



TGP03

Multifunction CO₂/PM2.5 Indoor Air Quality Monitor

Air Quality-TGP03

www.eyc-tech.com



Stealthy Fatal Killer PM2.5 exist in the ambient. It threatens human health if the value of PM2.5 and CO₂ excess the standard 35μg/m³ and 1000 PPM.

| Features |

- **【4-in-1】** Real-Time Data of PM2.5, CO₂, temperature & humidity
- **【Real-time data monitoring】** Quickly monitor and LCD display
- **【Nicer stability】** NDIR, MEMS, and Infrared LED sensor
- **【Sensor protected】** Anti-condensation and nicer long-term stability
- **【Operate easy】** Remote monitoring data via Modbus RS-485 digital output
- **【Install Quickly】** Compact size and elegant outlook and easy to install on the wall
- **【Data logger software】** Free programmable software to monitor and record local data via RS-485

| Applications |

Indoor air quality / Public and interior place such as restaurant, department store, museum, library and so on / HVAC / Air ventilation system / Library / Green house / Department store / Data station / Storehouse and so on

| Specification |

Display

Display	LCD module without backlight
Display readout	Double line character (Up : Temperature ; Down : Humidity)
Digit	PM2.5 : 3 digits and 1 decimal CO ₂ : 4 digits ; T & H : 3 digits & 1 decimal
Digit height	17.91 mm

Input

Temperature	MEMS sensor
Humidity	MEMS sensor
CO ₂	NDIR sensor
PM2.5	Infrared LED

Measuring range

Temperature	0 ... 50°C
Humidity	0 ... 100%RH (Non-condensing)
CO ₂	0 ... 2000 PPM
PM2.5	0 ... 500 µg/m ³

Output

Output	RS-485
Protocol	Protocol
Interface	Modbus RTU
Address	1 ... 247
Baud Rate	9600, 19200, 38400, 57600, 115200

Warm-up time

Temp. & Humidity	< 2 min. › stable time 20 mins.
CO ₂	< 2 min. › stable time 20 mins.

Response time

Temp. & Humidity	t 63 (15 ... 45°C/33 ... 75%RH) ≤ 10 sec
CO ₂	t 90 < 2 min.
PM2.5	3 sec

Sampling time

Temp. & Humidity	About 3 sec
CO ₂	About 6 sec
PM2.5	About 20 sec

Accuracy

Temperature	±0.5°C
Humidity	±5%RH (at 30 ... 80%RH)
CO ₂	±40 PPM±3% of reading
PM2.5	±10 µg/m ³ ±5% of reading

Electrical

Medium	Air
Operating environment	0 ... 50°C/0 ... 100%RH (Non-condensing)
Operating environment (CO ₂)	0 ... 50°C/0 ... 85%RH
Storage temperature	-20 ... + 60°C

Electrical

Power supply	AC : 24±10% & DC : 12 ... 36 V
Current consumption	DC 12 V : 30 mA / DC 24 V : 20 mA / AC 24 V : 35 mA
Starting current	DC 12 V : 162 mA / DC 24 V : 94 mA / AC 24 V : 158 mA
Electrical connection	4P connector

Installation

Installation	Indoor and wall mount
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Protection

IP rating	IP20
Electrical protection	■Polarity protection ■Short-circuit

Certification

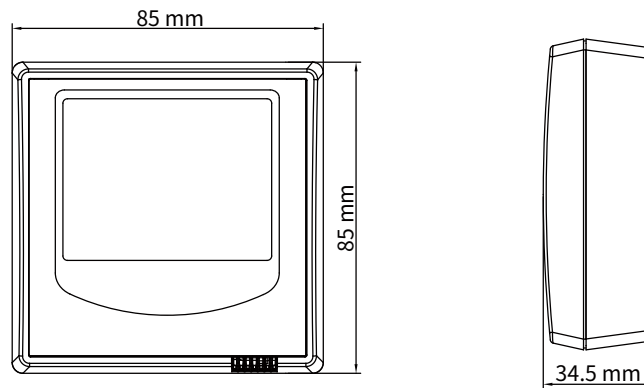
Certification	CE
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Material

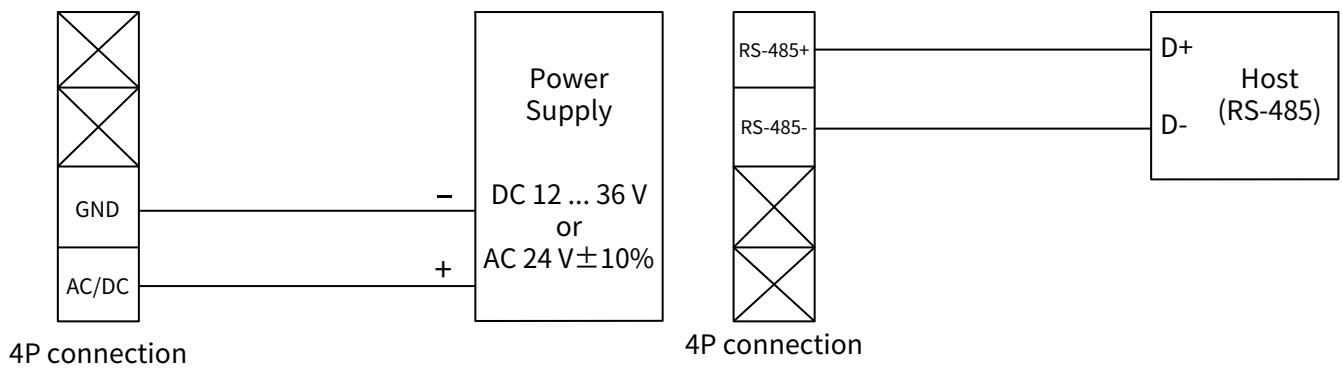
Housing	PC (PC - 110)(UL94V-2)
Weight	115 g (Display) 100 g (Without display)

*Please make sure the product and the device which connect with RS-485 are on common ground, avoid damaged product.

| Dimension |



| Diagram |



| Carbon Dioxide (CO₂) Indication |

Emoticon						
CO ₂ (PPM)	350 PPM	450 PPM	600 PPM	1000 PPM	2500 PPM	5000 PPM
Health Implication	Health, normal outside level	Acceptable level	Contaminated air	Drowsiness occurs	Adverse health effects	Time weighted averaging exposure time < 8 hours

| Optional Combination |

TGP03 Multifunction CO₂/PM2.5 Indoor Air Quality Monitor + DMB04 4-in-1 Multifunction Indoor Air Quality Large LED Display / Monitor / Indicator



eYc TGP03

Measuring range

Temperature : 0 ... 50°C
Humidity : 0 ... 100%RH
PM2.5 : 0 ... 500.0 µg/m³
CO₂ : 0 ... 2000 PPM

Accuracy

Temperature : ±0.4°C
Humidity : ±3%RH (at 20 ... 90%RH)
PM2.5 : ±10 µg/m³ ± 5% of reading
CO₂ : ±40 PPM ±3% of reading



eYc DMB04

Display scale

Display type : High brightness LED
Temperature : 1.5"(3.8 cm) red LED
Humidity : 1.5"(3.8 cm) red LED
PM2.5 : 2.3"(5.8 cm) yello LED
CO₂ : 2.3"(5.8 cm) green LED

Output

Output : RS-485
Protocol : Protocol
Interface : Modbus RTU
Power : AC 230 V / DC 24 V, 5A
Address : 1 ... FF(Hexadecimal)
Baud Rate : 19200, 9600, 4800, 2400, 115200, 57600, 38400
Modbus : N.81, N.8.2, E.8.1, O.8.1

| Organization |

eYc TGP03



RS-485



eYc DMB04

RS-485



Monitor & Record

Sensor : Temp. & Humidity, PM2.5, CO₂

| Ordering Guide |

