ULTRAVIOLET RADIATION SENSOR

RY-ZW

MANUAL

INTRODUCTION & PRINCIPLE

UV radiometer is a precise instrument used to measure the ultraviolet radiation of the sun (UVAB wavelength range) in the atmosphere. The instrument can be used with data collector to provide information of public concern: UV index, UV erythema measurement, UV effect on human body and UV special biological and chemical effects. Therefore, it has been paid more attention in meteorology, industry, architecture and medicine. It is widely used in the study of erythema dose caused by exposure, comprehensive environmental ecological effect, climate change and ultraviolet monitoring and prediction.

The ultraviolet radiation sensor adopts a photoelectric detector to receive the electric signal of the ultraviolet light wave. It passes through a filter with a wavelength range of 280-400nm, and its output voltage is 0-50mv. The special shape scatterer can make the sensor obtain very good cosine response, and prevent the filter from direct sunlight, reduce drift and thermal modulation. Install a f37mm quartz glass cover on the top of the body to meet the spectral transmission, reduce the impact of the external environment on the detector, and play a protective role. The sensor has good sealing and weather resistance, allowing continuous outdoor operation, and the output voltage is directly proportional to the UV radiation intensity.

TECHNICAL SPECIFICATION

- ●Spectral range：UVAB 280~400nm；UVA 280~315nm；UVB 315~400nm
- ●Cosine response：≤4%（太阳高度角 30°时）
- ●Working temperature：-50℃~+50℃
- ●Measuring range：0~70 w*m-2
- ●Respond time：≤1s（99%）
- ●Internal resistance：≤1000Ω
- ●Temperature error： ±2%
- ●Annual stability： ±2%
- ●Nonlinear： ±2%

INSTALLATION & MAINTENANCE

The installation site of the UV radiation sensor shall be selected to be free of any obstacles above the sensing element plane, so as to ensure that there are no obstacles with an altitude angle of more than 5 ° in the direction of sunrise and sunset, and the phenomenon of shadow falling on the sensing surface shall be

avoided. If it is placed in the box, pay attention to the surrounding reflected light, and it should not be close to the heat source.

During installation, adjust the small bubble of the level to the middle position, and then fix it.

The connecting cable between the UV radiation meter and the recorder shall be double core shielded wire, and the connection mode of the UV external plug is: 1 is signal +, 2 is signal -. And it has waterproof performance. Cables shall be firmly fixed on supports or buried underground for protection.

If it is measured with a digital voltmeter, the measured voltage divided by the sensitivity coefficient of the purple surface is the radiation amount.

Radiation = measured MV * 1000 / sensitivity coefficient = w / m2

The purple surface of continuous work shall be inspected at least once a day, mainly to see whether the glass cover is clean, and if there is ice, snow, frost, dew, etc., try to gently remove these deposits. In addition, the level should be checked regularly.

Storage conditions:

Indoor with relative humidity less than 80% and free of corrosive and volatile substances

WARRANTY & SERVICE

Warranty commitment: the warranty period is 12 months from the delivery period (except for the product problems caused by the failure to operate according to the corresponding technical requirements or other human behaviors).

After sales commitment: users can consult relevant technical problems by phone and get clear solutions. If it is a quality problem, it can be returned to the factory for maintenance or replacement.

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