

The soil temperature and humidity sensor based on FDR (Frequency Domain Reflection) principle, using the FDR layered tube type soil moisture measuring method, according to the frequency change of the electromagnetic wave emitted by the detector in different dielectric coefficient material, calculated from the measured soil moisture. Capable of simultaneous measurement of different depth of soil moisture and soil temperature. This series of products can be widely used in drought monitoring, soil research, intelligent irrigation, agricultural production prediction and landslides.

FEATURES

- High precision
- Fast response
- Not affected by soil properties
- Directly buried in soil
- Widely used



APPLICATIONS

- Agriculture irrigation
- Greenhouse
- Grass farm
- Environment monitoring
- Water conservation
- Soil testing

TECHNICAL SPECIFICATION

Item	Technical Specification			
	Moisture		Temperature	
Range	0-60%(m³/m³)		-40℃-+80℃	
Accuracy	±3%(0-35%) ±5%(35%-60%)		±0.5℃@25℃	
Resolution	0.1%		0.1℃	
Output signal	RS485			
Measurement level	3	4	5	6
Response time	<1s			
Supply	12-24VDC			
MTTF	≥25000h			
Housing	PVC			
Operating temperature	-40℃-+80℃			
Ingress protection	IP68(underground)			
Storage	10-60℃@20%-90%RH			

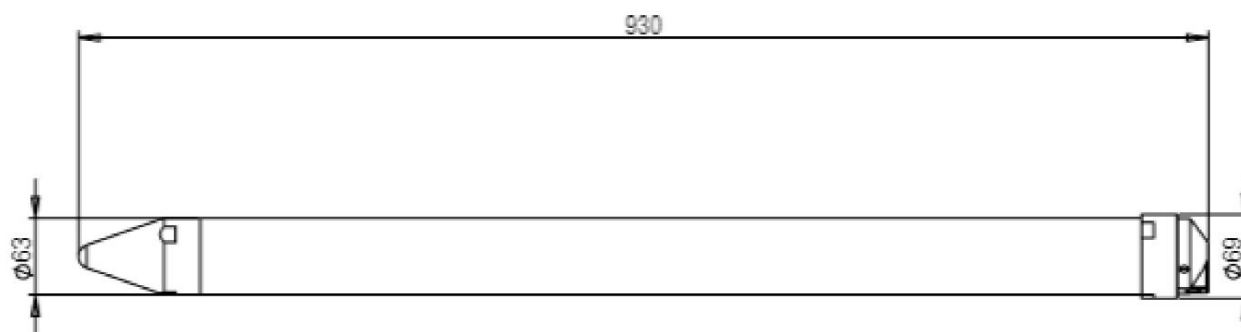
DEPTH OF MEASUREMENT

Measurement level	Depth of measurement
3	10cm-20cm-30cm
4	10cm-20cm-30cm-40cm
8	10cm-20cm-30cm-40cm-50cm-60cm-70cm-80cm
10	10cm-20cm-30cm-40cm-50cm-60cm-70cm-80cm-90cm-100cm

DIMENSION

Unit:

mm(1-4 levels)



MOUNTING

Sensors should be installed on flat land over 10 meters from the edge of representative plots and roadside. They should avoid low-lying areas where water is easily accumulated, and keep a distance of more than 20 meters from ditches and water supply channels, so as to avoid the influence of lateral seepage of ditches on soil water content.

The representative plot area in hilly areas should be greater than 1 acre and should be located on plots with smaller slopes and larger areas, rather than at the bottom of ditches and large slopes. The representative plot area in plain areas should be less than 10 acres and should be located on flat, waterlogged plots.

PARAMETER SELECTION TABLE

Remark	Series	Type	Parameter	Supply	Output	Measurement level	Cable Length	
RK								
	520							
		04						
			A					Moisture & Temperature
			B					Only moisture(0-100%)
				A				12-24V
				X				Other
					A			RS485
					X			Other
						A		3
						B		4
						C		8
						D		10
						X		Other(Customized)
							2000	Units:mm(typ)
							...	Units:mm

Example: RK520-04AAAA2000 Moisture & Temperature, Supply: 12-24V, Output:RS485,Measurement level: 3, Cable Length:2m.



Complies with applicable CE directives.
Specifications subject to change without notice. Version 3.0
Copyright © 2015 Hunan Rika Electronic Tech Co.,Ltd

Hunan Rika Electronic Tech Co., Ltd

Add: 10th Bd, International Enterprise Center,
No.268 Xinxing Rd, Yuhua Dist,Changsha,
410116 Hunan, China.



+86-731-85132979



info@rikasensor.com



www.rikasensor.com