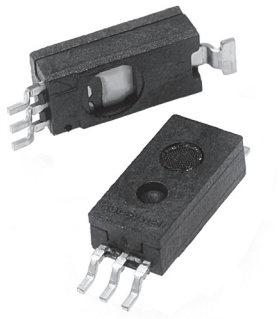
Honeywell

Humidity Sensors Line Guide



Performance and reliability. Just because humidity products are typically standardized and platform-based, they can still deliver superior performance right out of the box. At Honeywell Sensing and Control (S&C), each sensor is designed to provide enhanced sensitivity, response time, stability and reliability. Configured with integrated circuitry to provide on-chip signal conditioning offered on all products except HCH Series, Honeywell S&C humidity sensors offer interchangeability of ±3 % accuracy for potential applications as diverse as heating, ventilation and air conditioning equipment (HVAC), refrigeration, office automation, and medical equipment.

FEATURES

HUMIDITY SENSORS
HIH-4000 Series.

Features: Voltage output • Near linear voltage output vs % RH • Laser-trimmed • Accurate, fast response • Molded thermoset plastic housing • Chemically resistant

Benefits: Instrumentation-quality RH sensing performance in a competitively priced, solderable SIP. Multilayer construction designed to provide excellent resistance to wetting, dust, dirt, oils and common environmental chemicals. Laser trimmed for stable, low drift performance (optional). Factory calibration data provides individually matched downstream electronics and accuracy.

HIH-4602 Series.

Features: Humidity and temperature sensing in one package • Near linear voltage output vs %RH • Laser-trimmed • Accurate, fast response • Designed to be chemically resistant • Built-in static protection

Benefits: Combine both relative humidity and temperature sensing for measuring dew point and other absolute moisture terms. Can-type housing designed to provide quick response while still maintaining robustness of enclosed component. Factory calibration data designed to provide individually matched downstream electronics and accuracy. Optional on HIH-4602L Series. Standard on all other products. Laser trimmed for stable, low drift performance in potential applications such as HVAC, refrigeration, medical, office automation, telecommunications and meterology equipment.

HCH-1000 Series.

Features: Capacitance output • Polyimide sensing material • Semiconductor fabrication technology • Glass wafer substrate • Low hysteresis, long-term stability • Enhanced and accurate response time

Benefits: Polyimide sensing material designed to reduce temperature dependence and enhances resistance against contamination. Top grid electrode/ polyimide layer, bottom electrode structure more sensitive than standard structure. Cased version designed to protect against dust. Cost-effective performance in potential applications such as refrigeration, drying, meteorology, battery-powered systems, and OEM assemblies.

HIH-4010/4020/4021 Series.

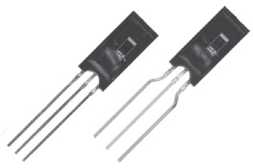
Features: Voltage output • Near linear voltage output vs % RH • Laser-trimmed • Accurate, fast response • Molded thermoset plastic housing • Designed to be chemically resistant

continued on back page

Humidity Sensors Line Guide

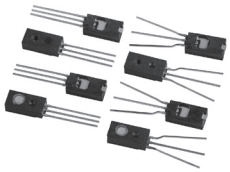
Highly viable humidity sensing solutions.
And every Honeywell S&C sensor contains something no other supplier can offer: Honeywell engineering and expertise. This means an unparalleled feature and benefit set: A capacitive sensing die set in thermoset polymers interacts with platinum electrodes. Laser-trimmed sensors designed to offer stable, low-drift performance and enhanced accuracy with calibration. Absorption-based humidity sensors provide both temperature and % RH. Packages are chemically resistant and operate in ranges of -40 °C to 85 °C [-40 °F to 185 °F] — performing in most harsh environments.

Most importantly, Honeywell S&C's legendary engineering expertise, proven product dependability, global reach and support and superior technical support deliver the most critical advantage of all: reliable quality products for a lower total cost of ownership.



Humidity Sensors

	HIH-4000 Series
Description	integrated circuit
Output	analog voltage
Package type	SIP (2,54 mm [0.100 in] or 1,27 mm [0.050 in] lead pitch)
Response time	5 s 1/e in slow moving air
Operating temperature range	-40 °C to 85 °C [-40 °F to 185 °F]
Operating humidity range	0 % RH to 100 % RH
Moisture/dust filter	no
Cover/case	no
Calibration and data printout	yes (some listings)



Humidity Sensors

	HIH-4010/4020/4021 Series	HIH-4030/4031 Series
Description	covered or uncovered, filtered or unfiltered integrated circuit	covered, filtered or unfiltered integrated circuit
Output	analog voltage	analog voltage
Package type	SIP (2,54 mm [0.100 in] or 1,27 mm [0.050 in] lead pitch)	surface mount
Response time	5 s 1/e in slow moving air	5 s 1/e in slow moving air
Operating temperature range	-40 °C to 85 °C [-40 °F to 185 °F]	-40 °C to 85 °C [-40 °F to 185 °F]
Operating humidity range	0 % RH to 100 % RH	0 % RH to 100 % RH
Moisture/dust filter	yes (some listings)	yes (some listings)
Cover/case	yes (some listings)	yes
Calibration and data printout	yes (some listings)	yes (some listings)

Humidity Sensors

	HIH-4602 Series	HCH-1000 Series
Description	monolithic IC with integral thermistor or precision RTD	cased or uncased capacitive polymer
Output	analog voltage (for humidity), resistance (for temperature)	capacitance value
Package type	TO-5 or TO-39 can	SIP (2,54 mm [0.100 in] lead pitch)
Response time	50 s 1/e in slow moving air	15 s at 30 % RH to 90 % RH
Operating temperature range	-40 °C to 85 °C [-40 °F to 185 °F]	-40 °C to 120 °C [-40 °F to 248 °F]
Operating humidity range	0 % RH to 100 % RH	0 % RH to 100 % RH
Moisture/dust filter	yes (some listings)	no
Cover/case	yes	yes (some listings)
Calibration and data printout	yes (some listings)	no

Benefits: Instrumentation-quality RH sensing performance in a competitively priced, solderable packages. Multilayer construction provides enhanced resistance to wetting, dust, dirt, oils and common environmental chemicals. Laser trimmed for stable, low drift performance. Factory calibration data designed to provide individually matched downstream electronics and accuracy (available on all voltage output models). Available covered/ uncovered and filtered/unfiltered for application flexibility in high volume OEM condensing environments such as HVAC, refrigeration, medical, office automation, and telecommunications equipment.

HIH-4030/4031 Series.

Features: Surface mount package • Voltage output • Near linear voltage output vs % RH • Laser-trimmed • Accurate, fast response • Molded thermoset plastic housing • Designed to be chemically resistant • Tape and reel

Benefits: Instrumentation-quality sensing performance in a competitively priced, solderable surface mount device. Multilayer construction designed to provide enhanced resistance to wetting, dust, dirt, oils, and common environmental chemicals. Low current draw often ideal in most low drain, battery operated systems. Tight sensor interchangeability reduces or eliminates OEM production calibration costs. Tape and reel for high volume applications (optional). Factory calibration data designed to provide individually matched downstream electronics and accuracy. Available covered, filtered/ unfiltered for application flexibility in high volume OEM condensing environments such as HVAC, refrigeration, medical, office automation, and telecommunications equipment.

Warranty. 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 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 web site, 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.

For more information about Sensing and Control products, visit www.honeywell.com/sensing or call +1-815-235-6847
Email inquiries to info.sc@honeywell.com

⚠ WARNING
PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING
MISUSE OF DOCUMENTATION

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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