eyc DMB05

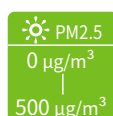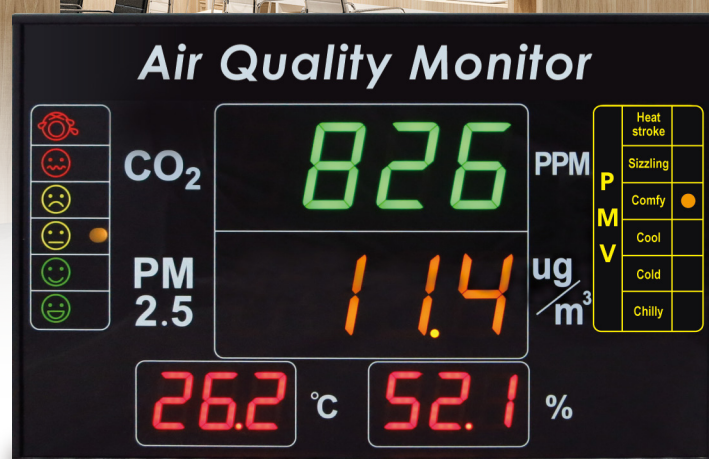## 4-in-1 Multifunction Indoor Air Quality Large LED Display / Monitor / Indicator

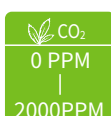Monitor IAQ 24-hour Non-stop !
Large LED !

Real-Time, React Quickly, High Brightness LED

Air Quality Monitor

CO_2 826 PPM

PM 2.5 11.4 ug/m³

26.2 ℃   52.1 %

PMV: Heat stroke / Sizzling / Comfy / Cool / Cold / Chilly

	PM2.5	CO₂	Temp.	Humidity	Emoticon	PMV Indication **New**	RS-485	LED Local Display
Range	0 µg/m³ — 500 µg/m³	0 PPM — 2000PPM	0℃ — +50℃	0%RH — 100%RH				
	PM2.5	CO₂	Temperature	Humidity	CO2 Indication	Indication	Output	Monitor in Time

| Features |

- Monitor PM2.5, CO_2, temperature & humidity via RS-485 at the same time
- Easily recognize measuring types and values
- As the local situation and refer to CO_2 indication standards to transfer the suitable emoticon
- Refer to PMV indication to display the real-time body sensing

| Applications |

Monitor environment for Industrial Process / Plant / IDC / Clean room / Laboratory / Agriculture / Storage / Hospital / Department store / Office building / Hotel / Restaurant / Library / Banks.

Signal / Meter-DMB05

www.eyc-tech.com

| Specifcation |

Display

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) yellow LED
CO_2	2.3" (5.8 cm) green LED

Display range

Temperature	0 … 50 ℃
Humidity	0 … 100 %RH
PM2.5	0 … 500 µg / m³
CO_2	0 … 2000 PPM

Accuracy

Temperature	$\pm$ 0.4℃
Humidity	$\pm$ 3%RH (at 20 … 90 %RH)
PM2.5	$\pm$ 10 µg / m³ $\pm$ 5% of reading
CO_2	$\pm$40 PPM $\pm$3% of reading

Input

Input	RS-485

Output

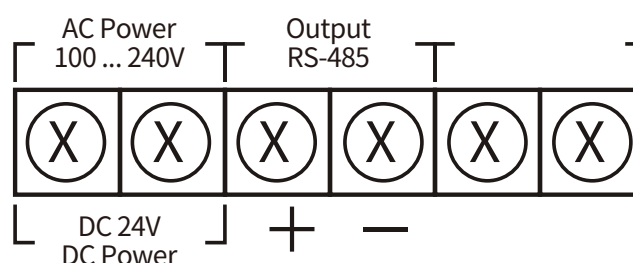| Output	RS-485
Protocol	Protocol
Interface	Modbus RTU
Relay x 2 set	AC 230 V / DC 24 V, 5A
Address	1 … FF (16 Hex)
Baud rate	19200, 9600, 4800, 2400, 115200, 57600, 38400
Frame	N.81, N.8.2, E.8.1, O.8.1

Installation

Installation	Indoor and wall type

Dimension

Dimension	460 (L) x 295 (H) x 60 (D) mm

| Diagram |

AC Power 100 … 240V   Output RS-485

DC 24V DC Power

| Carbon Dioxide (CO_2) 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

| PMV Indication |

Range	10 or less	11~15	16~19	20~26	27~31	above 31
Feeling	Chilly	Cold	Cool	Comfy	Sizzling	Heat stroke

Formula : T_m : °C ; t_b : dp °C ; When air reaches temperature saturation : more water vapor → dew point will be higher

$$PMV\ index = T_m - 0.55 \times \left[1 - \frac{\exp\left[\dfrac{17.269 \times t_b}{t_b + 273}\right]}{\exp\left[\dfrac{17.269 \times T_m}{T_m + 273}\right]} \right] \times (T_m - 14)$$

| Organization |

DMB05

RS-485

Monitor & Record