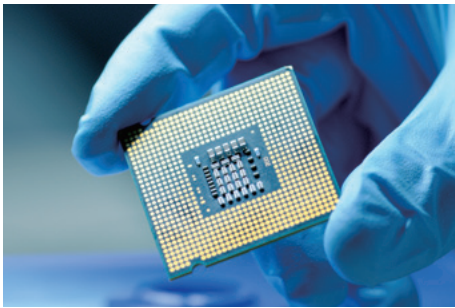


# OKAZAKI

## CRYOGENIC TEMPERATURE SENSOR

Our cryogenic temperature sensors are used in various fields such as aerospace, medical, and semiconductor equipment. Based on our experience and technology, we offer products that best suit our customers' operating environment and applications.



### New Product

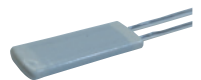
Stable performance under severe environments

### Vibration-resistant platinum resistance thermometer

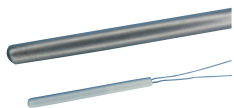
Ideal for use in environments subject to vibrations and shocks.

- Applying technology developed in temperature sensors for use in space
- Tightly wound platinum resistance wires for superior vibration resistance

Surface-mounted type



W:4.6mm  
D:12mm  
H:1.3mm



Sheath type  
Outer diameter:  $\phi 4.8$  to  $\phi 8.0$

Resistance: 500 $\Omega$ /1000 $\Omega$ /2000 $\Omega$  at 273 K (mounted type only)

Temperature range: 4 K to 373 K

Temperature vs Resistance table: Supplied with each individual sensor (4-point calibration; 4 K, 90 K, 273 K, or 373 K)

Measuring current: 0.1 to 1 mA

Element dimensions:  $\phi 1.5 \times 18$  mm (sheath type);  $W4.6 \times D12 \times H1.3$  (surface-mounted type)

Applications: Temperature measurement for liquid hydrogen tanks and piping systems, satellite equipment, etc.



**OKAZAKI**  
MANUFACTURING COMPANY

# OKAZAKI CRYOGENIC TEMPERATURE SENSOR

## Platinum cobalt resistance thermometer

For demanding applications at cryogenic temperatures

A single platinum cobalt resistance thermometer can cover the whole temperature range from 1.4 K to 300 K and compatible with well established reference tables at 4.2 K or higher.

The shape and material of the protection tube and cable can be customized as desired for use in various environments.

Resistance: 100Ω/1000Ω at 273 K

Temperature range: 1.4 K to 300 K (Calibration down to 1.5 K, Temperature vs Resistance table shall be supplied for temperatures at 4 K and below)

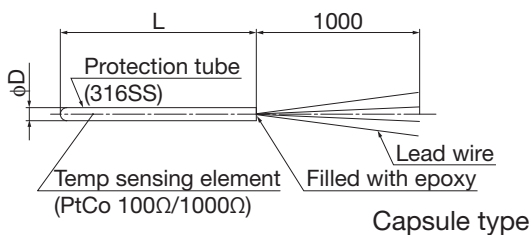
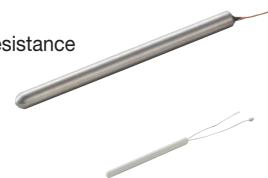
Tolerance: ±0.5 K at 4 K to 40 K / ±1 K at 273 K

Measuring current: 0.1 to 1 mA

Element dimensions: φ1.4 × 12 mm

Applications: Temperature measurement for MRIs, GM refrigerators, etc.

Hazardous area certification: Intrinsically safe certification available for Model R202 (Notified body: CML)



PtCo	D (mm)	L (mm)
100Ω	2.0	25
1000Ω	3.5	50

Capsule type

## Type E sheathed thermocouple

Cryogenic temperature measurement by thermocouple

Sheathed thermocouples offer superior responsiveness, easy installation and a choice of hazardous area certification for various uses. Suitable for measuring the temperature inside tanks of commercial facilities.

Element: Type E

Temperature range: 20 K to 313 K

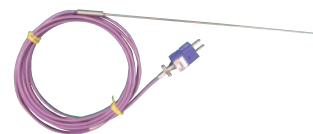
Sheath diameter: φ1.0, φ1.6

Tolerance: ±2.5 K at 106 K to 313 K /

±0.015 | t-273.15 | K at 20 K to 106 K

Applications: Temperature measurement for liquid hydrogen tanks and piping systems, etc.

Hazardous area certification: Explosion/Flame Proof, Intrinsically Safe



## Options

The main options are listed below. Contact us for more information.

Customization: Various shapes and materials available for the measuring part, process connection, sensor construction (MI cable type) etc.; hazardous area certification; material change of lead wire etc.

Temperature testing: Addition of calibration temperature points, creation of temperature vs resistance table (We have a JCSS accredited calibration room in compliance with international MRA)

Temperature transmitter: Configuring the transmitter with Temperature vs Resistance table

Maintenance: Periodic temperature calibration (for checking temperature readings)



OKAZAKI MANUFACTURING COMPANY

HEAD OFFICE/KOBE JAPAN

TEL: +81 78 251 8200 FAX: +81 78 251 8210

URL: <https://www.okazaki-mfg.com>

E-mail: [jp-sales@okazaki-mfg.com](mailto:jp-sales@okazaki-mfg.com) (from Japan)

[sales@okazaki-mfg.com](mailto:sales@okazaki-mfg.com) (from overseas)

TOKYO BRANCH

TEL: +81 3 5641 0200 FAX: +81 3 5641 9100

ARi Industries, Inc., USA

TEL: +1 630 953 9100 FAX: +1 630 953 0590

URL: <https://www.ariindustries.biz>

E-mail: [sales@ariindustries.com](mailto:sales@ariindustries.com)

Okazaki Manufacturing Company UK Limited

TEL: +44 (0)2920 814333

URL: <https://www.okazaki-mfg.co.uk>

E-mail: [sales@okazaki-mfg.co.uk](mailto:sales@okazaki-mfg.co.uk)

Information in this catalog is subject to change without notice.

We are constantly expanding the scope of our calibration services. Contact a sales representative for more information.

CAT. NO. OMC-8008E

First Ver. Jun, 2016 1000 parts

Ver.2-1 Oct, 2020 500 parts