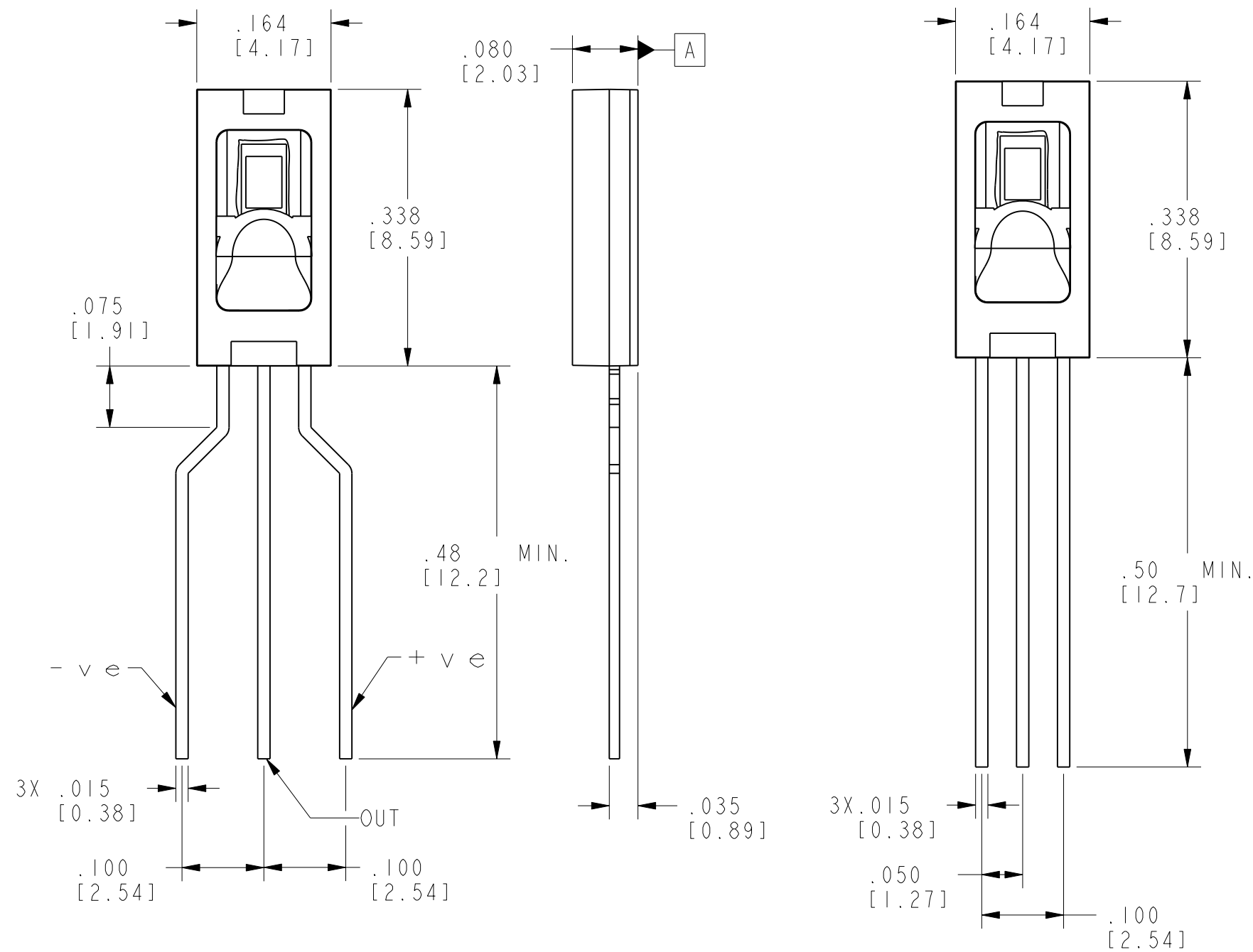


HONEYWELL  
PART NUMBER  
SEE TABLE, SHEET-2

REV	DOCUMENT	CHANGED BY	CHECK
E	0042016	MPH 01AUG08	CMH

HIH-4000-001 / HIH-4000-003 / HIH-4000-005

HIH-4000-002 / HIH-4000-004



**OPERATING CHARACTERISTICS**  
at 5.0 VDC AND 25°C UNLESS OTHERWISE NOTED

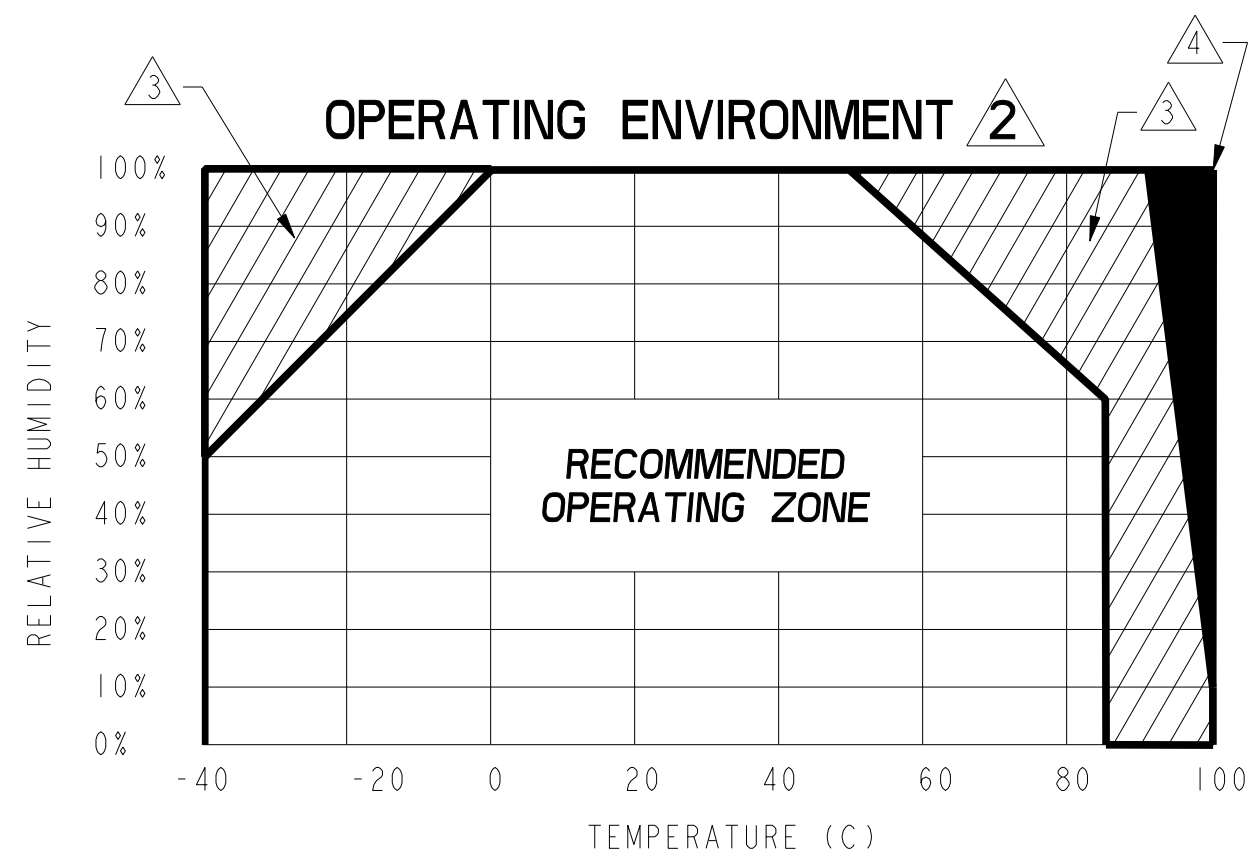
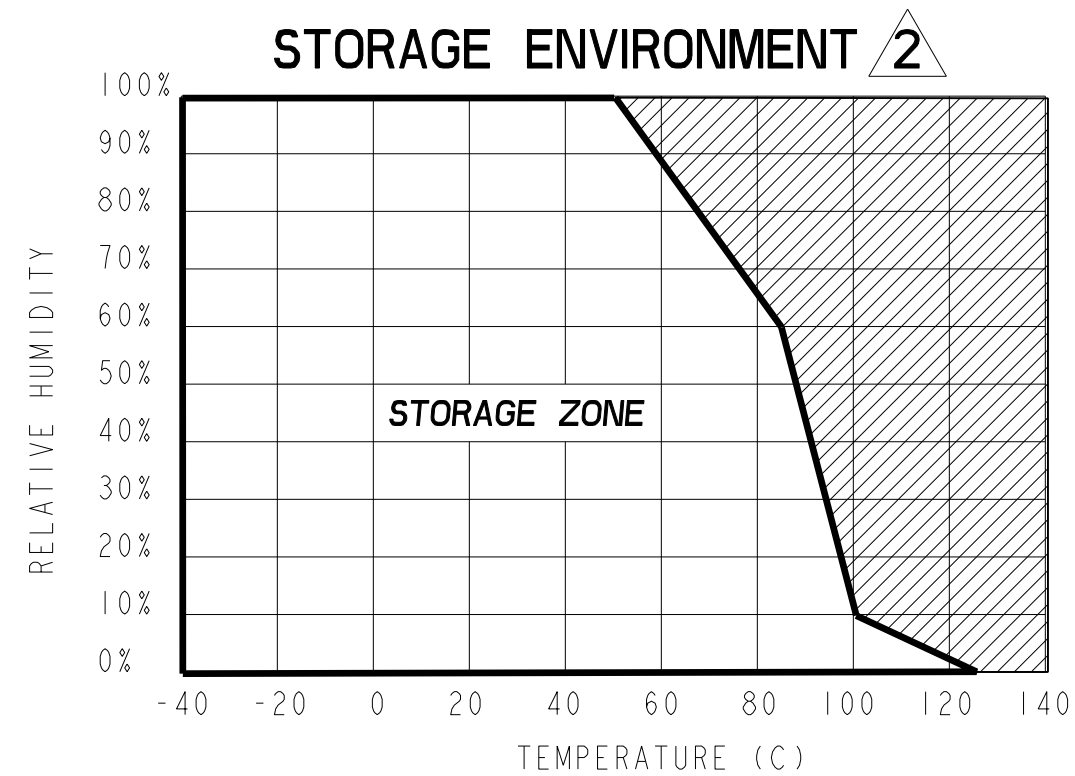
SPECIFICATION	MIN	TYP	MAX	UNITS	
INTERCHANGEABILITY	0 to 59%RH	-5	5	% RH	
	60% to 100%RH	-8	8	% RH	
ACCURACY, (BFSL)	△8		-3.5	+3.5	% RH
HYSTERESIS		3		% RH	
REPEATABILITY		±0.5		% RH	
SETTLING TIME			70	mS	
RESPONSE TIME, 1/e IN SLOW MOVING AIR		5		Sec.	
STABILITY, AT 50%RH IN 1 YEAR		±1.2		% RH	
POWER REQUIREMENTS	△1 VOLTAGE SUPPLY	4	5.8	VDC	
	CURRENT SUPPLY		200	500	µA
VOLTAGE OUTPUT, 1st ORDER CURVE FIT	Vout=(Vsupply)(0.0062(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 △2	0	SEE CHART	100	% RH	
STORAGE TEMPERATURE	-50		125	°C	
STORAGE HUMIDITY △2	SEE CHART			% RH	

NOTES

- △1 - DEVICE IS CALIBRATED AT 5 VDC AND 25°C
- △2 - NONCONDENSING ENVIRONMENT. WHEN LIQUID WATER FALLS ON THE HUMIDITY SENSOR DIE, OUTPUT GOES TO A LOW RAIL CONDITION INDICATING NO HUMIDITY
- △3 - CROSS-HATCHED OPERATING ZONE LIMITED TO <50 HOURS
- △4 - NO SPECIFICATION ZONE
- 5 - DEVICE IS RATIOMETRIC TO SUPPLY VOLTAGE
- 6 - EXTENDED EXPOSURE TO >=90% RH CAUSES A REVERSIBLE SHIFT OF 3% RH
- 7 - THIS SENSOR IS LIGHT SENSITIVE AND SHOULD BE SHIELDED FROM BRIGHT LIGHT TO ACHIEVE BEST PERFORMANCE
- △8 - CAN ONLY BE ACHIEVED WITH THE SUPPLIED SLOPE AND OFFSET -003 AND -004 PARTS.



DESIGN UNITS: INCH TOLERANCES UNLESS NOTED:	DRAWN TMM 22FEB05 CHECK PM 24MAR05	<b>Honeywell</b>			
NO PLACES X ± 0.040 ONE PLACE .X ± 0.030 TWO PLACE .XX ± 0.015 THREE PLACE .XXX ± 0.010 FOUR PLACE .XXXX ± 0.0005 ANGLES X ± 2	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.				TITLE HIH-4000 SERIES INTEGRATED CIRCUIT HUMIDITY SENSOR
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5M-1994 OTHER HONEYWELL ENGINEERING STANDARDS MAY APPLY	Pro/ENGINEER	3D	SHEET 1 OF 2	



PRODUCT DESCRIPTION	
CATALOG LISTING	DESCRIPTION
HIH-4000-001	INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.100 IN LEAD PITCH SIP
HIH-4000-002	INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.050 IN LEAD PITCH SIP
HIH-4000-003	INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.100 IN LEAD PITCH SIP WITH CALIBRATION AND DATA PRINTOUT
HIH-4000-004	INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.050 IN LEAD PITCH SIP WITH CALIBRATION AND DATA PRINTOUT
HIH-4000-005	EQUIVALENT TO HIH-4000-001

DATA PRINTOUT (EXAMPLE)	
MODEL	HIH-4000-003
CHANNEL	92
WAFER	030996M
MRP	337313
CALCULATED VALUES AT 5 V	
Vout @ 0% RH	0.958 V
Vout @ 75.3% RH	3.268 V
LINEAR OUTPUT FOR 3.5% RH ACCURACY @ 25 °C	
ZERO OFFSET	0.958 V
SLOPE	30.680 mV/%RH
SENSOR RH	(Vout-ZERO OFFSET)/SLOPE (Vout-0.958)/0.0307
RATIOMETRIC RESPONSE FOR 0 TO 100% RH	
Vout	Vsupply (0.1915 TO 0.8130)

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		SIZE	DWG TYPE	DRAWING NAME	REV
		<b>C</b>	<b>I</b>	<b>HIH-4000 SERIES CHART 1</b>	<b>E</b>
SCALE 6:1		SHEET 2 OF 2			