Cheemi Technology Co., Ltd

Datasheet for Platinum Resistance Temperature sensor

The temperature sensing element and technical specification of platinum heat temperature sensors are designed, and produced according to the standards of GB/T10321-2013 and Q/STB2019.

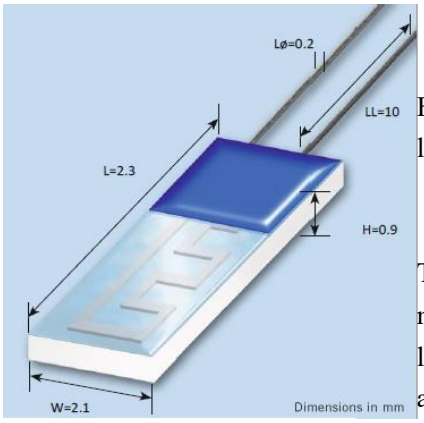
M series is designed by the company for most users in the medium temperature range, and the long-term stability, repeatability, and accuracy of components in this temperature range meet the standard requirements. The temperature range of use is -60 ℃ -400 ℃, and can reach 450 ℃ in the short term. It is mainly used in fields such as instruments and meters, heating metering, medical treatment, home appliances, etc.

H series is specially designed for customers using in high temperature zone, and the long-term stability, repeatability and accuracy of components in this temperature zone meet the standard requirements. The operating temperature range is from 0 ℃ to +850 ℃, which can reach 900 ℃ in a short time. It is mainly used in instrumentation, automobile, and other fields.

L series is specially designed by the company for customers who are specialized in low temperature section. The long-term stability, repeatability and accuracy of components in this temperature section meet the standard requirements. The temperature range is from -100 ℃ to +50 ℃, mainly used in chemical industry, air conditioning, and other fields.

Nominal resistance	Accuracy class	P/N	Lead wire length	Packaging
100Ωat 0℃	0.1℃（Class 1/3B） 0.15℃（Class A） 0.3℃（Class B）	Pt100-M2320-1/3BH Pt100-H2320-AH Pt100-L2320-BH	10mm 10mm 10mm	Plastic bag/ vacuum Plastic bag/ vacuum Plastic bag/ vacuum
500Ωat 0℃	0.15℃（Class A） 0.3℃（Class B）	Pt500-H2820-AH Pt500-L2820-BH	10mm 10mm	Plastic bag/ vacuum Plastic bag/ vacuum
1000Ωat 0℃	0.1℃（Class 1/3B） 0.15℃（Class A） 0.3℃（Class B）	Pt1000-M2820-1/3BH Pt1000-H2820-AH Pt1000-L2820-BH	10mm 10mm 10mm	Plastic bag/ vacuum Plastic bag/ vacuum Plastic bag/ vacuum

Diagram of element size is as follows:



For example, H2320 represents that the element is 2.3mm long, 2.1mm wide and 0.9mm high.

The information provided in the following table relates to the measured values (including but not limited to response time, long-term stability, seismic performance, insulation resistance and self heating), which are the average values obtained when

testing the components of the product under laboratory conditions. The product results or measurement results of the customer or any other person in any production, test or other environment may vary depending on the specific conditions of the situation.

Temperature and accuracy range:

Accuracy class F0.1 （1/3B）: 0℃~+150℃

Accuracy class F0.15（A）: -50℃~+300℃

Accuracy class F0.3 （B）: -70℃~+500℃

The specified tolerance classes refer to continuous operation.

Class F 0.3 also applies up to +550 °C for short periods.

Temperature coefficient:

TCR=3851ppm/K

Response time:

In liquid state（Speed=0.4m/s）	τ0.5=0.07S	τ0.632=0.1S
Under airflow（Speed=2m/s）	τ0.5=3S	τ0.632=5S

Measuring current: (self heating shall be considered)

100Ω: 0.3 to 1.0mA

500Ω: 0.1 to 0.7mA

1000Ω: 0.1 to 0.3mA

Long term stability:

The drift of R0 is less than 0.3 ℃ when the constant temperature is 400 ℃ for 1000 hours

Insulation resistance:

Room temperature ＞100MΩ

400℃＞2MΩ

Seismic resistance:

After installation and fixation, it can withstand 40g acceleration under the state of 10~2000Hz.

Lead material:

Pt-Ni

Lead wire size:

Φ0.2mm×10mm

Lead tensile strength:

Not less than 8N

Lead wire welding performance:

Suitable for soldering, brazing, pressure welding, etc.

Storage Life

Min. 12 months (in original packaging)