda	5 VDC
AQ7 output digitale	RS485 or I2C
AQ7 outputs analogico	raw signal; 0 to 3 V calibrated and compensated
AQ7 dimensioni scheda	39.1 x 44.6 x 29 mm with sensor
LoRaWAN frquenza	868 MHz EU
potenza segnale	up to 14 dBm
sensibilità ricezione	-137 dBm
protocollo comunicazione	LoRaWAN
materiale della struttura	ABS
grado di protezione	IP45
dimensioni	120 x 200 x 75 mm
colore	Grey RAL 7035
alimentazione del sistema	220V AC

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OBJECTS WITH LIFE INSIDE