



TGP03/THP03

## Multifunction PM2.5 Indoor Air Quality Monitor



**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/m<sup>3</sup>** and **700 PPM**.

## Introduction

eYc TGP03, PM2.5 multifunction 4-in-1 air quality monitor, which is specially used to monitor 4 kinds of physical quantities as PM2.5, CO2 (carbon dioxide), temperature and humidity. There are 3 types of excellent sensors in this monitor such as MEMS, NDIR, and Infrared LED. That is why we have the nicer Long-term stability of measuring and react quickly. TGP03 is easy to install and featured with compact size and elegant outlook, and also provide programmable software to monitor and record the data via RS-485.

## Feature

- 【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 Type	LCD without backlight
Display Readout	Double-row in rotation
Resolution	PM2.5 : 3 digits and 1 decimal CO2 : 4 digits Temp. & Humidity : 3 digits & 1 decimal
Digit Height	17.91 mm

### Input Sensor Type

Temperature	MEMS
Humidity	MEMS
CO2	NDIR
PM2.5	Infrared LED

### Measuring Range

Temperature	0 ... 50 °C
Humidity	0 ... 100 %RH ( non-cond. )
CO2	0 ... 2000 PPM
PM2.5	0 ... 500 µg/m <sup>3</sup>

### Output

Signal 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.
CO2	< 2 min. · stable time 20 mins.

### Response Time

Temp.&Humidity	t <sub>63</sub> ( 15 ... 45 °C / 33 ... 75 %RH ) ≤ 10 sec
CO2	t <sub>90</sub> < 2 min.
PM2.5	3 sec

### Sampling Time

Temp.&Humidity	about 3 secs.
CO2	about 6 secs.
PM2.5	about 20 secs.

### Accuracy

Temperature	± 0.5 °C
Humidity	± 5 %RH ( at 30 ... 80 %RH )
CO2	± 40 PPM ± 3 % of Reading
PM2.5	± 10 µg/m <sup>3</sup> ± 5% of Reading

### Environmental

Media Measured	Ambient
Working Environment	0 ... 50 °C / 0 ... 100 %RH ( non-cond. )
Working Environment (CO2)	0 ... 50 °C / 0 ... 85 %RH
Storage Environment	-20 ... + 60 °C

### Electrical

Power Supply	AC: 24 ± 10% ; DC: 12 ... 36V
Power Consumption	TGP03 : DC 12V : 30 mA ; DC 24V : 20 mA / AC 24V : 35 mA THP03 : DC 12V : 23 mA ; DC 24V : 17 mA / AC 24V : 28 mA
Starting Current	TGP03 : DC 12V : 162 mA ; DC 24V : 94 mA / AC 24V : 158 mA THP03 : DC 12V : 55 mA ; DC 24V : 103 mA / AC 24V : 140 mA
Electric Connection	4P Connector

### Installation

Installation	Indoor and Wall type
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### Protection

Protection Degree	IP 20
Electric Protection	⊗ Polarity Protection ⊗ Short Circuit

### Certification

CE	EN 61326-1 : 2013 CISPR11 : 2015 Group1 Class B EN 55011 : 2009 / A1 : 2010 Immunity EN 61326-1 : 2013 IEC 61000-4-2 : 2008 IEC 61000-4-3 : 2006 + A1 : 2007 + A2 : 2010 IEC 61000-4-8 : 2009
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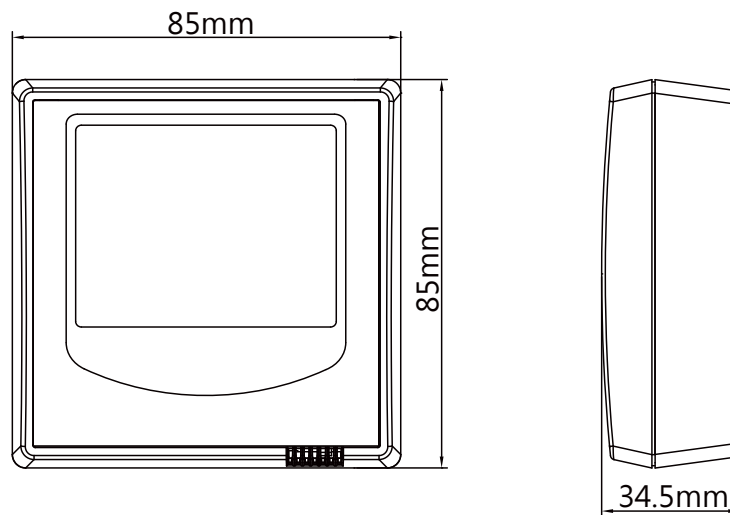
### Material

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

## Ordering guide

Item	Specification	TGP	03	—	1	D
Function	Temp. & Humidity + CO2 + PM2.5 Temp. & Humidity + PM2.5	TGP THP		— —		
Power Supply	12 ... 36 VDC 24 ± 10 %VAC & 12 ... 36 VDC				1 3	
Options	Without Display Display					N D

## Dimension



## Connection diagram

