PRODUCT OVERVIEW

Tilt solar radiation transmitter

Model ES-S228TA

Main features

- Adopts thermoelectric sensing elements, with high measurement accuracy.
- Transparent double-layer glass cover with a light transmittance of up to 95%, good sensitivity, special surface treatment to prevent dust adsorption
- Spectral range reaches 0.3~3μm
- Short response time, small error and temperature compensation, more accurate measurement within the range

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

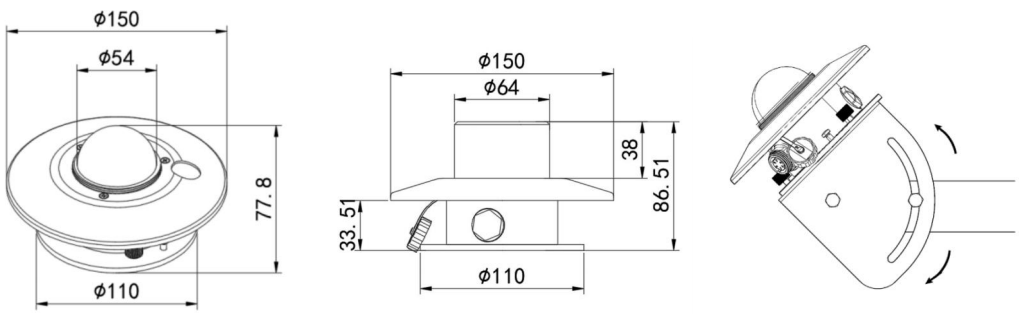
ES-S228TA tilt radiation transmitter uses the thermoelectric principle and can be used to measure solar radiation in the spectral range of 0.3~3μm. The sensing element adopts a winding electroplated thermopile, and the sensing surface is a black coating with high absorption rate. The thermal effect of radiation is used to absorb solar radiation and convert it into a temperature difference electromotive force. It also has a temperature compensation function and can measure the amount of solar radiation more accurately. A double-layer glass cover is used above the sensing surface, which can not only reduce the impact of air convection on the equipment, but also block the radiation of the outer cover itself.
In the use of solar energy, in order to obtain as much energy as possible, the solar energy device is generally placed tilted to the south. If you want to understand the solar energy on the surface in a tilted state, the most direct and accurate method is to use an instrument for direct measurement. This product can measure the radiation value at different angles by adjusting different angles, so as to more accurately judge whether the solar energy is used to the greatest extent.

Application

They are widely used in solar energy utilization, meteorology, agriculture, building materials aging and other industries to measure solar radiation energy.

Dimension

Unit:mm



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Specification

Power supply	10V～30V DC
Power consumption	0.2W
Output signal	RS485 (Modbus-RTU)
Working temperature	-40°C~60°C
Working humidity	0%~95%RH, Non-condensing
Sensitivity	7～14 μV·W-1·m2
Internal resistance	200-400Ω
Response time (95%)	≤30s
Non-linear error	≤±3%
Corresponding error of directionality	≤±30W/m²
Temperature response error	≤±3% (-30°C～+50°C)
Spectral range	0.3~3μm
Measuring range	0-2000W/m²
Resolution	1W/m²
Accuracy	±3%
Annual stability	≤±3%
Cosine response error	≤±5%
Tilt response error	≤2%
Zero drift	≤6 W/m²

Order guide

ES-S228TA	Solar radiation sensor		
	CODE	Material	
	A	Aluminum shell	
		CODE	Signal output
		1	RS485
ES-S228TA	A	1	Order example

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