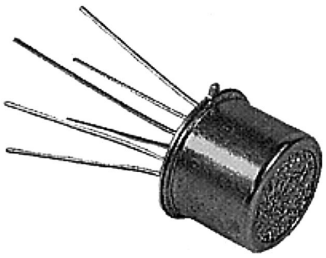
Honeywell

Interactive Catalog Replaces Catalog Pages

Honeywell Sensing and Control has replaced the PDF product catalog with the new Interactive Catalog. The Interactive Catalog is a power search tool that makes it easier to find product information. It includes more installation, application, and technical information than ever before.

Click this icon to try the new Interactive Catalog.

Sensing and Control
Honeywell Inc.
11 West Spring Street
Freeport, Illinois 61032



FEATURES
- Linear voltage output vs %RH
- Laser trimmed interchangeability
- High accuracy, fast response
- Chemically resistant
- Stable, low drift performance
- Built-in static protection
- Ideal for dew point and absolute moisture measurements
- TO-39 housing

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

GENERAL INFORMATION
HIH-3602-A and HIH-3602-C Relative Humidity (RH) sensors combine both relative humidity and temperature sensing in a TO-5 housing with a hydrophobic sintered stainless steel filter

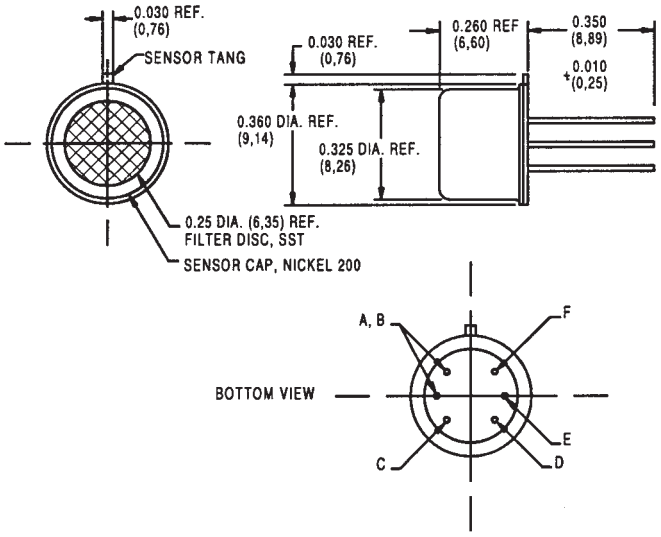
The laser trimmed thermoset polymer capacitive sensing elements have on-chip integrated signal conditioning. The temperature sensor is thermally connected with the RH sensor making the HIH-3602-A/C ideal for measuring dew point and other absolute moisture terms. Factory calibration data supplied with each sensor allows individually matched downstream electronics and ±2% RH total accuracy.

ORDER GUIDE

Catalog Listing	Description
HIH-3602-A	Monolithic IC humidity sensor with integral thermistor in TO-5 can
HIH-3602-C	Monolithic IC humidity sensor with integral precision RTD in TO-5 can

MOUNTING DIMENSIONS (for reference only)

HIH-3602-A and HIH-3602-C

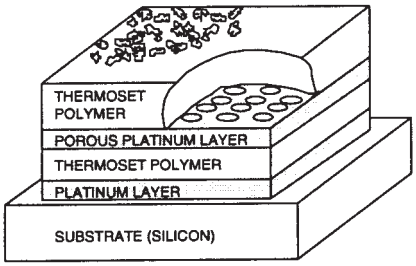


INTERNAL PIN CONNECTIONS

0.018 (0,46) dia. lead gold plated (6 places)	
A, B	(HIH-3602-A) Thermistor for temperature compensation
A, B	(HIH-3602-C) RTD for temperature compensation
C	+VDC supply
D	(−) Power or ground
E	VDC out
F	Case ground

NIST CALIBRATION
Each HIH-3602-A or HIH-3602-C sensor includes a sensor specific NIST calibration and data printout. Sensors are not individually serialized.

RH SENSOR CONSTRUCTION
Sensor construction consists of a planar capacitor with a second polymer layer to protect against dirt, dust, oils and other hazards.



CAUTION
PRODUCT DAMAGE
The inherent design of this component causes it to be sensitive to electrostatic discharge (ESD). To prevent ESD-induced damage and/or degradation, take normal ESD precautions when handling this product.

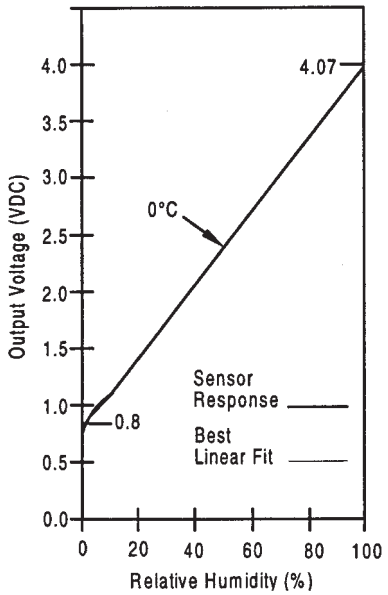
Humidity

PERFORMANCE SPECIFICATIONS

Catalog Listing	HIH-3602-A	HIH-3602-C
Temperature Sensor	Rb = 100 kΩ ±5% @ 25°C, NTC 0-50°C, β = 4143K, T = °K R(T) = Rb exp (β/T-β/298.15)	1000Ω ±0.2% @ 0°C Thin Film Platinum RTD alpha = 0.00375 Ω/Ω/°C
Temperature Accuracy	±3.0°C @ 25°C	±0.5°C @ 25°C
RH Accuracy[1]	±2% RH, 0-100% RH non-condensing, 25°C, V_{supply} = 5 VDC	
RH Interchangeability	±5% RH, 0-60% RH; ±8% @ 90% RH	
RH Linearity	±0.5% RH typical	
RH Hysteresis	±1.2% of RH span maximum	
RH Repeatability	±0.5% RH	
RH Response Time, 1/e	50 sec in slowly moving air at 25°C	
RH Stability	±1% RH typical at 50% RH in 5 years	
Power Requirements Voltage Supply Current Supply	 4 to 5.8 VDC, sensor calibrated at 5 VDC 200 μA at 5 VDC	
Voltage Output V_{supply} = 5 VDC Drive Limits	V_{out} = V_{supply} (0.0062 (Sensor RH) +0.16), typical @ 25°C (Data printout provides a similar, but sensor specific, equation at 25°C.) 0.8 to 3.9 VDC output @ 25°C typical Push/pull symmetric; 50 μA typical, 20 μA minimum, 100 μA maximum Turn-on ≤0.1 second	
Temp. Compensation Effect @ 0% RH Effect @ 100% RH	True RH = (Sensor RH)/(1.093-.0012T), T in °F True RH = (Sensor RH)/(1.0546-0.00216T), T in °C ±0.007% RH/°C (negligible) −0.22% RH/°C (<1% RH effect typical in occupied space systems above 15°C (59°F))	
Humidity Range Operating Storage	 0 to 100% RH, non-condensing[1] 0 to 90% RH, non-condensing	
Temperature Range Operating Storage	 −40° to 85°C (−40° to 185°F) −40° to 125°C (−40° to 275°F)	
Package	TO-5 with 60μ hydrophobic sintered stainless steel filter, resists condensation	
Handling	Static sensitive diode protected to 15 kV maximum	

1. Extended exposure to ≥90% RH causes a reversible shift of 3% RH.

OUTPUT VOLTAGE VS RELATIVE HUMIDITY (at 0°C)



OUTPUT VOLTAGE VS RELATIVE HUMIDITY (at 0°C, 25°C, and 85°C)