Ultraviolet UV sensor

Model ES-S320

Main features

- Highly sensitive UV measuring of 240-370 nm to accurately measure UV intensity.
- The perspective window is made of high-quality light-transmitting material, with UV transmittance exceeding 98%
- Supports multiple output signals to choose from.
- Wall-mounted waterproof shell, high protection level, can be used in outdoor rain and snow environment
- 10-30V DC wide voltage

Compliance

The electromagnetic compatibility in accordance with the following applicable directives:
LVD 2014/35/EU Low Voltage
EMC 2014/30/EU Electromagnetic Compatibility
EMC 2014/35/EU Electromagnetic Compatibility

Introduction

ES-S320 UV sensor is based on the principle that photosensitive elements convert UV rays into measurable electrical signals to achieve online monitoring of UV rays. The circuit uses industrial-grade microprocessor chips imported from the United States and imported high-precision UV sensors to ensure the product's excellent reliability and high precision. The product housing is a wall-mounted high-protection grade housing with a protection grade of IP65, which is rain and snow proof.
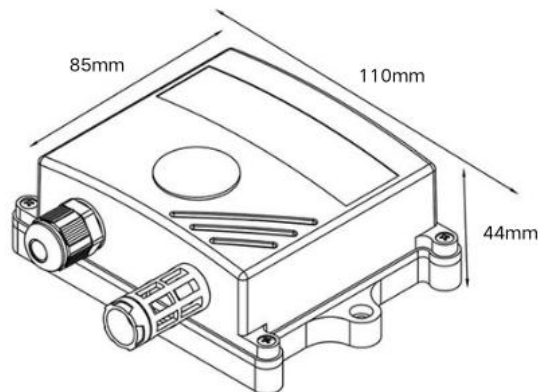
The product integrates temperature and humidity sensors into one, and the measurement data is more comprehensive. The product outputs 485 signals (standard Modbus-RTU protocol), can communicate up to 2000 meters, and supports secondary development.

Application

They are widely used in environmental monitoring, meteorological monitoring, agriculture, forestry, etc. Measure ultraviolet rays in the atmosphere and artificial light sources.

Dimension

Unit:mm

85mm
110mm
44mm

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Specification

Power supply	5~30VDC (0~10V type only supply 24VDC)		
Maximum power consumption	RS485: 0.1W		
	Analog output: 1.2W		
Accuracy	Ultraviolet irradiance	±10% FS	
	Humidity	±3%RH(5%RH~95%RH,25°C)	
	Temperature	±0.5°C（25°C)	
Ultraviolet Intensity Range	0-15m W/ cm², 0-450u W/ cm²		
Resolution	0.01mW/cm² (Range: 0-15m W/cm²) 1uW/cm² (Range: 0-450u W/cm²)		
Wavelength measurement range	Wavelength 240-370 nm		
Temperature and humidity range (optional)	-40°C~ +80°C, 0%RH~100%RH		
Circuit operating temperature and humidity	-40°C~+60°C, 0%RH~80%RH		
Long-term stability	Temperature	≤0.1°C/y	
	Humidity	≤1%/y	
Response time	Temperature	≤18s (1m/s wind speed)	
	Humidity	≤6s (1m/s wind speed)	
	Ultraviolet irradiance	0.2s	
	Ultraviolet Index	0.2s	
Output signal	RS485(Modbus-RTU protocol)、4-20mA,0-5V,0-10V		
Load capacity	Current output	With load capacity ≥600Ω	
	Voltage output	Output resistance≤250Ω	
IP level	IP65 default		

Order guide

ES-S320	UV sensor			
	CODE	Function		
	A	UV		
	B	UV and temperature and humidity		
		CODE	Signal output	
		1	4-20mA	
		2	0-10V	
		3	0-5V	
		4	RS485	
ES-S320	A	1	Order example	

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