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Representative photograph, actual product appearance may vary.

Due to regional agency approval requirements, some products may not be available in your area. Please contact your regional Honeywell office regarding your product of choice.

HIH-4000-002

HIH-4000 Series Integrated Circuity Humidity Sensor, 1,27 mm (0.050 in) Lead Pitch SIP

Features

- Molded thermoset plastic housing with cover
- Linear voltage output vs %RH
- Laser trimmed interchangeability
- Low power design
- High accuracy
- Fast response time
- Stable, low drift performance
- Chemically resistant

Typical Applications

- Refrigeration
- Drying
- Meteorology
- Battery-powered systems
- OEM assemblies

Description

The HIH-4000 Series Humidity Sensors are designed specifically for high volume OEM (Original Equipment Manufacturer) users. Direct input to a controller or other device is made possible by this sensor’s linear voltage output. With a typical current draw of only 200 µA, the HIH-4000 Series is ideally suited for low drain, battery operated systems. Tight sensor interchangeability reduces or eliminates OEM production calibration costs. Individual sensor calibration data is available.

The HIH-4000 Series delivers instrumentation-quality RH (Relative Humidity) sensing performance in a low cost, solderable SIP (Single In-line Package). Available in two lead spacing configurations, the RH sensor is a laser trimmed, thermoset polymer capacitive sensing element with on-chip integrated signal conditioning. The sensing element's multilayer construction provides excellent resistance to most application hazards such as wetting, dust, dirt, oils and common environmental chemicals.

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Product Specifications	
Package Style	Solderable SIP
Termination Details	1,27 mm [0.050 in] Lead Pitch
Series Name	HIH-4000 Series
RH Accuracy	± 3.5% RH, 0-100 % RH non-condensing, 25 °C, 5 Vdc supply
RH Interchangeability	± 5% RH, 0-60% RH; ± 8% @ 60-100% RH Typical
RH Hysteresis	± 3% of RH Span Maximum
RH Repeatability	± 0.5% RH
RH response time, 1/e	15 s in slowly moving air @ 25 °C
RH Stability	± 0.2% RH Typical at 50% RH in 1 Year
Supply Voltage	4.0 Vdc to 5.8 Vdc
Supply Current	500 µA Max.
Operating Humidity Range	0 to 100% RH, non-condensing
Operating Temperature Range	-40 °C to 85 °C (-40 °F to 185 °F)
Temperature Compensation	True RH = Sensor RH/(1.0305+0.000044T-0.0000011T^2) T in °C (True RH = Sensor RH/(0.9237-0.0041T+0.000040T^2) T in °C)
Availability	Global
Comment	Light sensitive, shield from bright light.
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers

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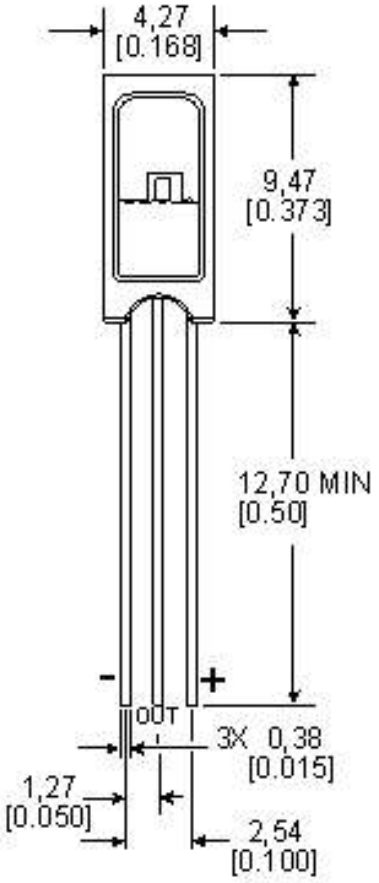
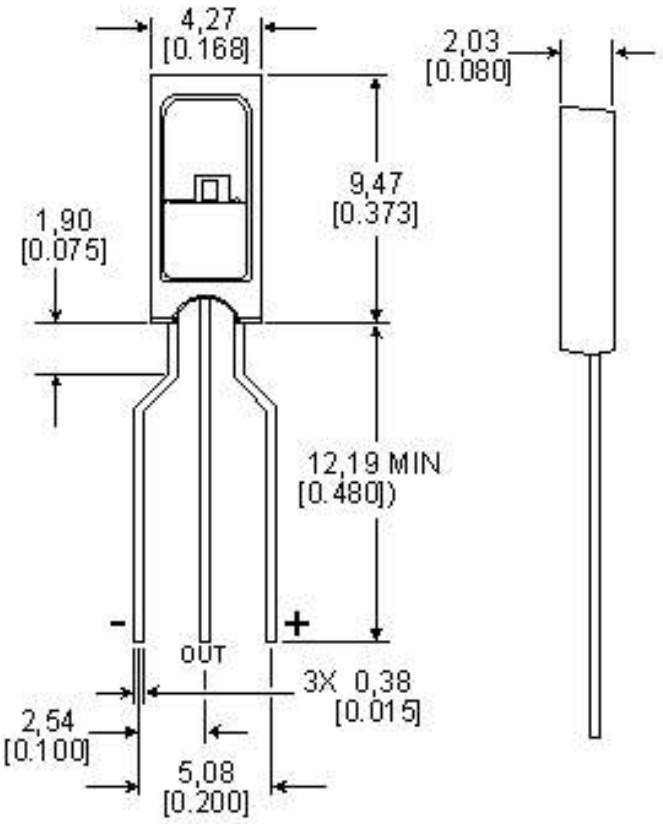
Mounting Dimensions
For Reference Only [mm/in]

HIH-4000-002
HIH-4000-004



HIH-4000-001
HIH-4000-003



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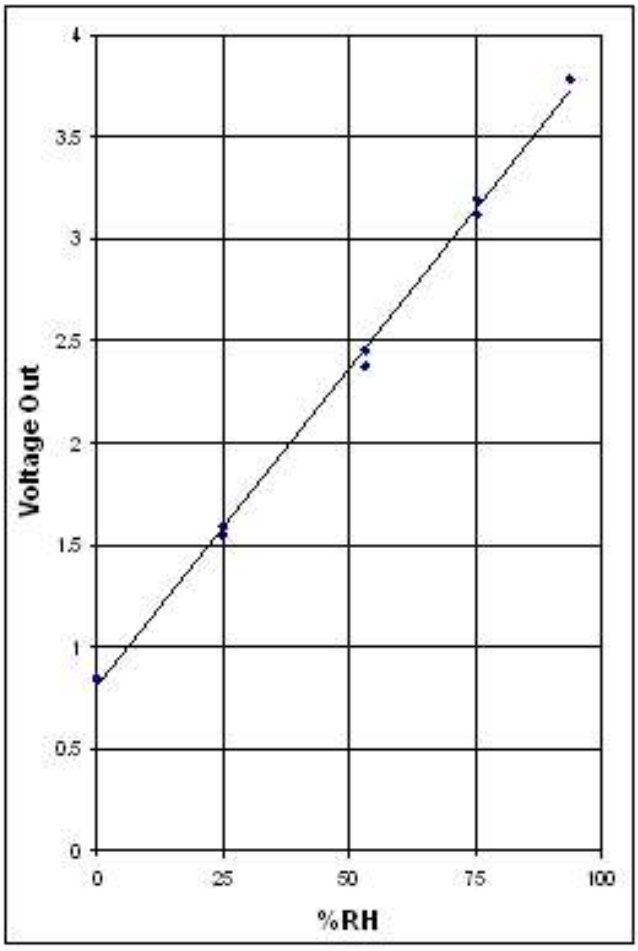
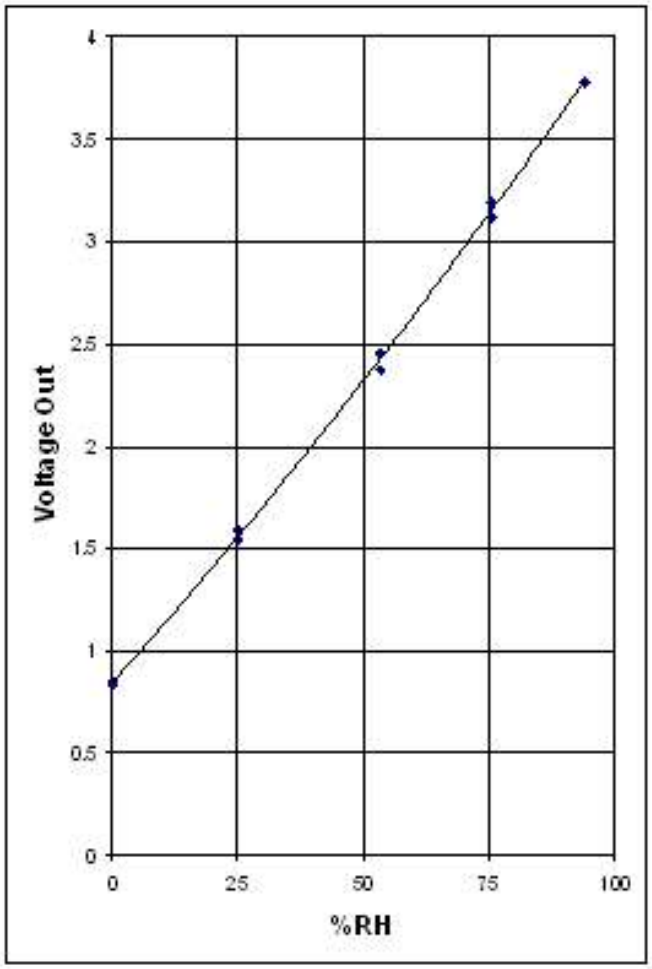
TYPICAL BEST FIT STRAIGHT LINE



TYPICAL 2nd ORDER CURVE FIT



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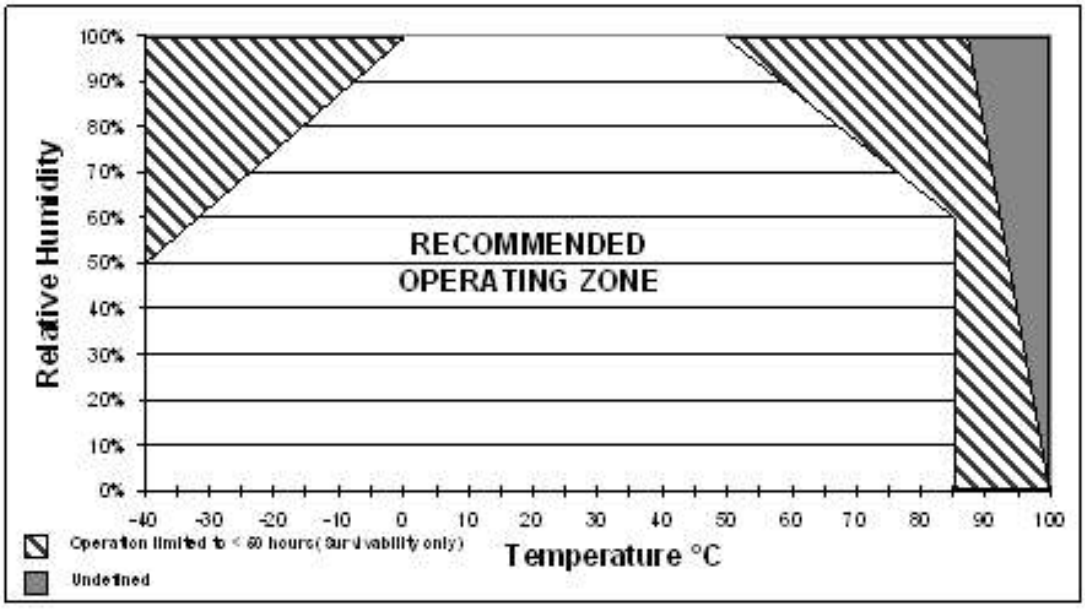
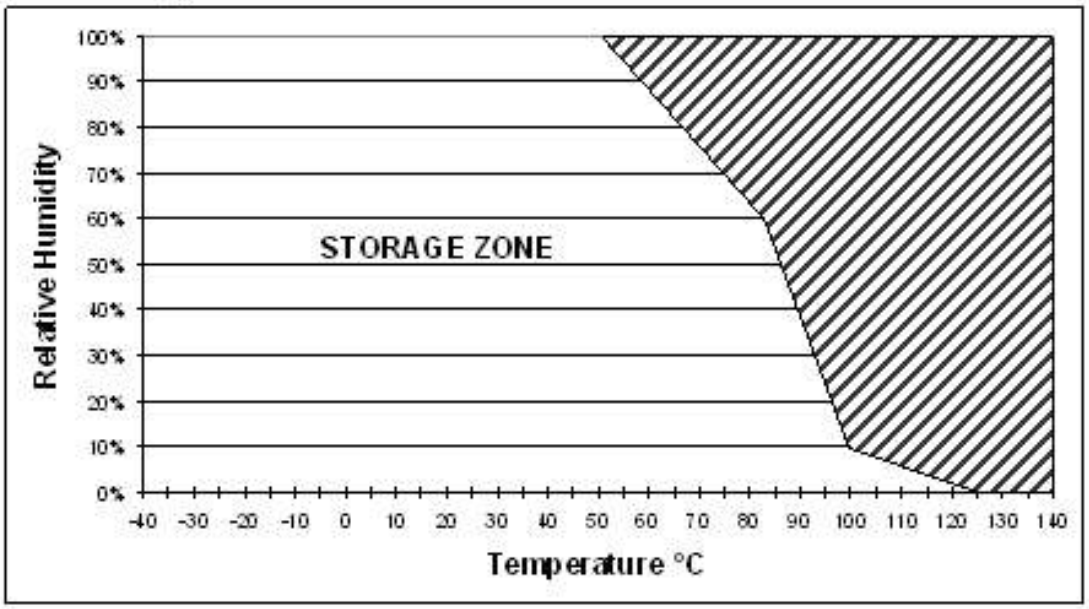
HIH-4000-002

HIH-4000 Series Integrated Circuity Humidity Sensor, 1,27 mm (0.050 in) Lead Pitch SIP

Recommended Operating Conditions



Storage Environment



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⚠ 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 product sheet (or catalog) 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.