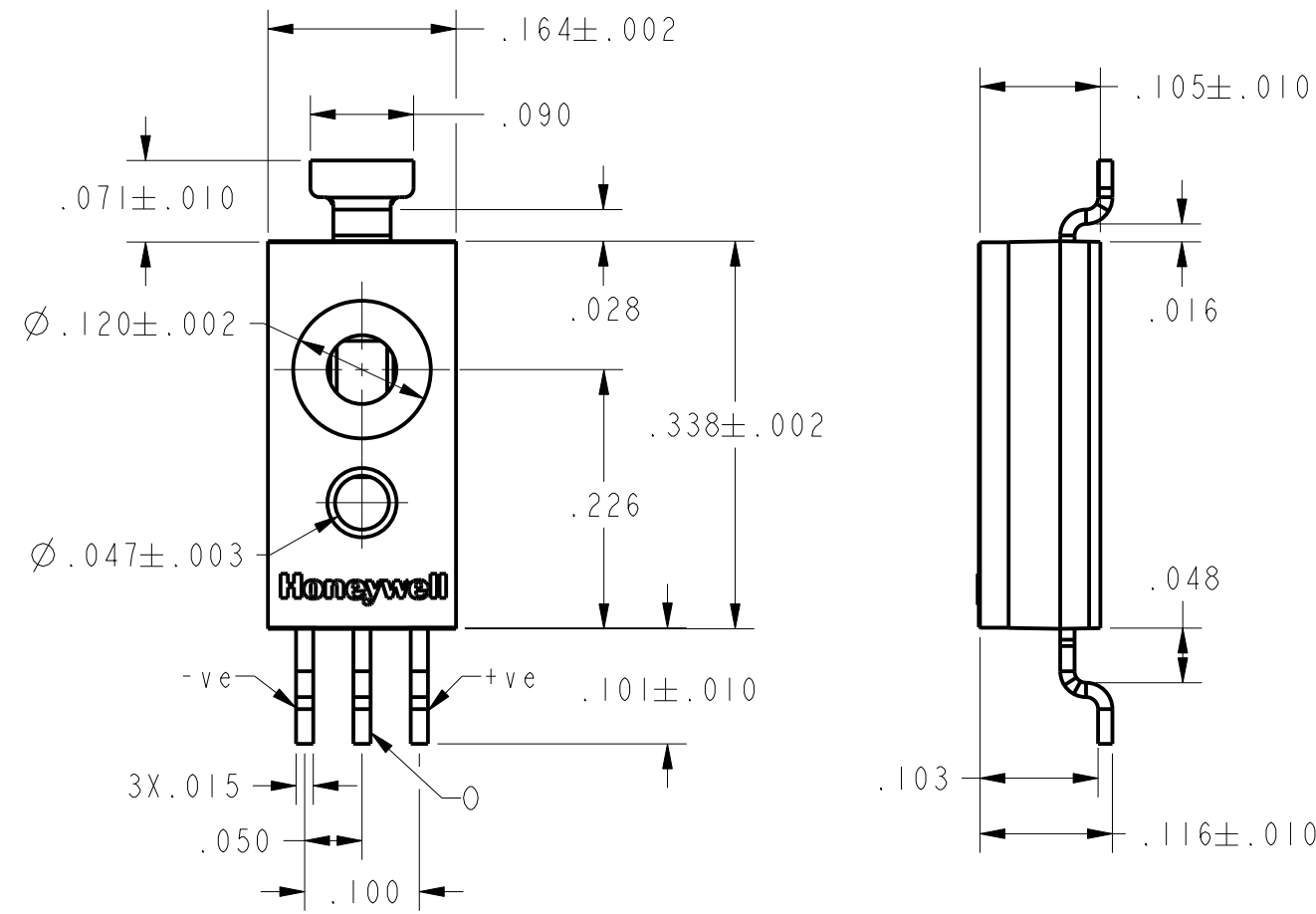
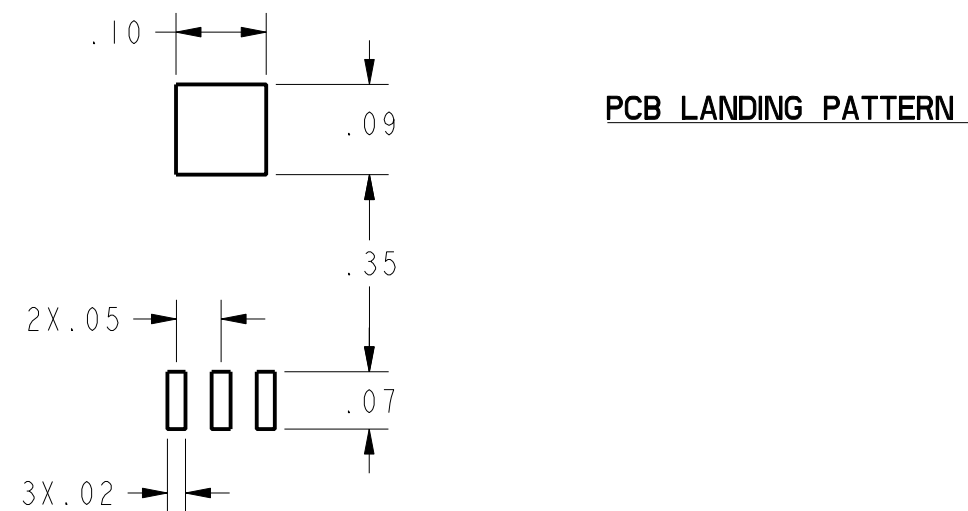
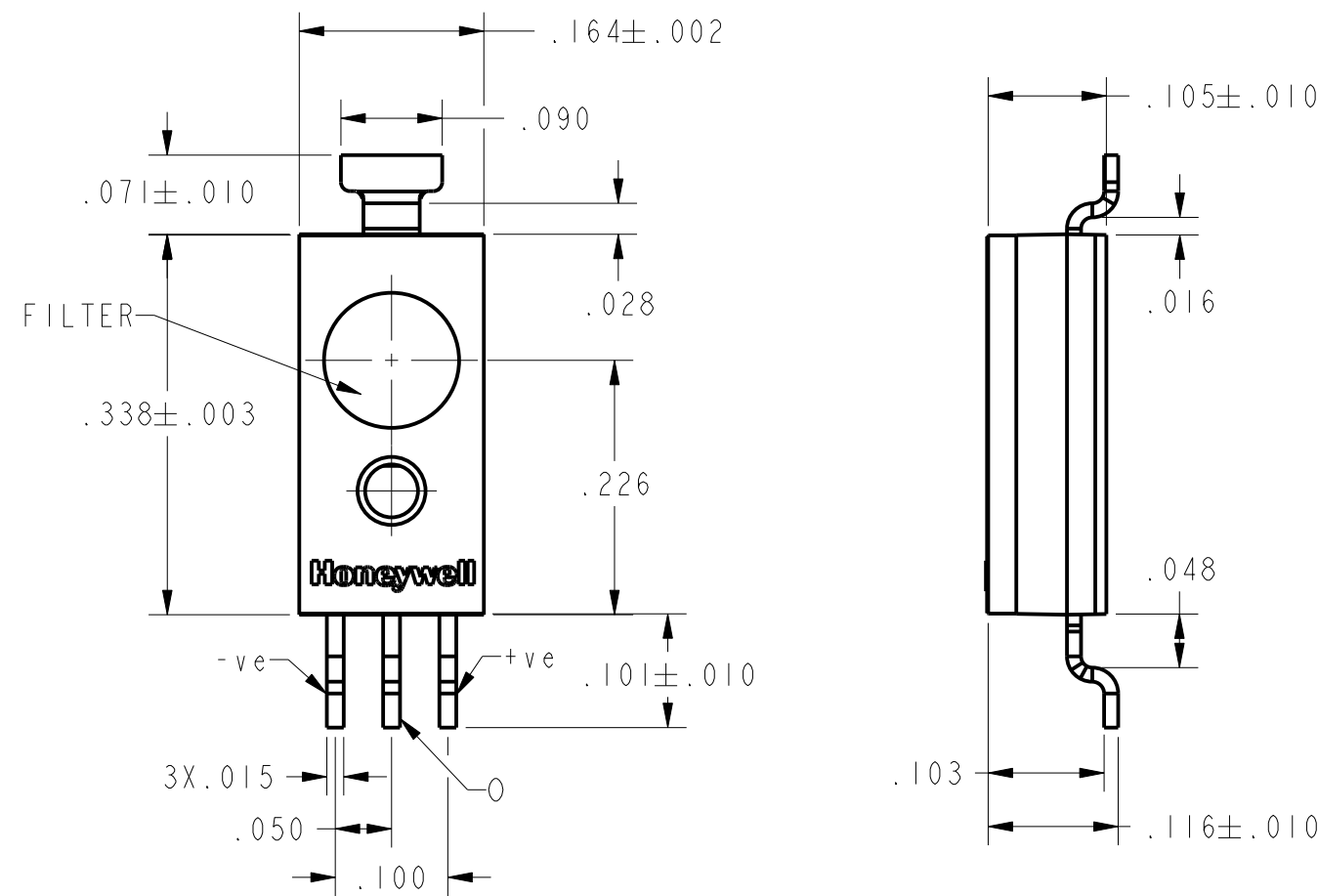


HONEYWELL PART NUMBER
HIH-4030-001
HIH-4030-003
HIH-4031-001
HIH-4031-003

HIH-4030-001/HIH-4030-003



HIH-4031-001/HIH-4031-003



PCB LANDING PATTERN



**OPERATING CHARACTERISTICS**

at 5.0 VDC AND 25°C UNLESS OTHERWISE NOTED

SPECIFICATION	MIN	TYP	MAX	UNITS	
INTERCHANGEABILITY (FIRST ORDER CURVE FIT)	0 to 59%RH		-5	5	% RH
	60% to 100%RH		-8	8	% RH
ACCURACY, (BFSL) $\Delta$	-3.5		+3.5	% RH	
HYSTERESIS		3		% RH	
REPEATABILITY		±0.5		% RH	
SETTLING TIME			70	mS	
RESPONSE TIME, 1/e IN SLOW MOVING AIR		5		Sec.	
STABILITY, AT 50%RH IN 1 YEAR $\Delta$ <sub>5</sub>		±1.2		% RH	
STABILITY, AT 50%RH IN 1 YEAR $\Delta$ <sub>6</sub>		±0.5		% RH	
POWER REQUIREMENTS $\Delta$ VOLTAGE SUPPLY	4		5.8	VDC	
		200	500	µA	
VOLTAGE OUTPUT, 1st ORDER CURVE FIT	$V_{out} = (V_{supply})(0.0062(\text{SENSOR RH}) + 0.16)$ TYP at 25°C				
TEMPERATURE COMPENSATION	TRUE RH = (SENSOR RH) / (1.0546 - 0.00216T). T IN °C				
OUTPUT VOLTAGE TEMPERATURE COEFFICIENT AT 50%RH, 5V		-4		mV/°C	
OPERATING TEMPERATURE	-40	SEE CHART	85	°C	
OPERATING HUMIDITY $\Delta$ <sub>2</sub> (HIH-4030)	0	SEE CHART	100	% RH	
OPERATING HUMIDITY (HIH-4031)	0	SEE CHART	100	% RH	
STORAGE TEMPERATURE	-50		125	°C	
STORAGE HUMIDITY $\Delta$ <sub>2</sub>	SEE CHART			% RH	

NOTES

- $\Delta$ <sub>1</sub> - DEVICE IS CALIBRATED AT 5 VDC AND 25°C
- $\Delta$ <sub>2</sub> - NONCONDENSING ENVIRONMENT. WHEN LIQUID WATER FALLS ON THE HUMIDITY SENSOR DIE, OUTPUT GOES TO A LOW RAIL CONDITION INDICATING NO HUMIDITY
- $\Delta$ <sub>3</sub> - CROSS-HATCHED OPERATING ZONE LIMITED TO <50 HOURS
- $\Delta$ <sub>4</sub> - NO SPECIFICATION ZONE
- $\Delta$ <sub>5</sub> - INCLUDES TESTING OUTSIDE OF RECOMMENDED OPERATING ZONE
- $\Delta$ <sub>6</sub> - INCLUDES TESTING FOR RECOMMENDED OPERATING ZONE ONLY
- 7 - DEVICE IS RATIO-METRIC TO SUPPLY VOLTAGE
- 8 - EXTENDED EXPOSURE TO >=90%RH CAUSES A REVERSIBLE SHIFT OF 3% RH
- 9 - THIS SENSOR IS LIGHT SENSITIVE AND SHOULD BE SHIELDED FROM BRIGHT LIGHT TO ACHIEVE BEST PERFORMANCE
- $\Delta$ <sub>10</sub> - CAN ONLY BE ACHIEVED WITH THE SUPPLIED SLOPE AND OFFSET, -003 PARTS

DESIGN UNITS: INCH	DRAWN	MPH	27OCT06
TOLERANCES UNLESS NOTED:	CHECK	RK	27OCT06
NO PLACE X ± 0.040	THIS DRAWING COVERS A PROPRIETARY ITEM AND IS THE PROPERTY OF HONEYWELL. THIS DRAWING IS NOT TO BE COPIED OR USED WITHOUT THE PERMISSION OF HONEYWELL.		
ONE PLACE .X ± 0.030			
TWO PLACE .XX ± 0.015			
THREE PLACE .XXX ± 0.005			
FOUR PLACE .XXXX ± 0.0005			
ANGLES X ± 2			

THIRD ANGLE PROJECTION



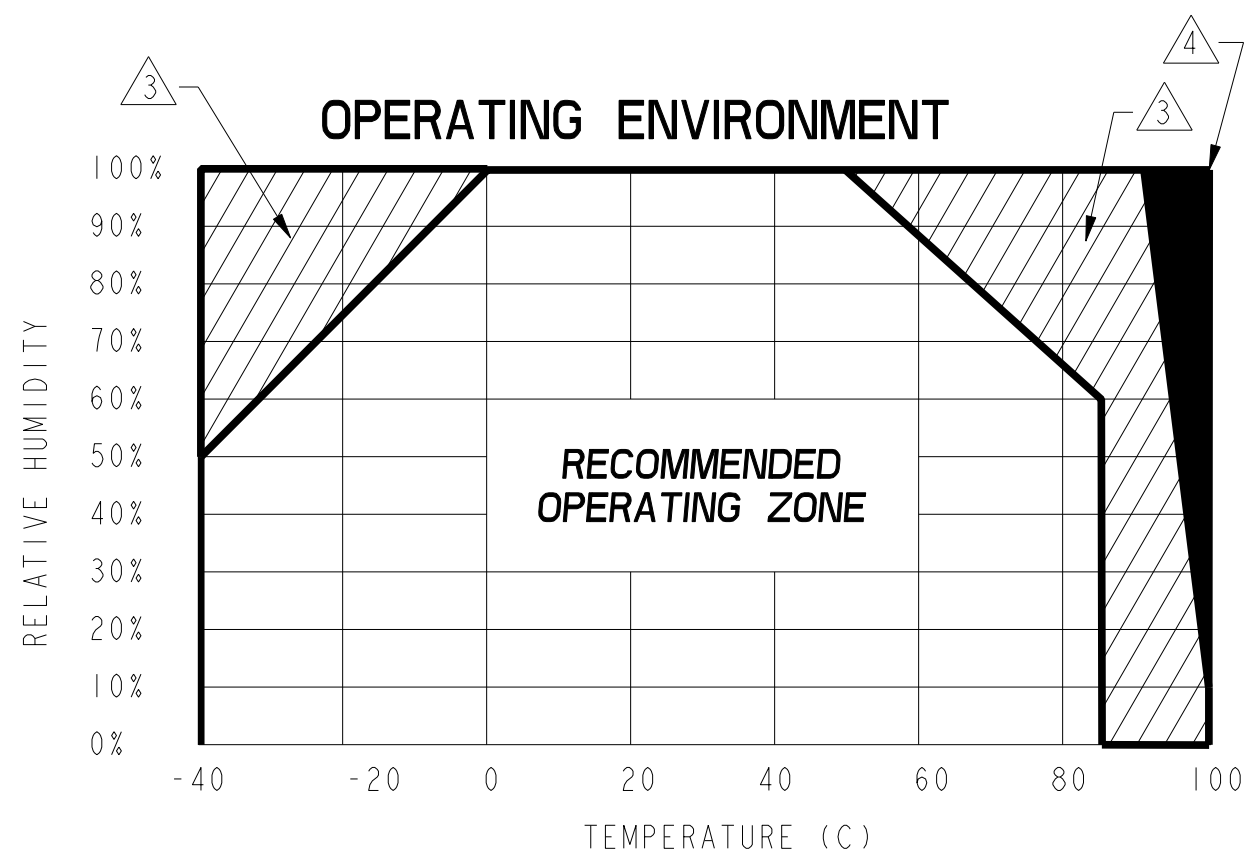
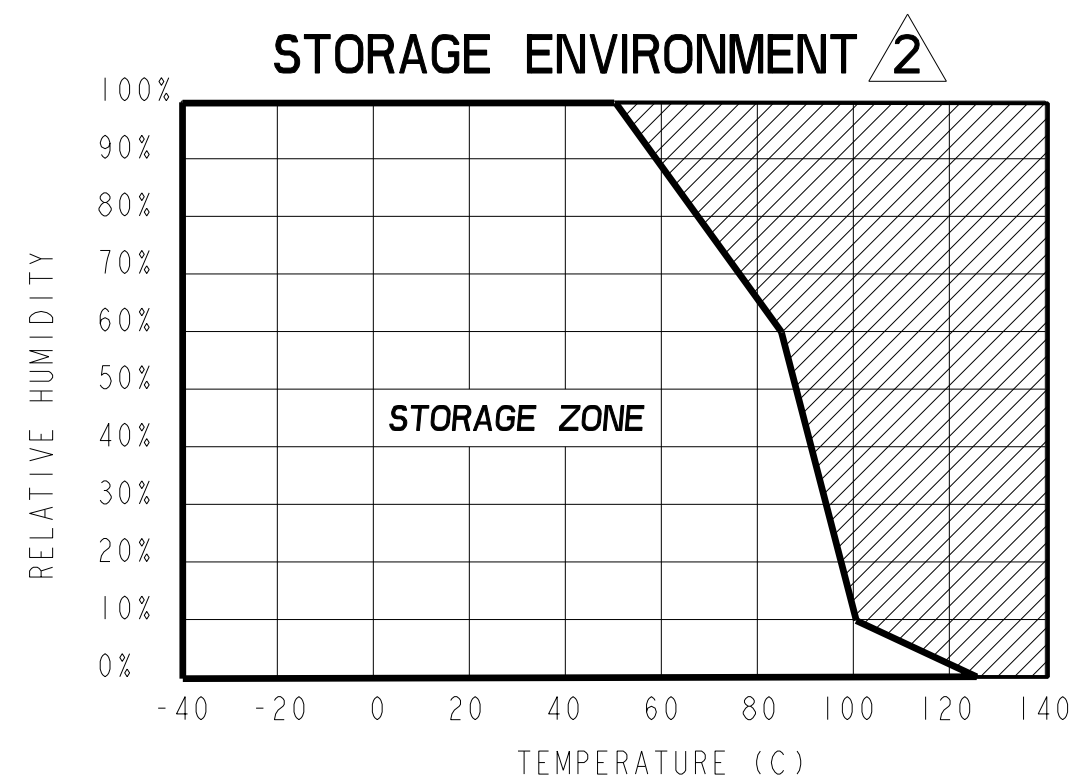
INTERPRET PER ASME Y14.5M-1994 OTHER HONEYWELL ENGINEERING STANDARDS MAY APPLY		SIZE	TYPE	DRAWING NAME	REV
Pro/ENGINEER	3D	C	I	HIH-4030 SERIES CHART 1	A
SCALE		8:1		SHEET 1 OF 2	

**Honeywell**

TITLE HIH-4030/31 SERIES INTEGRATED CIRCUIT HUMIDITY SENSOR

HIH-4030 SERIES CHART 1 A

SHEET 1 OF 2



PRODUCT DESCRIPTION	
CATALOG LISTING	DESCRIPTION
HIH-4030-001	COVERED INTEGRATED CIRCUIT HUMIDITY SENSOR, SMD
HIH-4030-003	COVERED INTEGRATED CIRCUIT HUMIDITY SENSOR, SMD WITH CALIBRATION AND DATA PRINTOUT
HIH-4031-001	COVERED, FILTERED INTEGRATED CIRCUIT HUMIDITY SENSOR, SMD
HIH-4031-003	COVERED, FILTERED INTEGRATED CIRCUIT HUMIDITY SENSOR, SMD WITH CALIBRATION AND DATA PRINTOUT

DATA PRINTOUT (EXAMPLE)	
MODEL	HIH-4030-003
CHANNEL	92
WAFER	030996M
MRP	337313
CALCULATED VALUES AT 5 V	
Vout @ 0% RH	0.950 V
Vout @ 75.3% RH	3.268 V
LINEAR OUTPUT FOR 3.5% RH ACCURACY @ 25 °C	
ZERO OFFSET	0.950 V
SLOPE	30.680 mV/%RH
SENSOR RH	$(V_{out} - ZERO\ OFFSET) / SLOPE$ $(V_{out} - 0.950) / 0.0307$
RATIOMETRIC RESPONSE FOR 0 TO 100% RH	
Vout	$V_{SUPPLY} (0.1900\ TO\ 0.8040)$

THIS DRAWING COVERS A PROPRIETARY ITEM AND IS THE PROPERTY OF HONEYWELL. THIS DRAWING IS NOT TO BE COPIED OR USED WITHOUT THE PERMISSION OF HONEYWELL.

<b>Honeywell</b>			
SIZE	DWG TYPE	DRAWING NAME	REV
<b>C</b>	<b>I</b>	<b>HIH-4030 SERIES CHART 1</b>	<b>A</b>
SCALE	8:1	SHEET	2 OF 2