

RK310-01 Atmospheric Temperature Sensor

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RK310-01 Atmospheric Temperature Sensor is produced with precision platinum resistance as the sensing element, and the platinum resistance located in the probe head where is done with overall seal to ensure the accuracy. If need, this model also can be equipped with 11 plates radiation shield(RK95-01/02) to protect the sensors from solar radiation and rain.

FEATURES

- High Sensitivity
- Fast response time
- Long service life
- Low consumption
- Good stability of output

Part:

Temperature sensor: 1

Radiation shield & bracket: 1

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SPECIFICATIONS

Item	Technical Specification
Range	-50-+150℃
Resolution	0.1℃
Accuracy	±0.5℃/PT100/PT1000 Class A
Long term stability	<0.1℃/year
Supply	Mark on the label
Output Signal	PT100/PT1000(3/4 wire)⓪,4-20mA,0-5V ,RS485 optional
Current Consumption	<40mA(current output)
Operating Temperature	-40℃-+80℃
Ingress Protection	IP65
Storage	10-60℃@20%-90%RH
Shelter material	Anti-UV engineering plastics

⓪If you choose PT100 signal output, you do not need the power supply.

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OUTPUT CHARACTERISTICS

● Current

$T = (I - 4) / 16 * 100 - 40$, (where T = temperature(℃), I = output current(mA))

● Voltage

$T = V / V_{full\ scale} * 100 - 40$, (where T = temperature(℃), V = output voltage(V), $V_{full\ scale} = 5V$ or $10V$)

● RS485

If the transmission distance is over 100m, please add a 120Ω terminal matching resistances on the front end and back end of bus interface respectively. Attach communication protocol.

MOUNTING

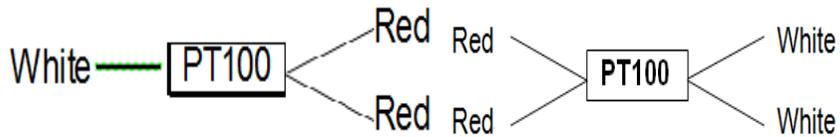
- Install the product in stable environment area, away from windows air-conditioning, heating and other equipment. Otherwise it will cause measurement inaccuracies.
- Fixing rail is optional.

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ELECTRICAL CONNECTIONS

Cable	Voltage/Current	RS485
Red	V+	V+
Yellow	Signal	RS485A
Black	V-	V-
Blue		RS485B

PT100-3/PT1000-3 wires: Red、Red、White, PT100/PT1000-4wires:Red/Red-White/White



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Note: This product has been tested and complies with European CE requirements for EMC directive.

PARAMETER SELECTION TABLE

Remark	Series	Type	Range	Output	Accessory	Cable Length	
RK							
	310						
		01					
			A				-40-+60°C
			B				0-50°C
			C				customization
				A			4-20mA
				B			0-5V
				C			PT100
				D			RS485
					A		With radiation shield
					B		With radiation shield & mounting bracket
					N		Without any accessory
						1500	Units:mm (typ)
						3000	Units:mm
						...	Units:mm

Example: RK310-01AAN1500 Range:-40-+60°C Output:4-20mA Without any accessory Cable Length:1.5m.

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WARRANTY

This product is warranted to be free of defects in materials and construction for a period of 12 months from date of lead time.

Liability is limited to repair or replacement of defective item.

CE Complies with applicable CE directives.

Manual subject to change without notice. Version 1.0

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