

# Smart CO<sub>2</sub> LoRa Sensor

## OVERVIEW

The purpose of installing Smart CO<sub>2</sub> LoRa based Sensor on the premise is to:

- Monitor COVID-19 relevant CO<sub>2</sub> in Rooms
- Air Quality (Temperature & Humidity)
- Direct Traffic Light Alerts on device (Buzzer & LED)
- Notify Responders
- Communicate Emergency
- Trend Indication and Data Analysis

## KEY FEATURES

- Automatic LED Alerts on threshold limits
- Real-time sensor measurement
- Configurable measurement sending interval
- Regular Heartbeat at configurable interval
- Secure Data Transmission
- Dual-channel NDIR sensor

## SPECIFICATIONS

<b>Model No.</b>	MTC-CO2-01 / MTC-CO2-02 / MTC-CO2-03 / MTC-CO2-04
<b>Enclosure Size</b>	95 x 95 x 40 mm
<b>Net Weight</b>	150 g
<b>Ingress Protection</b>	IP30 / IP54
<b>Operating Temperature</b>	-18°C to +55°C
<b>OTAA and ADR</b>	Compliant
<b>NDIR-Sensor</b>	CO <sub>2</sub> : 0-10.000 ppm Temperature: 0-70°C Humidity: 0-100% RH

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## APPLICATION

- Schools & Colleges
- Offices and Conference Rooms
- Hospitals & Wellness
- Villas/Apartments
- Shopping Malls
- Courtrooms, Banks and Hotels
- Cinemas
- Museums

<b>LoRa Frequency</b>	EU863-870 (CE-Certified) IN865-867 (ETA-Certified) US902-928 AU915-928 AS923 -1, -2, -3, -4 KR920-923
<b>SF Supported</b>	7 - 12
<b>Voltage</b>	100 - 240V AC / 3.3V DC, 1A
<b>RF Output</b>	14 dBm
<b>NDIR-Sensor Accuracy</b>	CO <sub>2</sub> : ± 30ppm ± 3% Temperature: ± 0.5°C Humidity: ±3% RH

# Smart CO<sub>2</sub> LoRa Sensor

## CO<sub>2</sub> FUNCTIONALITY

- Device performs a measurement check every 2 seconds against the threshold
- Once CO<sub>2</sub> value exceed threshold level, LED starts flashing and/or Buzzer starts alarming
- When CO<sub>2</sub> levels fall down specific threshold level, the alarm automatically switches off

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## CO<sub>2</sub> SIGNAL



- At **800 ppm**, the LED glows **YELLOW** constantly
- At **1000 ppm**, the LED glows **RED** constantly
- At **1500 ppm**, the LED flashes **RED** and buzzer sounds for 5 seconds (3 beeps)
- If CO<sub>2</sub> values remain above 1450 ppm, the 2 buzzer sounds for 5 seconds every 10 minutes
- When CO<sub>2</sub> values falls back to:
  - Below 1450 ppm, the **RED** LED stops flashing, but remains on
  - Below 950 ppm, the **RED** LED goes off and **YELLOW** LED goes on
  - Below 750 ppm LED goes off

## VARIANT TRAFFIC-LIGHT FEATURE OPTIONS

- **Standard Model** (MTC-CO2-01, MTC-CO2-03) comes with Red Lens and LED color to glow **YELLOW / RED**
- **3-Color Model** (MTC-CO2-02, MTC-CO2-04) comes with White Lens and LED color to glow **GREEN\* / YELLOW / RED**
- Available as **IP30** (MTC-CO2-01, MTC-CO2-02) and **IP54** (MTC-CO2-03, MTC-CO2-04) version



\* below 800 ppm, the LED lights up **GREEN**.  
In the default model, the LED would be off

