

T18AIR-485

(5 in 1 air quality detector) instruction



Technical Parameters:

Power input	12~24VDC
Wiring port	24V+, GND, RS485(A1, B1), NTC100K (S1, S2)
Co2	Measuring range (detection and display range) : 400~2000ppm Concentration description: GOOD: value $\leq$ 1000ppm OK: 1001 $\leq$ value $\leq$ 1400ppm POOR: value > 1400ppm
PM2.5	Measuring range (detection and display range): 1~999 $\mu\text{g}/\text{m}^3$ Concentration description: GOOD: value $\leq$ 75 $\mu\text{g}/\text{m}^3$ OK: 76 $\mu\text{g}/\text{m}^3 \leq$ value $\leq$ 115 $\mu\text{g}/\text{m}^3$ POOR: value > 115 $\mu\text{g}/\text{m}^3$
TVOC	Measuring range (detection): GOOD/OK/POOR
Internal temperature and humidity	Temperature and humidity detection range: -10°C~+50°C 0%~95%RH
External temperature (NTC 100K)	Temperature detection range: -10°C~+50°C
Rs485 Communication Interface	RTU format MODBUS protocol, two-wire system (dial-code configuration address)
Storage environment temperature and humidity	-10~60°C , 0~90%RH(Anti-condensation)
Working environment temperature and humidity	0~50°C , 0~80%RH(Anti-condensation)
Installation method	Wall mounted
Color	White
Dimension	L110mm*W110mm*H28.6mm
Protection level	IP21

Modbus protocol communication rules

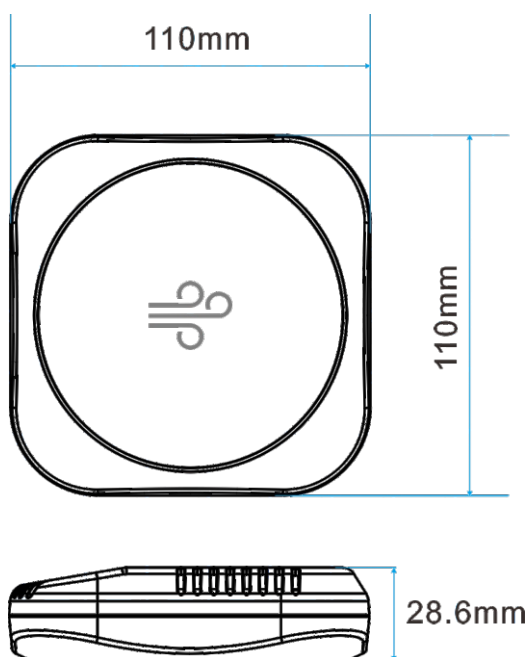
Modbus RTU Configuration name	Configuration data
Baud rate	9600bps
Check	No checksum
Data bits	8bit
Stop bit	1bit

Communication protocol

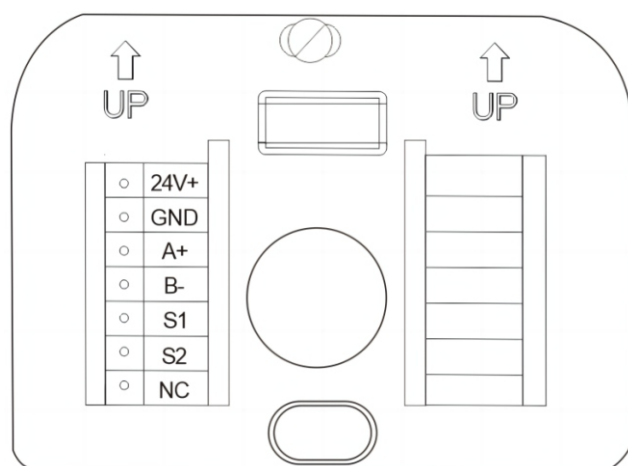
(Standard MODBUS RTU data format, the data frame contains address information, function code, CRC check code, query command 0x03 setting command 0x06)

Description	Address (register number)	Read and write type	Instruction
Baud rate	0000 (40001)	R/W	0 : 4800 1 : 9600 2 : 115200
Reserve	0001 (40002)	R/W	Reserve
Temperature type display settings	0002 (40003)	R/W	0 : Always displays internal temperature 1 : Always displays NTC external temperature
Internal temperature correction	0003 (40004)	R/W	-10~10°C(step length 1°C) Stored as 16-bit signed integer
Internal humidity correction	0004 (40005)	R/W	-20~20%(step length 1%) Stored as 16-bit signed integer
NTC Temperature compensation (external temperature transmission sensor)	0005 (40006)	R/W	-10~10°C(step length 1°C) Stored as 16-bit signed integer
CO2 correction	0006 (40007)	R/W	-1000~1000ppm (step length 50ppm) Stored as 16-bit signed integer
PM2.5 correction	0007 (40008)	R/W	-100~100ug/m ³ (step length 5ug/m ³) Stored as 16-bit signed integer
Reserve	0008 (40009)	R/W	Reserve
Restore parameters to factory values	0009 (40010)	R/W	0 : Do not restore to factory values 1 : restore to factory values
IP	0010 (40011)	R	1~64 (no address 0, the international standard dialing corresponding address plus 1 is the actual address)
Internal temperature	0011 (40012)	R	Stored as a 16-bit signed integer, divide it by 10 to get the actual temperature value. Example: The register value is 0x0119, the corresponding decimal value is 281, and the actual temperature value is 28.1 °C
Internal humidity	0012 (40013)	R	Stored as a 16-bit signed integer, divide it by 10 to get the actual humidity value

Description	Address (register number)	Read and write type	Instruction
NTC Temperature (external temperature transmission sensor)	0013 (40014)	R	Stored as a 16-bit signed integer, divide it by 10 to get the actual humidity value
Co2	0014 (40015)	R	Stored as a 16-bit signed integer. Example: Register value 0x00A6, corresponding to the decimal CO2 concentration value is 166ppm.
PM2.5	0015 (40016)	R	Stored as a 16-bit signed integer
TVOC	0016 (40017)	R	1: GOOD 2: OK 3: POOR
Reserve	0017 (40018)	R	Reserve
Internal temperature and humidity sensor failure	0018 (40019)	R	0: Normal 1: Error alarm
External temperature sensor failure	0019 (40020)	R	0: Normal 1: Error alarm
Co2 sensor failure	0020 (40021)	R	0: Normal 1: Error alarm
TVOC sensor failure	0021 (40022)	R	0: Normal 1: Error alarm
PM2.5 sensor failure	0022 (40023)	R	0: Normal 1: Error alarm
Reserve	0023 (40024)	R	Reserve



Product Dimension



24V+ GND : 12~24VDC

A+ B- : RS485

S1 S2 : NTC100K

NC : Empty pin

Backplane wiring diagram

