

# Soil Heat Flux Transmitter

Model ES-S2256



## Main features

- 5-30V DC wide voltage power supply, suitable for a variety of power supply occasions on site.
- The product adopts the standard ModBus-RTU 485 communication protocol to directly read the current soil heat flux value
- It can be connected to the weather station or host to upload to the mobile phone APP, applet, local platform and free cloud platform
- IP68 protection level design

## Compliance

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

## Introduction

ES-S2256 soil heat flux transmitter (also known as "soil heat flux plate", "heat flow meter") is mainly used to measure the energy balance of soil and the heat conduction of soil layer. The soil heat flux transmitter adopts thermopile measurement, which is composed of two different metal materials. The thermopile generates a temperature difference potential after receiving thermal radiation, and then obtains the heat flux value according to the algorithm.

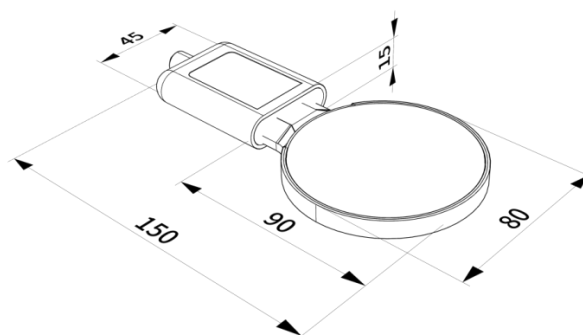
ES-S2256 Soil heat flux refers to the heat energy transferred through the soil surface, which is an important part of the energy balance of the earth's surface. The size of soil heat flux is affected by many factors, including solar radiation, soil properties, vegetation cover, etc. Solar radiation is the main driving force of soil heat flux. It directly irradiates the soil surface, causing the soil to absorb energy and heat up. Soil properties such as soil thermal conductivity and bulk density also affect the size of soil heat flux. Vegetation cover can affect soil heat flux by regulating the radiation, evaporation and conduction processes on the soil surface.

## Application

The sensor is suitable for soil heat path analysis in geotechnical engineering, meteorological surface flux measurement, soil heat transfer process in scientific research, etc.

## Dimension

Unit:mm



## Specification

DC power supply (default)	DC 5-30V
Maximum power consumption	0.3W (24V DC power supply)
Operating temperature	-40°C~+60°C
Accuracy	±5% (@±200W/m2)
Protection level	IP68
Range	-2000~2000 W/m2
Sealing material	Black flame retardant epoxy resin
Default cable length	2m, cable length can be customized as required
Output signal	RS485 (ModBus protocol)

## Order guide

ES-S2256	soil heat flux transmitter		
	CODE	Function	
	A	soil heat flux transmitter	
		CODE	Signal output
		1	RS485(Modbus RTU)
ES-S2256	ABC	1	Order example