

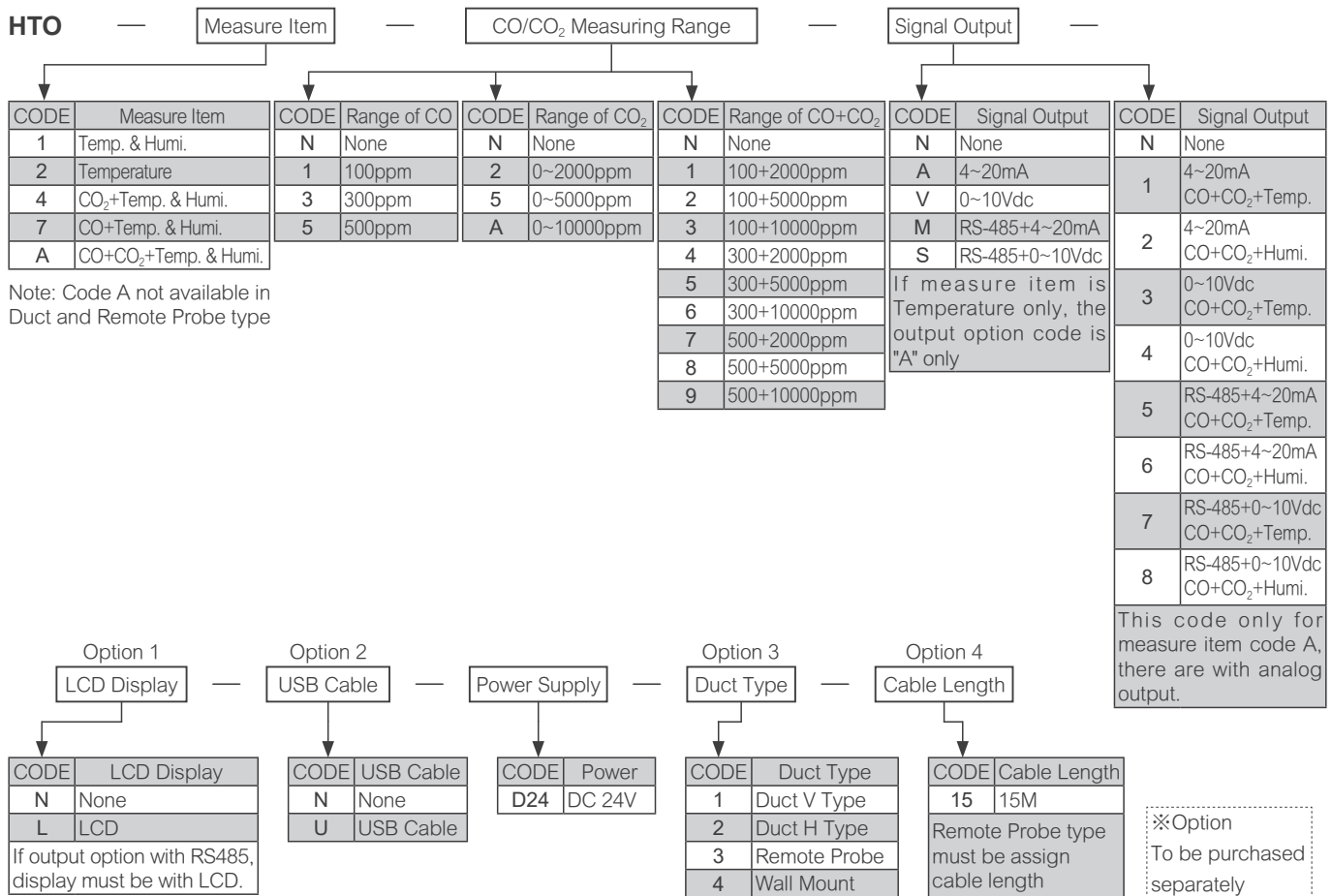
# HTO Temperature & Humidity & CO & CO<sub>2</sub> Transmitter ADTEK

## ■ Features

- CO<sub>2</sub> measuring element: NDIR Sensor
- CO measuring element: Electrochemical sensor
- Temperature/Humidity sensing element : CMOS sensor
- Analog output option:4~20mA or 0~10V
- Communication output option:RS-485 Modbus RTU
- Present value offset adjustable
- Inside buttons for adjust output parameters
- LCD backlight color to Indicated CO/CO<sub>2</sub> concentration



## ■ Ordering Information



Example 1:  
Temperature, Humidity, RS-485, 4~20mA output, LCD and Wall mount.  
HTO-1-N-M-L-N-D24-4

Example 2:  
Temperature, Humidity, CO(300ppm), RS-485, 4~20mA output(CO+Temp.+Humi), LCD and Duct Vertical type.  
HTO-7-3-M-L-N-D24-1

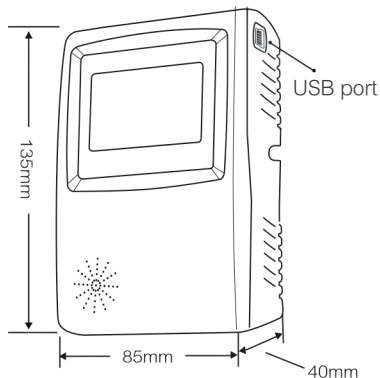
Example 3:  
Temperature, Humidity, CO<sub>2</sub>(2000ppm), RS-485, 0~10V output(CO<sub>2</sub>+Temp.+Humi.), LCD, Remote probe and 15M length.  
HTQ-4-2-S-L-N-D24-3-15

## Technical Specification

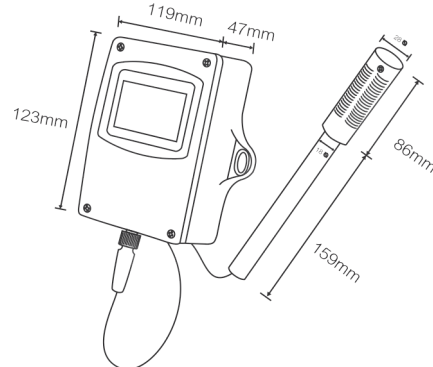
|                                                    |                                                                                                                                                       |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| RS-485 signal output                               | RS-485 Modbus RTU<br>(Remote real-time monitoring by PLC, DDC, PC)                                                                                    |
| Supported system transmission formats              | N81 N82 O81 E81                                                                                                                                       |
| Baud rate                                          | 2400 or 4800 or 9600 or 19200 or 38400 or 57600 or 115.2K                                                                                             |
| RS-485 address                                     | 1~255                                                                                                                                                 |
| RS-485 response time                               | <200mS                                                                                                                                                |
| Temp. & Humi. sensing element                      | CMOS sensor                                                                                                                                           |
| Temp. & Humi. sampling time                        | 1~10 second programmable                                                                                                                              |
| Temp. & Humi. measuring accuracy                   | $\pm 2\%RH(10\sim 90\%RH)(at\ 25^{\circ}C)$ , $\pm 0.4^{\circ}C$ (at $25^{\circ}C$ )<br>(Power supply 24Vdc, operating temperature at $25^{\circ}C$ ) |
| Temperature measuring range                        | $-50^{\circ}C \sim 100^{\circ}C$ , Can be via USB console port to setting. Initial value is $0^{\circ}C \sim 50^{\circ}C$                             |
| Humidity measuring range                           | 0%RH~100%RH                                                                                                                                           |
| Gas sensing element                                | CO: Electrochemical sensor / CO <sub>2</sub> : NDIR sensor                                                                                            |
| CO measuring range                                 | 0~100ppm or 0~300ppm or 0~500ppm                                                                                                                      |
| CO <sub>2</sub> measuring range                    | 0~2000ppm or 0~5000ppm or 0~10000ppm                                                                                                                  |
| CO backlight LCD indication                        | Green:0~9ppm / Blue:10~30ppm / Orange:31ppm 以上                                                                                                        |
| CO <sub>2</sub> backlight LCD indication           | Green:0~600ppm / Blue:600~1000ppm / Orange:1001ppm 以上                                                                                                 |
| Gas measuring accuracy                             | CO: $\pm 10ppm$ / CO <sub>2</sub> : $\pm 70ppm$                                                                                                       |
| Gas response time                                  | CO:60 second / CO <sub>2</sub> :1 second                                                                                                              |
| Analog Output driver ability                       | $4\sim 20mA \leq 500\Omega$ / $0\sim 10V \geq 600\Omega$                                                                                              |
| Analog Output resolution                           | 15 bits                                                                                                                                               |
| USB port                                           | Can via this port to supply power by PC or charger. Option function.                                                                                  |
| Operating temperature and condition                | Temperature: $-10^{\circ}C \sim 50^{\circ}C$ / Humidity: 0~100%RH(Non-condensing)                                                                     |
| Current consumption                                | $\leq DC:50mA$                                                                                                                                        |
| Wall Mount type dimensions and material            | 135mm(H) X 85mm(W) X 40mm(D), Housing:ABS, Panel:PC                                                                                                   |
| Duct and Remote Probe type dimensions and material | 123mm(H) X 119mm(W) X 47mm(D), Tube 168mm / Housing:ABS, Panel:PC                                                                                     |
| IP degree of protection(IEC60529)                  | Wall Mount type:IP20<br>Duct V Type / Duct H Type / Remote Probe type:IP65 Body, IP54 Sensor                                                          |
| Power Supply                                       | DC24V $\pm 20\%$                                                                                                                                      |

## Dimensions

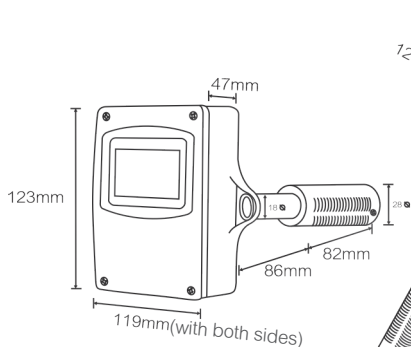
Wall Mount type



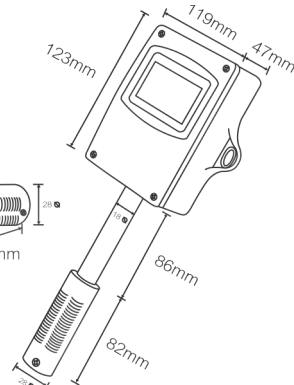
Remote Probe



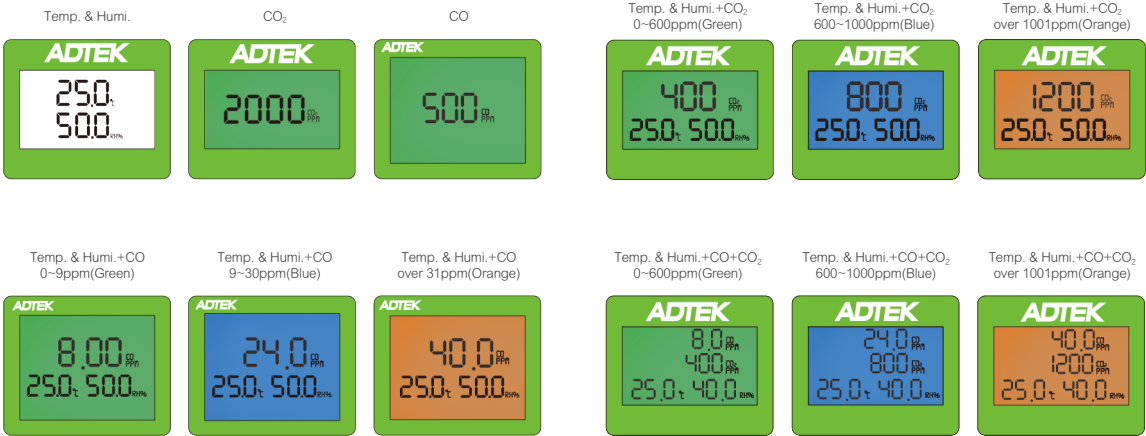
Duct V type



Duct H type



LCD Backlight Indication



Connection Diagram

