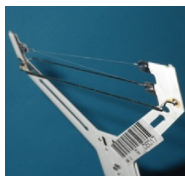
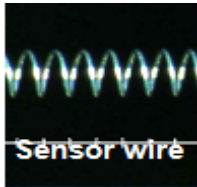
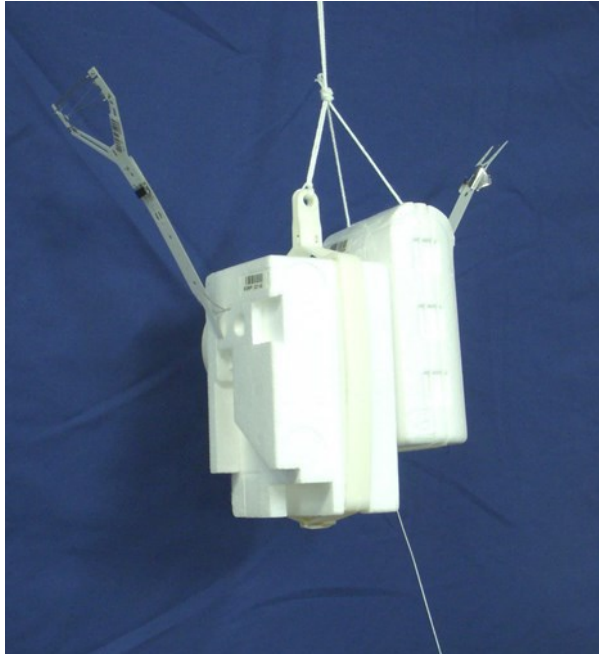


# Meisei Temperature Reference

## MTR-08



### Features:

- Temperature sensor with world's fastest response time for upper air observation.
- MTR is suitable for researches of a fine structure in boundary layer, turbulence, and observation in stratosphere, where a response of operational radiosonde is slow.
- High response and aluminum coating decrease the influence by solar radiation. It enables to acquire reliable data.
- To avoid error by self-contamination from the sonde package, it has the long sensor probe and the independent sensor rig.

### Outline

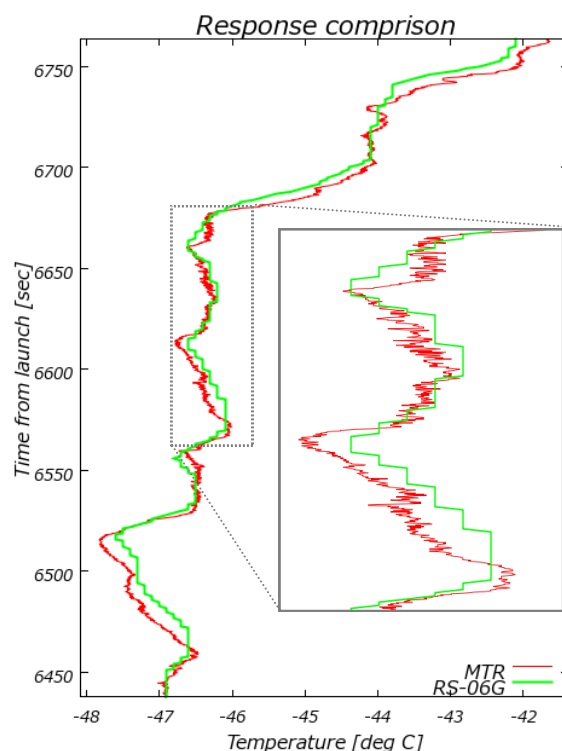
Temperature reference sensor(MTR-08) is sonde with a fine tungsten wire (10  $\mu$ m diameter) for temperature measurement.

The response is 5/1000sec on surface and 40/1000sec at around 30km altitude. The response is 40times faster than conventional radiosonde.

The sampling data is acquired at 16th a second (16Hz) on the data conversion circuit with consideration of anti-aliasing. The vertical resolution is only 30cm approximately.

The fine wire has the aluminum coating and the heating by solar radiation at 30km altitude is less than 0.5k. A reliable temperature data can be acquired.

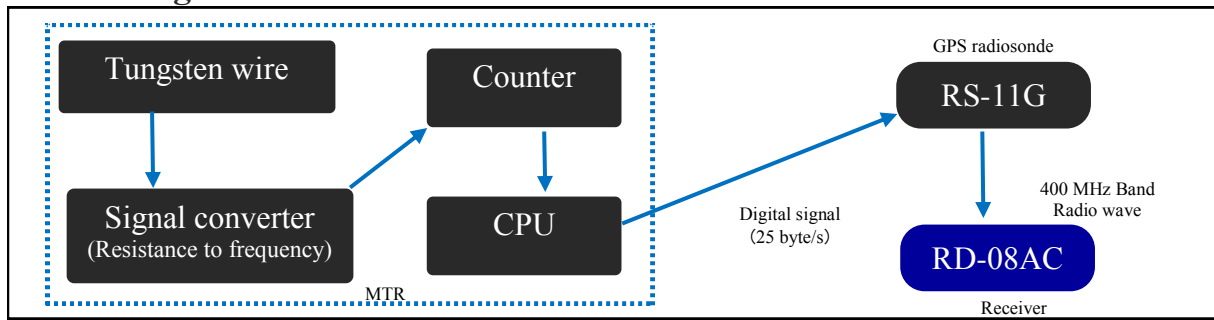
### MTR highest response



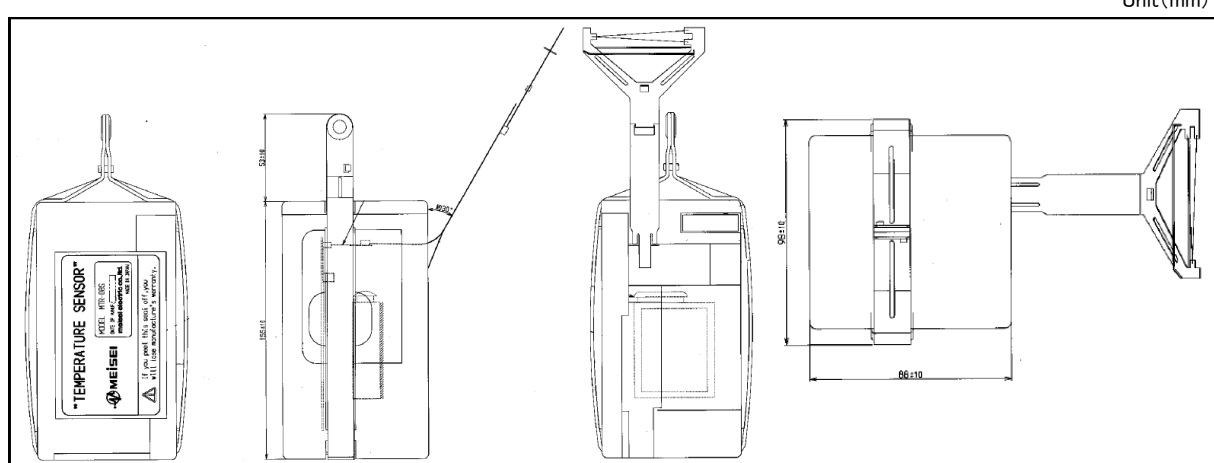
## Specification

Temperature measurement	Range	-100 °C to +50°C	Output	data	25 byte/sec		
	Resolution	0.01 °C		Baud rate	9600 bps, 8, 1, non		
	Accuracy (at factory)	±0.28°C (2σ)		6Hz model	Temperature		
	Repeatability	±0.26°C (2σ)		16Hz model	Radiation (optional)		
	Radiation correction	Not applied			Temperature		
	Radiation error	0.47 °C (at 30 km)		Power	Voltage	4.5VDC x 1	
	Response time	5/1000 s at surface			Current	Less than 100 mA	
		40/1000 s at 30km				Latium dry cell battery AA x 3	
		Material		tungsten	Dimension	Dimension	160(W) x 160(D) x 90(H) mm
		Diameter		10 μm			(including RS-11G)
	Coating	Aluminum	Sensor arm	150 mm			
	Sampling rate	6Hz or 16Hz	Weight	185 g including RS-11G)			

## Block Diagram



## Outline View



## ⚠ Cautions

- For safe and correct usage, please read the "Operation Manual" prior to the use of the products.
- The specifications and appearances might be changed without prior notice, which please understand.
- The specifications shown in the catalog are of our standard products. We are pleased to customize it to meet customer's requirements. For the details, please contact us.
- Please understand in advance that our company cannot assume the responsibility of any claims made by the third party about any monetary damages or any loss of profits arising out from the use of our products.
- The color of the product photography on catalog might be different from that of actual product because of printing.

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