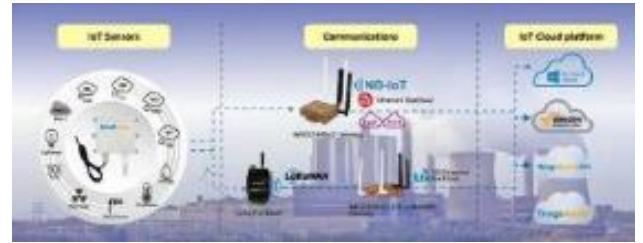









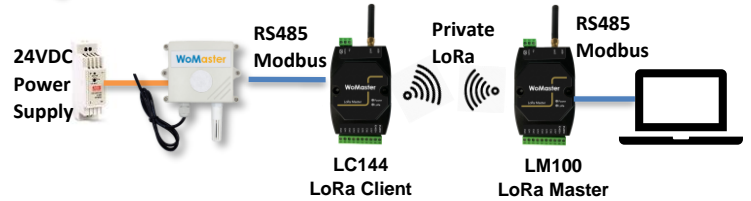
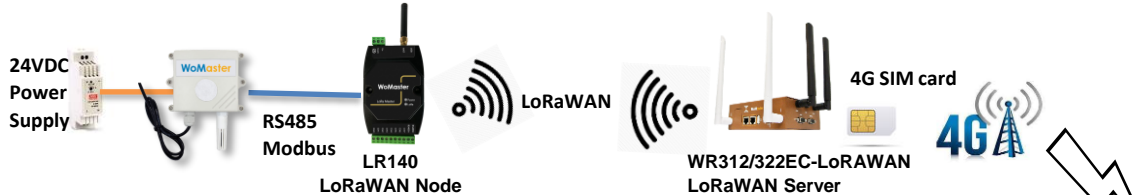
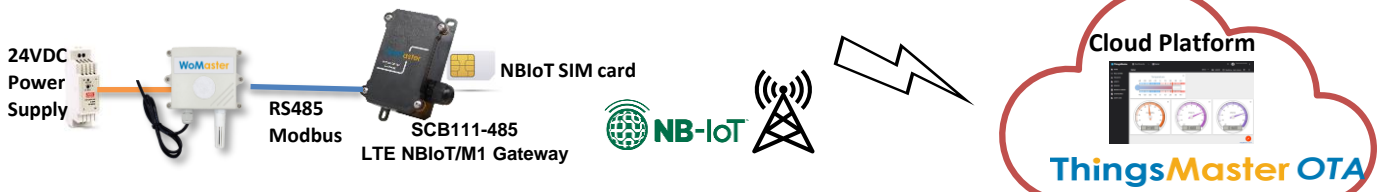
# Outdoor Environment IoT Sensor

- Outdoor Protective Design against direct ultraviolet radiation
- Single or multiple parameters in small shutter, small size, light weight and easy to install
- 2-Wire RS485 Modbus output to connect to optional cellular gateway WR222 or LC144/LR140 LoRa/LoRaWAN nodes
- 24(10-30) VDC Power Input and Real-time measurement
- 4~20mA or 0~10V Output by Special Order



Model			Measurement	Accuracy	Dimension
ES102-TH	<b>Outdoor Temperature and Humidity Sensor</b>		Temperature: -40~+80 °C Humidity: 0%~100%RH	Temperature accuracy: 0.5 °C(25 °C) Humidity: 3%RH (5%RH~95%RH, 25 °C)	110x85x44(mm)
ES101-AT	<b>Outdoor Air Atmospheric Pressure Sensor</b>		air pressure:0-120kpa	Air Pressure ±0.15kpa (25 °C/75Kpa)	110x85x44(mm)
ES101-NL	<b>Outdoor Noise Level Sensor</b>		30~120dB (20Hz~12.5KHz)	0.5dB	110x85x44(mm)
ES102-UW	<b>Outdoor Ultrasonic Wind Speed Direction Sensor</b>		0~70Meters/Second Compass , 360 degree	0.1Meter/Second 1 degree	Base Φ141mm Height 115mm
ES101-WS	<b>Outdoor Anemometer Wind Speed Sensor</b>		0~70Meters/Second	0.3Meter/Second	Base Φ80mm Height 160mm
ES101-WD	<b>Outdoor Wind Direction Sensor</b>		Compass , 360 degree	1 degree	Base Φ80mm Height 190mm
ES101-RG	<b>Outdoor Rain Measurement Sensor</b>		0~4mm/Min (Max.8mm/Min)	0.5mm/Min	Φ200mm
ES101-UV	<b>Outdoor UV Measurement Sensor</b>		0~15 mW/ cm2	UV Strength: ±10% FS 0.01 mW/ cm2	110x85x44(mm)
ES101-SR	<b>Solar Radiation Sensor</b>		1800 w/m <sup>2</sup> 0.3 ~3 um	1 w/m <sup>2</sup>	Base Φ80mm Height 90mm
ES101-LUX	<b>Illumination Sensor</b>		0~65535 Lux 0~200000 Lux	±7% (25 °C)	110x85x44(mm)
ES101-FL (5M/10M /20M/30M)	<b>Outdoor Flood Water Detection Sensor</b>		Water Detection Length 5M, 10M, 20M, 30M	Water Leakage	110x85x44(mm)

**1) Sensor Connect to PC/HMI/PLC**

**2) Sensor Connect to Private LoRa to PC/HMI/PLC**

**3) Sensor Connect to LoRaWAN Gateway**

**4) Sensor Connect to LTE NB-IoT Gateway SCB111-485-NB**

**5) Sensor Connect to WiFi + LTE Gateway WR222-WLAN+LTE**


**Optional Accessory**

Item	
<b>MDR-40-24</b>	Din-Rail Power Supply INPUT:85-264VAC, 120-370VDC, OUTPUT: 24VDC/1.7A, -20 ~ +70°C
<b>ThingsMaster OTA-5GW</b>	ThingsMaster OTA for 5 gateways, One Year License
<b>LM100</b>	LoRa Master / Modbus RTU Client (Must work with LC144) (with LoRa antennas)
<b>LC144</b>	LoRa End-Node, 8CH AIO, 1 Modbus RTU 485 2-wire, 2 x 0~10V input, 2 x 4~20mA input, 1 x 0~10V Output, Open Collect (O.C.), 1 x 4~20mA Output, 1 x PWM Output (0~5V), 1 x PWM (0~10V), Open Collect (O.C.) Type, 1 x SMA /LoRa Antenna (Must work with LM100 or LM200)
<b>LR140</b>	LoRa WAN End-Node, 4CH AI, 1 Modbus RTU 485 Host, 1 x RS485 Host, 2-wire, 1 x SMA /LoRa Antenna Connector (with LoRa antennas)
<b>WR322GR-EC-LTE-LORAWAN</b>	Industrial LoRaWAN Gateway, 2GbE+2COM, LTE 2SIM, (with LTE and LoRa antennas)(Must work with LR140)
<b>WR312GR-EC-LORAWAN</b>	Industrial LoRaWAN Gateway, 2GbE+2COM (Must work with LR140)
<b>WR222-WLAN+LTE</b>	Industrial Wireless IIoT Field Router, 2FE+1COM, SD, 802.11b/g/n WLAN, 1SIM (with WiFi, LTE Antennas)
<b>SCB111-485-NB-DC</b>	Outdoor Modbus RS485 to NB-IoT / LTE Cat M1 Gateway

# Outdoor Temperature and Humidity Sensor

## ES102TH

### Outdoor Protective Design

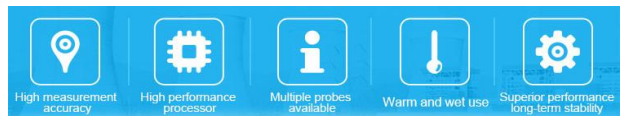
- Prevent direct ultraviolet radiation to the sensors
- Avoid rapid aging of sensors under harsh environmental conditions such as strong winds, rain, and snow
- The sensor parts are ventilated for truly sensing the changes in external detection parameters
- Single or multiple parameters both can use small shutter, small size, light weight and easy to install

### Optional IoT Router and Cloud Platform - ThingsMaster

- Support Modbus to connect optional NBloT Gateway WR222 for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



### Features & Benefits



<b>Probe measuring temperature:</b>	-40~+60°C
<b>Probe measuring humidity:</b>	Relative humidity 0%~100%RH
<b>Signal output</b>	RS485 2-Wire output (Modbus protocol)
<b>Working voltage</b>	10~30VDC
<b>Maximum power consumption</b>	≤0.4w
<b>Accuracy</b>	Temperature accuracy: 0.5°C(25°C) Humidity: 3%RH (5%RH~95%RH, 25°C)
<b>Long-term stability</b>	Temperature: ≤0.1°C/year Humidity: ≤ 1%/year
<b>Response time</b>	Temperature: ≤18/sec(1m/s wind speed) Humidity: ≤6 seconds (1m/s wind speed)



Register Address	PLC or Configuration Address	Content	Description
0000 H	40001	Humidity	Range : 0-100.0%RH ; Upload data 10 times real data
0001 H	40002	Temperature	Range : -40-80°C ; Upload data 10 times real data
07D0 H	42001	Slave ID	1 ~ 254 (Factory Default 1)
07D1 H	42002	Baud Rate	0=2400 1=4800 2=9600(Default)



### Ordering Information

Model Name	Description
ES102TH	Outdoor Temperature and Humidity Sensor, -40~+60°C, 0~100%RH, RS485 Modbus, 10-30V Power
	<b>Package List</b>
	1 x Product Unit, 1 x Quick Installation Guide
	2x Expansion plugs, 2 x Self-tapping screws

\*4~20mA / 0~5V / 0~10V output by request

# Outdoor Air Atmospheric Pressure Sensor ES101AT

## Outdoor Protective Design

- Prevent direct ultraviolet radiation to the sensors
- Avoid rapid aging of sensors under harsh environmental conditions such as strong winds, rain, and snow
- The sensor parts are ventilated for truly sensing the changes in external detection parameters
- Single or multiple parameters both can use small shutter, small size, light weight and easy to install



## Optional IoT Router and Cloud Platform - ThingsMaster

- Support Modbus to connect optional NBLoT Gateway WR222 for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



## Features & Benefits

High measurement accuracy	High performance processor	Multiple probes available	Warm and wet use	Superior performance long-term stability
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<b>Testing Range:</b>	air pressure:0-120kpa
<b>Digital Signal output</b>	RS485 2-Wire output (Modbus protocol)
<b>Working Voltage</b>	10-30VDC
<b>Power consumption</b>	≤0.5w
<b>Accuracy</b>	Air Pressure ±0.15kpa (25°C/75Kpa)
<b>Long term stability</b>	Air pressure -0.1kpa/year Temperature ≤0.1°C/year
<b>Response Time</b>	≤1S
<b>Working Environment</b>	-20-+60°C , 0% - 80%RH



Register Address	PLC or Configuration Address	Content	Description
0000 H	40001	Air Pressure	Range : 0 ~ 120Kpa Upload data 10 times real data
07D0 H	42001	Slave ID	1 ~ 254 (Factory Default 1)
07D1 H	42002	Baud Rate	0=2400 1=4800 2=9600(Default)

## Ordering Information

Model Name	Description
ES101AT	Outdoor Air Atmospheric Pressure Sensor, 0-120kpa, RS485 Modbus, 10-30V Power
	<b>Package List</b>
	1 x Product Unit
	2x Expansion plugs
	2 x Self-tapping screws
	1 x Quick Installation Guide

# Outdoor Noise Level Sensor

## ES101NL

### Outdoor Protective Design

- Prevent direct ultraviolet radiation to the sensors
- Avoid rapid aging of sensors under harsh environmental conditions such as strong winds, rain, and snow
- The sensor parts are ventilated for truly sensing the changes in external detection parameters
- Single or multiple parameters both can use small shutter, small size, light weight and easy to install

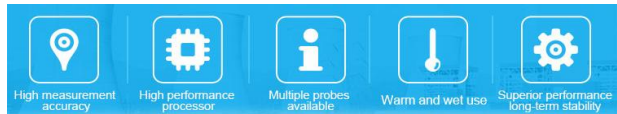


### Optional IoT Router and Cloud Platform - ThingsMaster

- Support Modbus to connect optional NBloT Gateway WR222-WLAN-NB for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



### Features & Benefits



<b>Noise measurement range</b>	30~120dB (20Hz~12.5KHz)
<b>Noise resolution</b>	0.1dB
<b>Accuracy</b>	0.5dB
<b>Signal output</b>	RS485 2-wire output (Modbus protocol)
<b>Operating Voltage</b>	10~30VDC
<b>Power consumption</b>	<0.18W
<b>Working Environment</b>	-20~+60°C , 0-80%RH
<b>Response time</b>	<3 seconds



Register Address	PLC or Configuration Address	Content	Description
0000 H	40001	Instantaneous Noise Value	Range: 30~120dB Upload data 10 times real data
07D0 H	42001	Slave ID	1 ~ 254 (Factory Default 1)
07D1 H	42002	Baud Rate	0=2400 1=4800 2=9600(Default)



### Ordering Information

Model Name	Description
ES101NL	Outdoor Noise Level Sensor, 30~120dB (20Hz~12.5KHz), RS485 Modbus, 10-30V Power
	<b>Package List</b>
	1 x Product Unit
	2x Expansion plugs
	2 x Self-tapping screws
	1 x Quick Installation Guide

\*4~20mA / 0~5V / 0~10V output by request

# Outdoor Ultrasonic Wind Speed Wind Direction Sensor ES102UW

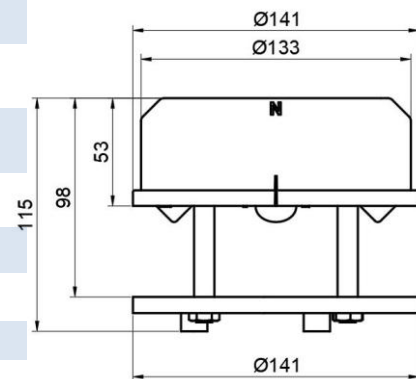
The ES102UW ultrasonic wind speed and direction sensor employs four ultrasonic probes that continuously transmit and receive ultrasonic waves within a two-dimensional plane. It calculates wind speed and direction by analyzing the time differential between the propagation of ultrasonic waves in the air.

With the built-in electronic compass, the orientation is no longer required during the installation; it only needs to be installed horizontally. The high-quality ABS enclosure features lightweight, no moving parts, durability, and no maintenance or on-site calibration is needed. It can simultaneously output wind speed and wind direction and is widely applicable in the measurement of wind speed and wind direction in various fields such as meteorology, oceanography, environmental monitoring, airports, ports, laboratories, agriculture, and transportation.



## Features & Benefits

<b>Housing Material</b>	ABS IP66
<b>Wind measurement range</b>	0~60Meters/Second $\pm 0.2m/s$ 0~359 $\pm 3^\circ$
<b>Resolution</b>	0.01Meter/Second 1 $^\circ$
<b>Signal output</b>	RS485 2-wire output (Modbus protocol)
<b>Operating Voltage</b>	10~30VDC
<b>Power consumption</b>	0.4W
<b>Working Environment</b>	-40~+60 $^\circ C$ , 0-95%RH
<b>Response time</b>	<0.5 seconds



Register Address	PLC or Configuration Address	Content	Description
0000 H	40001	Instantaneous Wind Speed	Range : 0 ~ 70m/s Upload data x 100 times = real data
0001H	40002	Wind Direction	Wind Direction (North 0 $^\circ$ Clockwise Increase, East 90 $^\circ$ )
0002H	40003	Max Wind Speed	Max Speed (data *100)
0003H	40004	Wind Level	Wind Level by Speed 0~17
07D0 H	42001	Slave ID	1 ~ 254 (Factory Default 1)
07D1 H	42002	Baud Rate	0=2400 1=4800 2=9600(Default)



## Ordering Information

ES102UW Outdoor Ultrasonic Wind Speed Wind Wind Direction Sensor, Output RS485 Modbus, 10-30VDC Power, 0~60Meters/Second Speed, 0~359 $^\circ$  Direction

### Package List

- 1 x Product Unit
- 2 x Mounting plates, M4\*10 screws x 2, M5\*14 screws x 3, connector x 1
- 1 x Quick Installation Guide

\*4~20mA / 0~5V / 0~10V output by request

# Outdoor Anemometer Wind Speed Sensor ES101WS

## Outdoor Protective Design

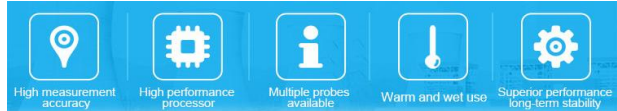
- Prevent direct ultraviolet radiation to the sensors
- Avoid rapid aging of sensors under harsh environmental conditions such as strong winds, rain, and snow

## Optional IoT Router and Cloud Platform - ThingsMaster

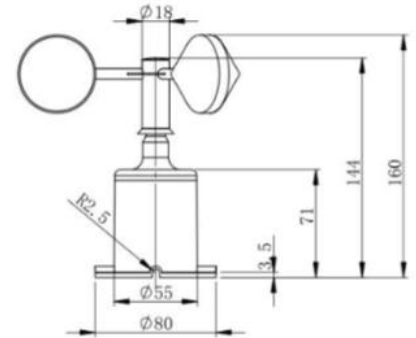
- Support Modbus to connect optional NBloT Gateway WR222-WLAN-NB for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



## Features & Benefits



<b>Housing Material</b>	Polycarbonate
<b>Wind measurement range</b>	0~70Meters/Second
<b>Resolution</b>	0.1Meter/Second
<b>Signal output</b>	RS485 2-wire output (Modbus protocol)
<b>Operating Voltage</b>	10~30VDC
<b>Power consumption</b>	<0.3W
<b>Working Environment</b>	-20~+60°C , 0-80%RH
<b>Response time</b>	<0.5 seconds



Register Address	PLC or Configuration Address	Content	Description
0000 H	40001	Instantaneous Wind Speed	Range : 0 ~ 70m/s Upload data 10 times real data
07D0 H	42001	Slave ID	1 ~ 254 (Factory Default 1)
07D1 H	42002	Baud Rate	0=2400 1=4800 2=9600(Default)



## Ordering Information

Model Name	Description
ES101WS	Outdoor Anemometer Wind Speed Sensor, 0~70Meters/Second, RS485 Modbus, 10-30V Power
	<b>Package List</b>
	1 x Product Unit
	4 x Mounting Screws
	1 x Quick Installation Guide

\*4~20mA / 0~5V / 0~10V output by request

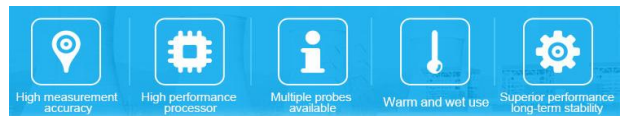
# Outdoor Wind Direction Sensor ES101WD

### Outdoor Protective Design

- Prevent direct ultraviolet radiation to the sensors
- Avoid rapid aging of sensors under harsh environmental conditions such as strong winds, rain, and snow

### Optional IoT Router and Cloud Platform - ThingsMaster

- Support Modbus to connect optional NBIoT Gateway WR222-WLAN-NB for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



### Features & Benefits

<b>Wind measurement range</b>	Compass , 360 degree
<b>Accuracy</b>	1 degree
<b>Resolution</b>	1 degree
<b>Signal output</b>	RS485 2-wire output (Modbus protocol)
<b>Operating Voltage</b>	10~30VDC
<b>Power consumption</b>	<0.3W
<b>Working Environment</b>	-20~+60°C , 0-80%RH
<b>Response time</b>	<0.5 seconds



Register Address	PLC or Configuration Address	Content	Description
0000 H	40001	Wind Direction	Angle value with one decimal place(0-3599) Uploaded data is 10 times larger than the angle value with one decimal place
0001 H	40002	Wind Direction	Integer angle value (0-359) Uploaded data is actual value
07D0 H	42001	Slave ID	1 ~ 254 (Factory Default 1)
07D1 H	42002	Baud Rate	0=2400 1=4800 2=9600(Default)



### Ordering Information

Model Name	Description
ES101WD	Outdoor Wind Direction Sensor, Compass , 360 degree, RS485 Modbus, 10-30V Power
	<b>Package List</b>
	1 x Product Unit
	4 x Mounting Screws
	1 x Quick Installation Guide

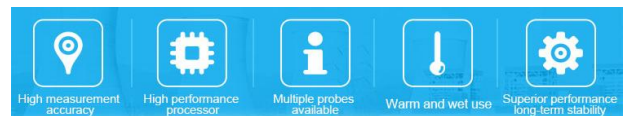
\*4~20mA / 0~5V / 0~10V output by request

# Outdoor Rain Measurement Sensor ES101RG

The ES101-RG rainfall measurement sensor adopts the three-dimensional streamlined core component, ensuring seamless water tipping. The tipping bucket is equipped with a permanent magnet, and the reed switch bracket is fitted with a reed switch. The magnet and reed switch are both adjusted to the appropriate coupling distance before shipment, ensuring a definite proportional relationship between the instrument's output signal and the number of tipping bucket rotations.

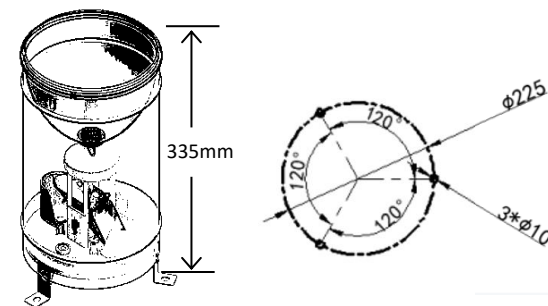


During on-site installation, it is only necessary to align the instrument, ensuring that the bubble level is centered, and then it can be put into use. There is no need for further adjustment of the tipping bucket angle on-site. It also incorporates self-cleaning dust capabilities, simplifying maintenance. Furthermore, it provides a pulse signal output that can be effortlessly converted to a 485 signal for straightforward rainfall measurement readings, eliminating the necessity for additional calculations and offering a hassle-free solution.



## Features & Benefits

<b>Housing</b>	#304 Stainless, 200mm Diameter
<b>Measurement Range</b>	0~4mm/Min (Max.8mm/Min)
<b>Resolution</b>	0.5mm/Min
<b>Signal output</b>	RS485 2-wire output (Modbus protocol)
<b>Operating Voltage</b>	10~30VDC
<b>Working Environment</b>	0~+50°C , 0~95%RH



Register Address	PLC or Configuration Address	Content	Description
0000 H	40001	Rain Measurement	Range : 0~4mm/Min Upload data 10 times real data
07D0 H	42001	Slave ID	1 ~ 254 (Factory Default 1)
07D1 H	42002	Baud Rate	0=2400 1=4800 2=9600(Default)



## Ordering Information

Model Name	Description
ES101RG	Outdoor Rain Measurement Sensor, 0~4mm/Min (Max.8mm/Min), RS485 Modbus, 10~30V Power
	<b>Package List</b>
	1 x Product Unit
	3 x Screws
	1 x Quick Installation Guide

\*4~20mA / 0~5V / 0~10V output by request

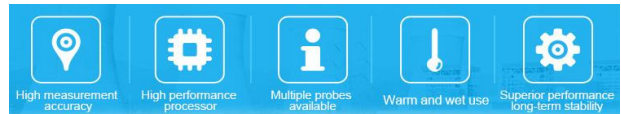
# Outdoor UV Measurement Sensor ES101UV

## Highly Sensitive UV measurement

- The ultraviolet measurement is highly sensitive to 240-370nm to accurately measure ultraviolet intensity
- The transparent window adopts high-quality light-transmitting materials for over 98% of ultraviolet transmittance.
- Wall Mount Enclosure for outdoor environment

## Optional IoT Router and Cloud Platform - ThingsMaster

- Support Modbus to connect optional NBloT Gateway WR222-WLAN-NB for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



## Features & Benefits

<b>Accuracy</b>	UV Strength: $\pm 10\%$ FS
<b>Measurement</b>	0~15 mW/ cm <sup>2</sup>
<b>Sensitivity</b>	0.01 mW/ cm <sup>2</sup>
<b>UV Index</b>	0~15
<b>Wave Length Range</b>	240-370 nm
<b>Digital Signal output</b>	RS485 2-Wire output (Modbus protocol)
<b>Working Voltage</b>	10-30VDC
<b>Power consumption</b>	0.1w
<b>Response Time</b>	0.2 Second
<b>Working Environment</b>	-40~+60°C , 0% - 80%RH



Register Address	PLC or Configuration Address	Content	Description
0000 H	40001	UV Measurement	Uploaded data is 100 times of Actual Value
0001 H	40002	UV Index	Actual value
07D0 H	42001	Slave ID	1 ~ 254 (Factory Default 1)
07D1 H	42002	Baud Rate	0=2400 1=4800 2=9600(Default)



## Ordering Information

Model Name	Description
ES101UV	Outdoor UV Sensor, 0-15 mW/ cm <sup>2</sup> , RS485 Modbus, 10-30V Power
	<b>Package List</b>
	1 x Product Unit, 1 x Quick Installation Guide
	2x Expansion plugs, 2 x Self-tapping screws

\*4~20mA / 0~5V / 0~10V output by request

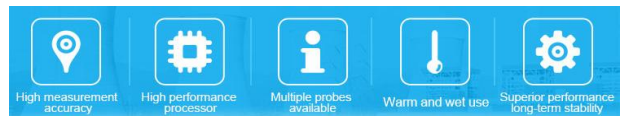
# Outdoor Illumination Sensor ES101LUX

## Highly Sensitive Illumination measurement

- The highly sensitive illumination range from 0~65535 LUX, or 0~200,000 LUX
- Wall Mount Enclosure for outdoor environment

## Optional IoT Router and Cloud Platform - ThingsMaster

- Support Modbus to connect optional NBIoT Gateway WR222-WLAN-NB for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



## Features & Benefits

<b>Accuracy</b>	±7%
<b>Measurement</b>	0~65535 LUX, or 0~200,000 LUX
<b>Digital Signal output</b>	RS485 2-Wire output (Modbus protocol)
<b>Working Voltage</b>	10-30VDC
<b>Power consumption</b>	0.4w
<b>Response Time</b>	0.1 Second
<b>Working Environment</b>	-40~+60°C , 0% - 95%RH



Register Address	PLC or Configuration Address	Content	Description
0002 H 0003 H	40003 40004	Illumination	0~200000 LUX, unit: 1 LUX
0006 H	40007	Illumination	0~65535 LUX, unit: 1 LUX 0~200000 LUX, unit: 100 LUX
0x07D0	42001	Slave ID	1 ~ 254 (Factory Default 1)
0x07D1	42002	Baud Rate	0=2400 1=4800 (Default) 2=9600



## Ordering Information

Model Name	Description
ES101LUX60	Outdoor Illumination Sensor, 0~65535 LUX, RS485 Modbus, 10-30V Power
ES101LUX200	Outdoor Illumination Sensor, 0~200000 LUX, RS485 Modbus, 10-30V Power
	<b>Package List</b>
	1 x Product Unit, 1 x Quick Installation Guide
	2x Expansion plugs, 2 x Self-tapping screws

\*4~20mA / 0~5V / 0~10V output by request

# Solar Radiation Sensor

## ES101-SR

The ES101SR Solar Radiation Sensor utilizes the photoelectric method to measure solar radiation with a spectral range from 0.3 to 3µm. It adopts high precision photosensitive elements with wide spectrum absorption, high absorption, and good stability. The dust cover provides 95% transmittance of radiation and gives an excellent dust-proof and water-proof protection with special treatment to reduce dust adsorption and enhance the measurement accuracy.

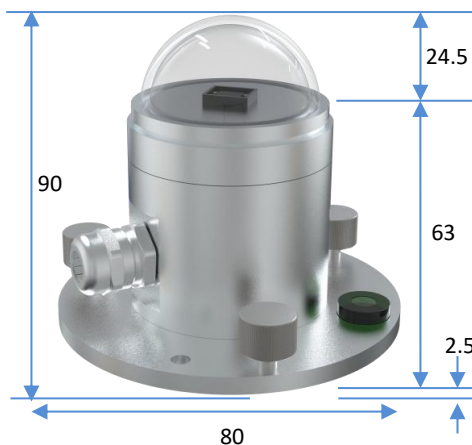
The ES101SR supports standard Modbus RTU protocol with a 2-wire RS-485 communication interface that can be integrated with an IoT gateway, like as WR222, WR312, which with 4G/LTE, NB, WiFi transmission technologies, or through the cost efficiency solution - LoRa End-Node LC144, NBIoT End-Node NC144 to upload environmental data to the cloud server for monitoring.



### Features & Benefits

- **Excellent Solar Radiation Detection**
  - Photoelectric measuring technology
  - Wide spectral: 0.3 ~3.0µm
  - Wide Measuring Range 1800 w/m<sup>2</sup>
- **Water-Proof / Anti-Dust**
  - IP65 Ingress Protection
  - Anti Dust Absorption Treatment
  - Anti-U/V Plastic Housing
- **Modbus RTU Standard**
  - 2-Wire RS-485 Communication Interface
  - Simply Data Access
- **Harsh Operating Environment**
  - Wide range power input 10~30V
  - Lower Power Consumption 0.08w
  - Wide Operating Temperature -40~60°C

### Dimension (mm)



### Application



Solar Radiation Sensor Parameters	
Measuring Range	0 ~1800 w/m <sup>2</sup>
Spectrum Range	0.3 ~3 um
Accuracy	1 w/m <sup>2</sup>
Long term stability	≤+/- 2% / Year
Response time	≤ 10 Sec.

System Operating Parameters	
Operating Temperature & Humidity	-40 ~ 60°C, 0~100% RH
Power Input Range	10~30Vdc ( V+: Brown, V- : Black)
Power Consumption	0.08w
Communication Interface	2-wire RS-485 ( RS485-A: Yellow, RS485-B: Blue)
Enclosure Material	Polycarbonate Plastic & Acrylic
Enclosure Protection	IP65 Protection Level
Enclosure Dimension	80mm (Diameter) x 90mm (High)

Modbus Register Information			
Parameters Function	Register Add. (HEX / DEC)	PLC Add. (Configure. Add.)	Note
Device ID Storage Add.	07D0H / 2000	2001/(32002, 62002)	R/W , System Factory Default ID: 1
Serial Baud Rate Add.	07D1H / 2001	2002/(32003, 62003)	R/W , Default: 2 2(9600), 0(2400), 1(4800)
Real Solar Radiation	0000H / 0	1 / (30001)	R/O(03) , Real Value = Read Value
Offset Value (Solar Radiation)	0052H / 82	83/ (30083 , 60083)	R/W (03/06), 0~1800 w/m <sup>2</sup>
R/W: Read & Write, R/O: Read Only			



## Ordering Information

Model	Description
ES101-SR	Solar Radiation Sensor, Modbus RTU protocol, 2-wire RS-485 , 10~30VDC
	<b>Package List</b>
	1 x Sensor
	1 x QIG

# Flood / Water Leak Detection Sensor ES101-FL-5M/10M/20M/30M

The ES101-FL Flood Water Leak Detection Sensor finds extensive application in communication base stations, underground facilities, IT rooms, warehouses, cabinets, and other environments requiring water detection alerts. It ensures secure operation through complete isolation of power input, water detection cable, and signal output.

Primarily utilized to identify water leaks beneath floors, the water detection cable sensors can also be employed to monitor rising water levels by positioning the cable along walls or surfaces. This water detection cable is intended for use in conjunction with the ES101-FL, and its length can be tailored to specific requirements, with options of 5, 10, 20, or 30 meters.



## Features & Benefits

Power Input	DC10-30V
Power Consumption	0.4W
Detection	Natural Water
Operation Temperature Humidity	-20°C~+60°C · 0%RH~80%RH
Output	RS485 Modbus
Water Detection Length	5M, 10M, 20M, 30M
Enclosure	IP53 Wall Mount

Register Address	PLC or Configuration Address	Content	Description
0004 H	40005	Measurement	Range : 0~10m; Upload real data
0000 H	40001	Slave ID	1 ~ 254 (Factory Default 1)
0001 H	40002	Baud Rate	0=2400 1=4800 2=9600(Default)



## Ordering Information

Model Name	Description
ES101-FL-5M	Outdoor Flood Water Detection Sensor, 5 Meter, RS485 Modbus, 10-30V Power
ES101-FL-10M	Outdoor Flood Water Detection Sensor, 10 Meter, RS485 Modbus, 10-30V Power
ES101-FL-20M	Outdoor Flood Water Detection Sensor, 20 Meter, RS485 Modbus, 10-30V Power
ES101-FL-30M	Outdoor Flood Water Detection Sensor, 30 Meter, RS485 Modbus, 10-30V Power