Tecnología Aplicada
a la Información

Humidity Sensor

TAI8540B

Preliminary

Features:

- Measures Relative Humidity with a +/-2% accuracy
- Rel. Humidity measurement range from 0% to 100%
- Temperature measurement accuracy +/-2°C
- Based on the HIH 3610-A sensor from HONEYWELL
- 1-Wire® DS2438 IC from Maxim/Dallas Semiconductors used as A/D and temperature sensor
- Cable length is 2 meters (6.56 f)
- Cable ended with a RJ11 connector compatible with the 1-Wire specification
- It doesn't require external power supply, the needed operation power is obtained from the 1-Wire® data line.
- Unique 1-Wire address permits multiple sensors on the network
- TMEX -Standard compatible

Description:

The TAI8540B sensor is based on the HIH-3610-A humidity sensor, manufactured by Honeywell, and uses the DS2438 IC from Dallas Semiconductors as a 1-Wire A/D converter. The DS2438 not only provides the complete front-end for the 1-Wire® section assigning a 64 bit address to each unit, but also is used as a tempe-
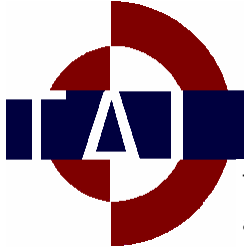
rature sensor . So this module not only measures the relative humidity, but also senses temperature. The electronics is protected by a 10 mm diameter metallic enclousure. To connect the sensor to the 1-Wire newtork a 2 meter cable ended in an RJ11 connector is provided.

For more information regarding the HIH-3610-A sensor please visit:
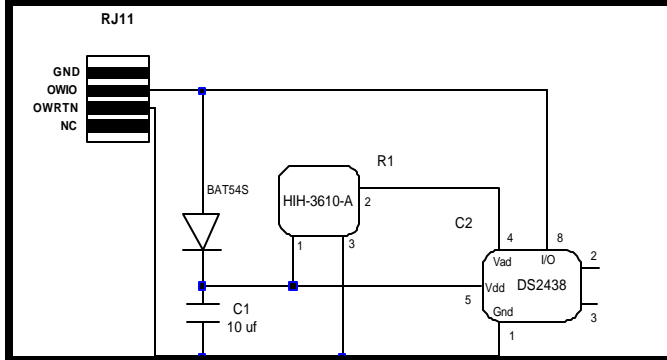
www.honeywell.com/sensing

and more information about the DS2438 can be obtained here:

www.dalsemi.com

Automatización Aplicada a Gasolineras S.A. de C.V.., Pino Suárez #271G, Col.Niños Héroes
Querétaro, 76010, Querétaro Tel/Fax +52(442)215-3166 e-mail:infoaag@aag.com.mx, www.aag.com.mx
1   AAG211102

Tecnología Aplicada
a la Información

Schematic:

RJ11

GND
OWIO
OWRTN
NC

BAT54S

HIH-3610-A

R1

C2

2

1 3

C1
10 uf

Vad   I/O
DS2438
Vdd

5   Gnd

4   8

2

3

1

Conector:

RJ11
Plug
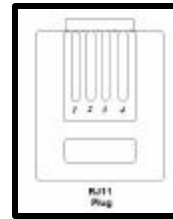
- **Pin #1 NC**
- **Pin #2 1-Wire Data**
- **Pin #3 Gnd**
- **Pin #4 NC**

Specifications:

Parameter	Min	Normal	Max	Notes
Humidity rel (%)		+/-2%		0-100 % RH non-condensing, 25 ° C, 5 VDC supply
Operation Temperature	-10	+25	+50	
Supply Voltage (PIN4)	4.8v	5.0v	5.5v	Refered to Pin 1
Data Voltage (PIN2)	0	-	5.0v	
A/D Temperature resolution		13 bits		
A/D Humidity resolution		10 bits		
Current consumption			2ma	
Humidity sensor response time 1/e			15 sec	

Ordering information:

TAI8540B   Humidity Sensor

Important:

This product is designed to be used indoors only. This product is not designed, intended or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of a product of could create a situation where personal injury or death may occur. 1-Wire® is a trademark of the Dallas Semiconductor . Third-party product and brand names may be trademarks or registered trademarks of their respective owners

Automatización Aplicada a Gasolineras S.A. de C.V.., Pino Suárez #271G, Col.Niños Héroes
Querétaro, 76010, Querétaro Tel/Fax +52(442)215-3166 e-mail:infoaag@aag.com.mx, www.aag.com.mx
2   **AAG211102**