

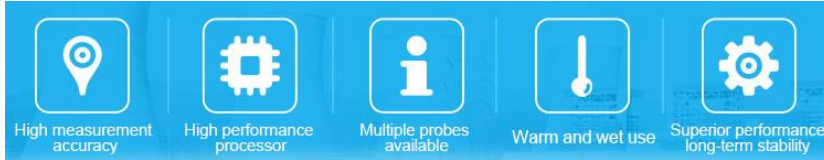
CO₂ , illumination, Temperature, Humidity, Atmospheric pressure, PM2.5/PM10

ES-105-5

Performance Parameter:

	Temperature & humidity	illumination	co2
Measuring Range	Temperature -40-80°C	0-65535 Lux	0-5000ppm
	Humidity:0%RH-100%RH	0-200000 Lux	
Output Signal	RS485 (Modbus protocol)	RS485 (Modbus protocol)	RS485 (Modbus protocol)
Power Supply	10-30VDC	10-30VDC	10-30VDC
Accuracy	Temperature±0.5°C(25°C) Humidity:±3%RH(5%RH-95RH, 25°C)	±7%(25°C)	±40ppm +3%FS(25°C)
Long term stability	Temperature ≤0.1°C/year Humidity ≤0.1%RH/year	≤0.5°C/year	≤30ppm/year
Response time	Temperature <15/S(1m/s wind speed)	0.1 second	<10/S (1m/s wind speed)
	Atmospheric pressure	PM2.5/PM10	
Measuring range	0-120Kpa		
Power consumption	≤0.5W	0.4W	
Output signal	RS485 (Modbus protocol)	RS485 (Modbus protocol)	
Power supply	10-30VDC	10-30VDC	
Accuracy	±1.5Kpa(25°C)		
Long term stability	0.1Kpa/year		
Response time	≤1 second	<90/second	
Working Temperature	Temperature -40-80°C Humidity:0%RH-80%RH	Temperature -40-60°C Humidity:0%RH-80%RH	
Resolution		1ug/m3	
Preheat time		2min	

Temperature and Humidity



ES-102TH

Performance Parameter:

Probe measuring temperature: -40~+125°C, default-40~+80°C

Probe measuring humidity: Relative humidity0%-100%RH

Signal output	4~20mA 0~5VDC 0~10VDC RS485 output (Modbus protocol)
Working voltage	10-30VDC Note: 0-10VDC output (limited to 24VDC power supply)
Maximum power consumption	Analog signal (voltage/current 1.2W MAX); Digital signal≤0.4w
Accuracy	Temperature accuracy: 0.5°C(25°C) Humidity: 3%RH (5%RH-95%RH, 25°C)
Long-term stability	Temperature: ≤0.1°C/year Humidity: ≤0.1%/year
Response time	Temperature: ≤18/sec(1m/s wind speed) Humidity: ≤6 seconds (1m/s wind speed)
Digital output	Device address 1-255 can be set, the default is 1 Device baud rate 2400, 4800, 9600 optional, Default 4800 Byte format 8 bit data bit, 1 stop bit, no parity
Electrical connections	Direct Lead

Air Atmospheric Pressure Sensor



ES-101AT

Performance Parameter:

Testing Range: air pressure:0-120kpa Temperature -40-80°C (customized for option)

Analog Signal output	4~20mA 0~5VDC 0~10VDC
Digital Signal output	RS485 output (Modbus protocol)
Working Voltage	10-30VDC Note: 0-10VDC output (limited to 24VDC power supply)
Power consumption	Analog signal (voltage/current maximum power consumption 1.2w) Digital signal maximum power consumption $\leq 0.4w$
Accuracy	Air Pressure $\pm 0.15kpa$ (25°C) Temperature: $\pm 0.5^{\circ}C$ (25°C)
Long term stability	Air pressure -0.1kpa/year Temperature $\leq 0.1^{\circ}C$ /year Temperature $\leq 0.1^{\circ}C$ /year
Response Time	$\leq 1S$
Working Environment	-20+60°C 0%RH-80%RH
Digital output: Device address	1-255 can be set, the default is 1
Device baud rate	2400 4800 9600 for option
Byte format	8 bit data bit, 1 stop position, no parity
Electrical connection	Direct Lead

CO2 Carbon Dioxide Sensor



ES-101CO2

Performance Parameter:

Testing Range: Carbon dioxide concentration 0-5000ppm

Technical Index

Analog Signal output	4~20mA 0~5VDC 0~10VDC
Digital Signal output	RS485 output (Modbus protocol)
Working Voltage	10-30VDC Note: 0-10VDC output (limited to 24VDC power supply)
Power consumption	Analog signal (voltage/current maximum power consumption 1.2w) Digital signal maximum power consumption 0.4w
Accuracy	CO2 concentration $\pm 40\text{ppm} + 3\%FS$ (25°C)
Working Environment	-20-+60°C 0%RH-80%RH
Long term stability	≤ 30 ppm / year
Response time	≤ 10 (1m/s wind speed)
Preheat time	2min(available) 10min(Maximum accuracy)
Digital output: Device address	1-255 can be set, the default is 1
Device baud rate	2400 4800 9600 for option
Byte format	8 bit data bit, 1 stop position, no parity
Electrical connection	Direct Lead

CO Carbon Monoxide Sensor

ES-101CO

Performance Parameter:

CO measurement range	0~2000ppm
Temperature measurement range	-40°C ~+80°C
Humidity measurement range	0~100%RH
Temperature accuracy	±0.5°C
Humidity accuracy	±3%RH
CO resolution	0.1ppm
Signal output	Analog signal I4~20mA/0~5VDC/0~10VDC Digital signal RS485 output (Modbus protocol)
Operating Voltage	10~30VDC Note: 0~10VDC output (24VDC power supply)
Power consumption	Analog signal (voltage/current maximum power consumption 1.2W) Digital signal maximum power consumption 0.4W
Data update time	2s
Response time	90% step change is generally less than 50s
Electrical connections	Direct lead

Ozon O3 Sensor



ES-10103

Performance Parameter:

O3 measurement range	0-10ppm/0-100ppm O3 Discriminate 0.01PPM/0.01PPM
Temperature measurement range	-40°C ~+80°C
Humidity measurement range	±100%RH
Temperature accuracy	±0.5°C
Humidity accuracy	±10%RH
CO resolution	0.1ppm
Signal output	Analog signal 4~20mA/0~5VDC/0~10VDC Digital signal RS485 output (Modbus protocol)
Operating Voltage	10~30VDC Note: 0~10VDC output (24VDC power supply)
Power consumption	Analog signal (voltage/current maximum power consumption 1.2W) Digital signal maximum power consumption 0.4W
Data update time	1s
Response time	90% step change is generally less than 50s
Electrical connections	Direct lead

Sulphur Dioxide SO2 Sensor



ES-101SO2

Performance Parameter:

SO2 measurement range	0-2000ppb
Temperature measurement range	-40°C ~+80°C
Humidity measurement range	±100%RH
Temperature accuracy	±0.5°C
Humidity accuracy	±10%RH
SO2 resolution	≤0.1ppm
Signal output	Analog signal I4~20mA/0~5VDC/0~10VDC Digital signal RS485 output (Modbus protocol)
Operating Voltage	10~30VDC Note: 0~10VDC output (24VDC power supply)
Power consumption	Analog signal (voltage/current maximum power consumption 1.2W) Digital signal maximum power consumption 0.4W
Data update time	1s
Response time	90% step change is generally less than 50s
Electrical connections	Direct lead

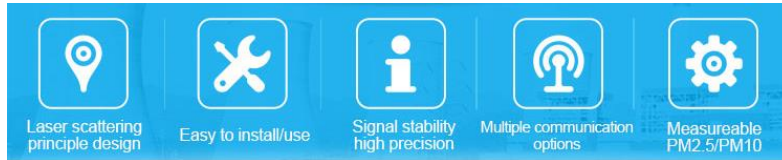
Nitrogen Dioxide NO2 Sensor



ES-101NO2

Performance Parameter:

NO2 measurement range	0-2000ppb
Temperature measurement range	-40°C ~+80°C
Humidity measurement range	±100%RH
Temperature accuracy	±0.5°C
Humidity accuracy	±10%RH
NO2 resolution	≤0.1ppm
Signal output	Analog signal I4~20mA/0~5VDC/0~10VDC Digital signal RS485 output (Modbus protocol)
Operating Voltage	10~30VDC Note: 0~10VDC output (24VDC power supply)
Power consumption	Analog signal (voltage/current maximum power consumption 1.2W) Digital signal maximum power consumption 0.4W
Data update time	1s
Response time	90% step change is generally less than 50s
Electrical connections	Direct lead

Air Monitor Quality Sensor (PM2.5 , PM.10)

ES-101PM

Performance Parameter:

Testing Range: PM2.5 0-6000ug/m3 PM10 0-6000ug/m3

Output Signal	digital output: RS485 (Modbus protocol)
Working Voltage	10-30VDC
Power consumption	Digital signal maximum power consumption 0.4w
Parameter configuration	Configure via the 485 interface with the provided configuration software
Resolution	1ug/m3
Working Environment	-20-+60°C 0%RH-80%RH
Response speed	≤90s
Preheat time	≤2min
Communication mode	485 communication (Modbus protocol)
Device baud rate	2400 4800 9600 for option, standard 4800
Byte format	8 bit data bit, 1 stop position, no parity Communication address: defaults to 1 Support function:03
Electrical connection	Direct Lead

Soil Moisture and Soil Temperature



ES-101SM

Performance Parameter:

Measurement range	-40~80°C
Working humidity	0%RH~100%RH
Signal output	4~20mA Rs485 output (Modbus protocol)
Operating Voltage	10~30VDC 5~24VDC
Maximum power consumption	1.2W 0.4W
Accuracy	Humidity: $\pm 3\%$ RH (5%RH~95RH, 25°C) Temperature: $\pm 5\%$ °C (25°C)
Probe length	55mm
Probe diameter	3mm
Electrical connections	Direct lead

Rain and Snow Sensor



ES-101RS

Performance Parameter:

Output Signal	RS485 (Modbus-RTU protocol)
	Relay: Normally open contact
Supply Voltage	10-30VDC
Working Temperature	-20-+60°C
Parameter Configuration	Software settings
Heating Function (optional)	Heating start ambient temperature <15°C (default)
Max heating temperature	40°C (default)
Output relay with load capacity	250VAC 1A/ 30VDC 1A
Electrical connection	Direct Lead

Noise Sensor

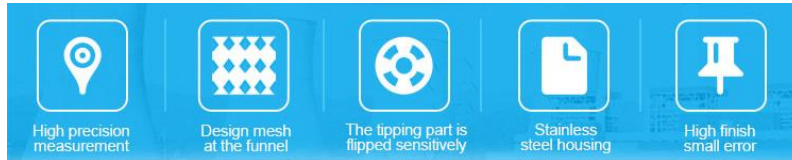


ES-101NL

Performance Parameter:

Output Signal	RS485 (Modbus-RTU protocol)
	Relay: Normally open contact
Supply Voltage	10-30VDC
Working Temperature	-20-+60°C
Parameter Configuration	Software settings
Heating Function (optional)	Heating start ambient temperature <15°C (default)
Max heating temperature	40°C (default)
Output relay with load capacity	250VAC 1A/ 30VDC 1A
Electrical connection	Direct Lead

Rain Measurement Sensor



ES-101RM

Performance Parameter:

Barrel inlet size	Diameter 200mm																
Sharp edge	40-45°																
Rain intensity range	0.01mm-4mm/min (Allow maximum rain intensity)																
Testing Accuracy	≤±3%																
Power Voltage	5-24V DC 12-24V DC																
Communication mode	double contact on/off signal output																
Resolution	0.2mm																
Ambient temperature	-10~+50°C																
Relative humidity	<95%(40°C)																
Size	dia 216*460mm																
Output Signal	<table border="0"> <tr> <td>Signal Mode</td> <td>Data conversion method</td> </tr> <tr> <td>Voltage signal 0-2vdc</td> <td>Rainfall=50*V</td> </tr> <tr> <td>Voltage signal 0-5vdc</td> <td>Rainfall=20*V</td> </tr> <tr> <td>Voltage signal 0-10vdc</td> <td>Rainfall=10*V</td> </tr> <tr> <td>Current signal 4-20mA</td> <td>Rainfall=6.25*A-25</td> </tr> <tr> <td>Pulse signal (pulse)1 pulse represents 0.2mm rainfall</td> <td></td> </tr> <tr> <td>Digital signal(RS485)</td> <td></td> </tr> <tr> <td>Standard Modbus-RTU protocol, baud rate9600</td> <td></td> </tr> </table>	Signal Mode	Data conversion method	Voltage signal 0-2vdc	Rainfall=50*V	Voltage signal 0-5vdc	Rainfall=20*V	Voltage signal 0-10vdc	Rainfall=10*V	Current signal 4-20mA	Rainfall=6.25*A-25	Pulse signal (pulse)1 pulse represents 0.2mm rainfall		Digital signal(RS485)		Standard Modbus-RTU protocol, baud rate9600	
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Digital signal(RS485)																	
Standard Modbus-RTU protocol, baud rate9600																	

Check digit: None, data bit:8 bits, stop bit:1 (address defaults to 01)

Dissolved Oxygen Sensor

Fluorescence method Dissolved oxygen sensor is based on the physics of fluorescence quenching principle. The blue light from a light-emitting diode (LED) illuminates the fluorescent substance on the inner surface of the fluorescent cap. The fluorescent substance on the inner surface is excited to emit red light. By detecting the phase difference between the red and blue light, To calculate the concentration of oxygen molecules, through the temperature and pressure automatically compensate for the final output value.

Performance Parameter:

Measurement range	0-20mg/L
Temp	-5-65°C
Pressure (MPa)	0-0.2
Output signal	RS485(MODBUS/RTU)
Accuracy	±5%F.S.
Power Supply	DC12V -24V±10%, <1W
Resolution	0.01mg/L
Cable length	5m, other length can be customized



WS-201DOS

Water Electrical Conductivity/EC Sensor

Performance Parameter:

Measurement range:	0-5000us/cm, 0-20us/cm, 0-200us/cm, 0-200ms/cm.
Temp:	0-80°C
Pressure (MPa):	0-0.6
Output Model:	RS485(MODBUS/RTU)
Accuracy:	±1.5%F.S.
Power Supply:	DC12V -24V±10%
Resolution:	0.1us/cm or 0.1PSU



WS-201WEC

Ph Sensor

Performance Parameter:

ph range:	0-14
Temp	0-60°C
Pressure (MPa):	0-0.4
Inner resistance MΩ (25°C):	≤250
Zero potential:	7±0.5
Theoretical percentage slope %:	≥95
Applicable scope:	Environmental protection, Sewage, Online detection



WS-201PH

Residual Chlorine Sensor

Performance Parameter:

Range	0 - 2.000 mg/L, 0 - 20.00 mg/L
Resolution ratio	0.001 mg/L, 0.01 mg/L
Temperature range	0 - 80 °C
Pressure	0 -10 bar
Shell material	Glass+PP+POM
Reference system	Double junction, annular liquid junction
Electrode cap (PP)	PG13.5
Handle material	POM
Cable length	5m
Joint	terminal
interface / protocol	RS-485 Modbus RTU
Power	DC-12V
Output	Residual chlorine, Temp
Protection grade	IP68



WS-201RCL

ntu turbidity sensor

Performance Parameter:

Range	0.1~3000NTU(0-100, 0-10000, 0-3000)
Accuracy	<5% or 0.3NTU
Temperature range	0 - 80 °C
Response Time	<2 sec
Operation temperature	5~50 °C
Max pressure	6bar
Body Material	316L
Protection grade	IP68
Communication interface	RS-485, MODBUS
Cable length:	5M
Stall method:	Insert to the water



WS-201NTU

Oxidation Reduction Potential (ORP) sensor

Performance Parameter:

Range	mV:-1999~+1999 Temperature: (0~50.0)°C
Accuracy	mV:±1 mV Temp: ±0.5°C
Resolution	mV:1 mV Temp: 0.1°C
Response Time	<2 sec
Body Material	ABS
Communication interface	RS-485, MODBUS
Cable length:	5M



WS-201ORP