NTC THERMISTORS

192 Series, 194 Series

Honeywell discrete thermistor temperature sensors are installed directly into the air stream to monitor the air temperature. The sensor is coupled to a microcontroller designed to measure air stream temperature and interact with the controller that regulates the temperature of the air stream. You can choose packaged sensors as components for your assemblies, or Honeywell can provide a fully assembled solution you can integrate into your system.

- Accurate Performance — Designed for enhanced accuracy and stability.
- Cost Effective — With Honeywell thermistors, the resistance temperature curve interchangeability offers standardization of circuit components and simplification of design/replacement.
- Flexible **— Bare leads (192 Series) or insulated leads (194 Series)** give you versatility within your application.
- Small — The compact size of Honeywell thermistors makes them easy to use in confined spaces.
- Improves Patient Comfort — Helps maintain desired temperature inside the incubator.

192 Series

194 Series

2450RC Series

THERMOSTATS

2450RC Series

Honeywell thermostats help provide overtemperature protection for the heater element. It is installed in series with the main heating unit and disconnects power to the heater if **the temperature reaches a pre-set overtemperature limit as** set by the operator.

- Cost Effective — Simple design approach for standalone power interruption to the main heater unit.
- High-Limit Temperature Controls **— a built-in temperature-detection** device can help minimize system overheating.
- Improves System Performance and Safety — Helps maintain proper temperature.
- Flexible **— Variety of housing materials, reset options (one-shot, manual, or auto), temperature set points, mounting and termination** styles allows for flexibility of use within the application.

FLEXIBLE HEATER ASSEMBLIES

A3100 Series, A3200 Series, A3400 Series, C3100 Series, C3200 Series, C3400 Series

Flexible heater assemblies can be applied to the incubator door to help heat the incubator's internal temperature and to also maintain clear visibility through the door wall.

- Total Thermal Management Solution **— Value-added heater** assemblies include mounting, temperature monitoring and control capabilities. Honeywell can design and manufacture complete heater turnkey assemblies, including supplying a vulcanized or adhered heater assembly to a heat plate, heat sink, mounting bracket or cover.
- Uniform Heating **— Count on even heat distribution (no hot spots)** across the heater surface.
- Eases System Qualification **— Honeywell offers uL- and CSa-** recognized components.
- Flexible **— Numerous con i gurations (l at, transparent composite and high temperature), manufacturing materials (silicon, kapton, polyester Indium Tin oxide and other l exible dielectric components) and watt densities (single or multiple) provide more options within** the application.
- High-Limit Temperature Controls **— a built-in temperature-detection** device can help minimize system overheating.
- Stable — A uniform temperature minimizes heat loss.

3100 Series

3200 Series

3400 Series

HEL-775 Series

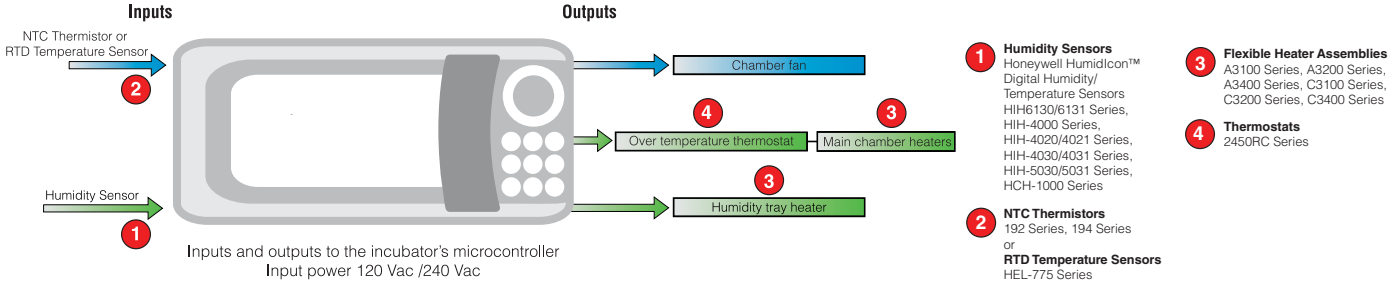
RTD TEMPERATURE SENSORS

HEL-775 Series

Some customers may choose to integrate platinum-based RTDs into infant or laboratory incubators because of their linear resistance output and the ease of interfacing it with their microcontrollers.

- Flexible — Linear resistance versus temperature output allows for direct interfacing with the microcontroller.
- Accuracy and Interchangeability — Helps eliminate additional signal conditioning and calibration at the OEM.
- Stable — Helps support long term system performance, uptime, and warranty requirements.
- Durable — Thin film platinum technology provides enhanced durability
- Small — The compact size of Honeywell RTDs makes them easy to use in confined spaces.
- Ceramic SIP Package with Solderable Leads — Provides strong connections for wires or printed circuits.

Incubator Diagram



Inputs and outputs to the incubator's microcontroller
Input power 120 Vac /240 Vac

DIAGNOSTIC EQUIPMENT

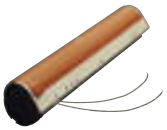
HONEYWELL — PROVIDING ACCURATE HEATING SOLUTIONS

Accuracy and reliability are essential for medical equipment used in laboratories to analyze body fluid. Honeywell thermal solutions help eliminate variables through even, accurate heating that maintains the fluid at the desired temperature.

Whether your equipment tests one type of fluid or several, and whether containers or vials are used to transfer the fluid to the equipment, Honeywell can provide a thermal management system customized to your equipment needs. Honeywell will work with your specifications to design heater geometry and sensor placement for your control circuitry and application.

Customized to your Specifications
Honeywell will manufacture many thermal components to your diagnostic equipment's requirements.

3100 Series



3200 Series

3400 Series

FLEXIBLE HEATER ASSEMBLIES

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- Uniform Heating **— Count on even heat distribution (no hot spots) across the heater surface.**
- Eases System Qualification **— Honeywell offers uL- and CSa-recognized components.**
- Flexibile **— Numerous con i gurations (l at, transparent composite and high temperature), manufacturing materials (silicon, kapton, polyester Indium Tin o xide and other l exible dielectric components) and watt densities (single or multiple) provide** more options within the application.
- High-Limit Temperature Controls **— a built-in temperature-detection device can help minimize system overheating.**
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NTC THERMISTORS

192 Series, 194 Series

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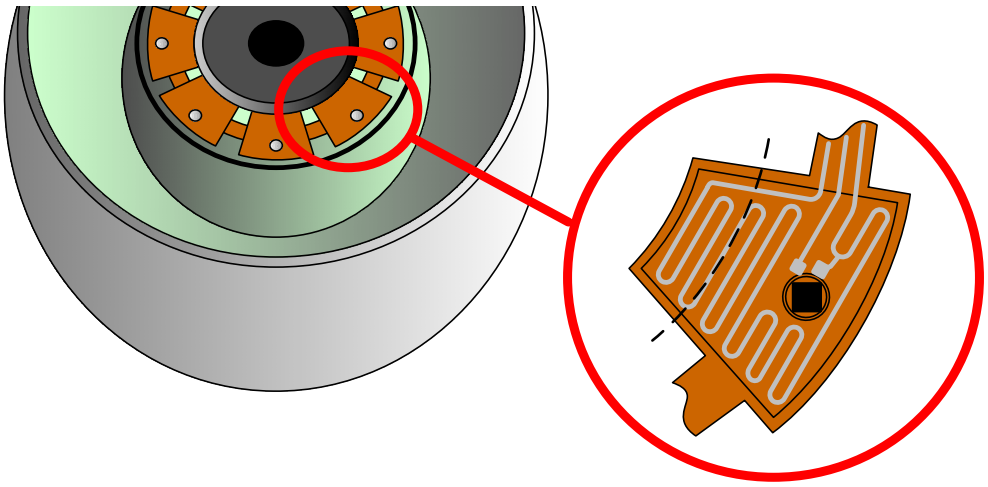
- Small — The compact size of Honeywell thermistors makes them easy to use in confined spaces.

Example of a Customized Flexible Heater Assembly for a Centrifuge



AUTOCLAVES

HONEYWELL'S HISTORY OF PROVIDING PRECISE CONTROL

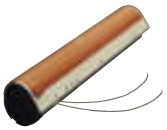
Small autoclaves are used to steam-sterilize small medical instruments, such as those used in dentistry. Patients trust their medical care provider to use clean and sterile instruments.

Honeywell's flexible heater assemblies are designed so that the products being sterilized in the autoclave equipment reach the proper sterilization temperatures/conditions during the cleaning cycle. It's common for flexible heaters used in autoclaves to be large and wrap completely around the autoclave. Honeywell can integrate a thermostat, an NTC **(negative temperature coef i cient) thermistor, or a discrete RTD (resistance temperature detector) sensor for self-contained duty cycle control — whatever you need to meet your** exact control requirements.

Customized to your Specifications

Honeywell will manufacture many thermal components to the requirements of your autoclave.

3100 Series



3200 Series

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- Stable — A uniform temperature minimizes heat loss.

500 Series

TEMPERATURE PROBES

500 Series

autoclaves use the power of high-pressure steam to effectively disinfect. Temperature probes may be used to increase the autoclave's system temperature to the appropriate level, generally 121 °C [250 °F] over a period of time, in which to disinfect. If the appropriate temperature isn't accurately maintained, contamination of the instruments can occur and may cause an infection to the patient.

- Accurate — Count on accurate temperature sensing so that the autoclave reaches the right temperature, as set by the system, so that microbes are killed.
- Durable **— Stainless steel, corrosion-resistant packaging allows for use with various types of chemicals.**
- Easy to Install — Threaded housing style eases installation.
- Stable — Enhanced stability of the output over the life of the application leads to enhanced reliability.

Sales and Service

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

E-mail: info.sc.honeywell.com

Internet: www.honeywell.com/sensing

Phone and Fax:

asia Paciic	**+65 6355-2828**
	+65 6445-3033 Fax
Europe	**+44 (0) 1698 481481**
	+44 (0) 1698 481676 Fax
Latin america	**+1-305-805-8188**
	+1-305-883-8257 Fax
uSa/Canada	**+1-800-537-6945**
	+1-815-235-6847
	+1-815-235-6545 Fax

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies **unless agreed to otherwise by Honeywell in writing; please refer to your order** acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell website, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

Sensing and Control
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422
www.honeywell.com/sensing

009067-1-EN IL50 gLo Printed in uSa
January 2012

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