

# Overview of Relative Humidity Sensing

TI Precision Labs – Humidity Sensing

Presented and prepared by TJ Cartwright

# Humidity Fundamentals

## Absolute Humidity

- Not dependent on temperature changes
- Measured in grams of moisture per cubic meter ( $\text{g}/\text{m}^3$ )

## Relative Humidity

- Temperature dependent equation
- Measured as a percentage of atmospheric moisture

## Dew Point

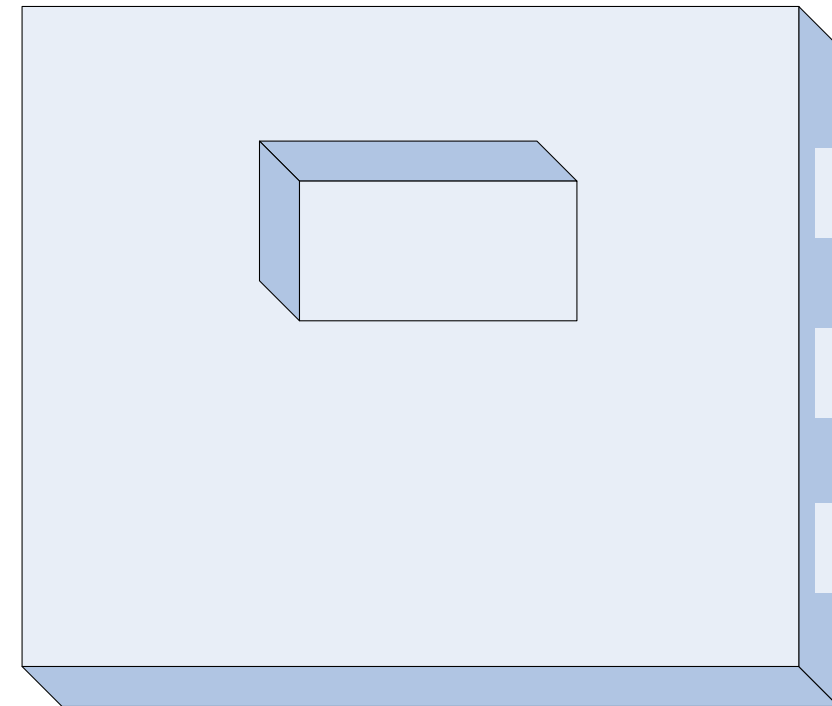
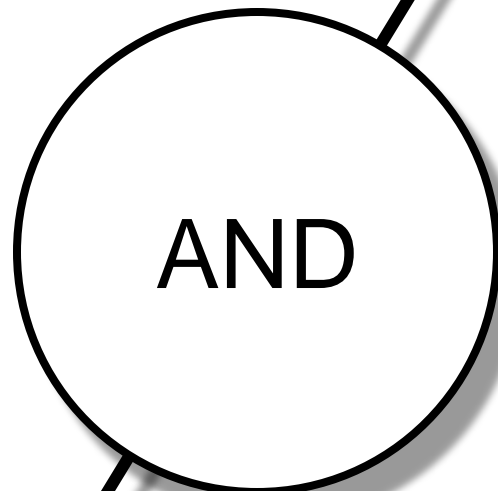
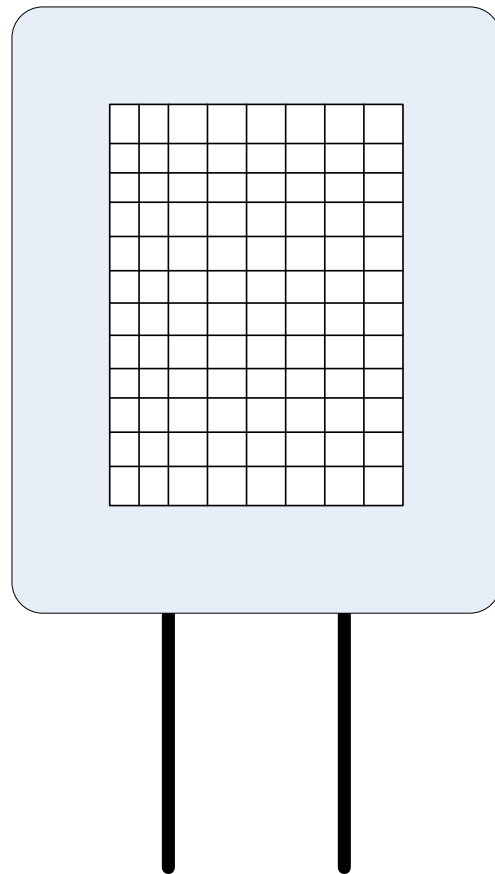
- The point at which air must be cooled to reach 100% RH

## Psychrometric Chart

- Give representation to how an environment can feel depending on temperature and humidity combinations

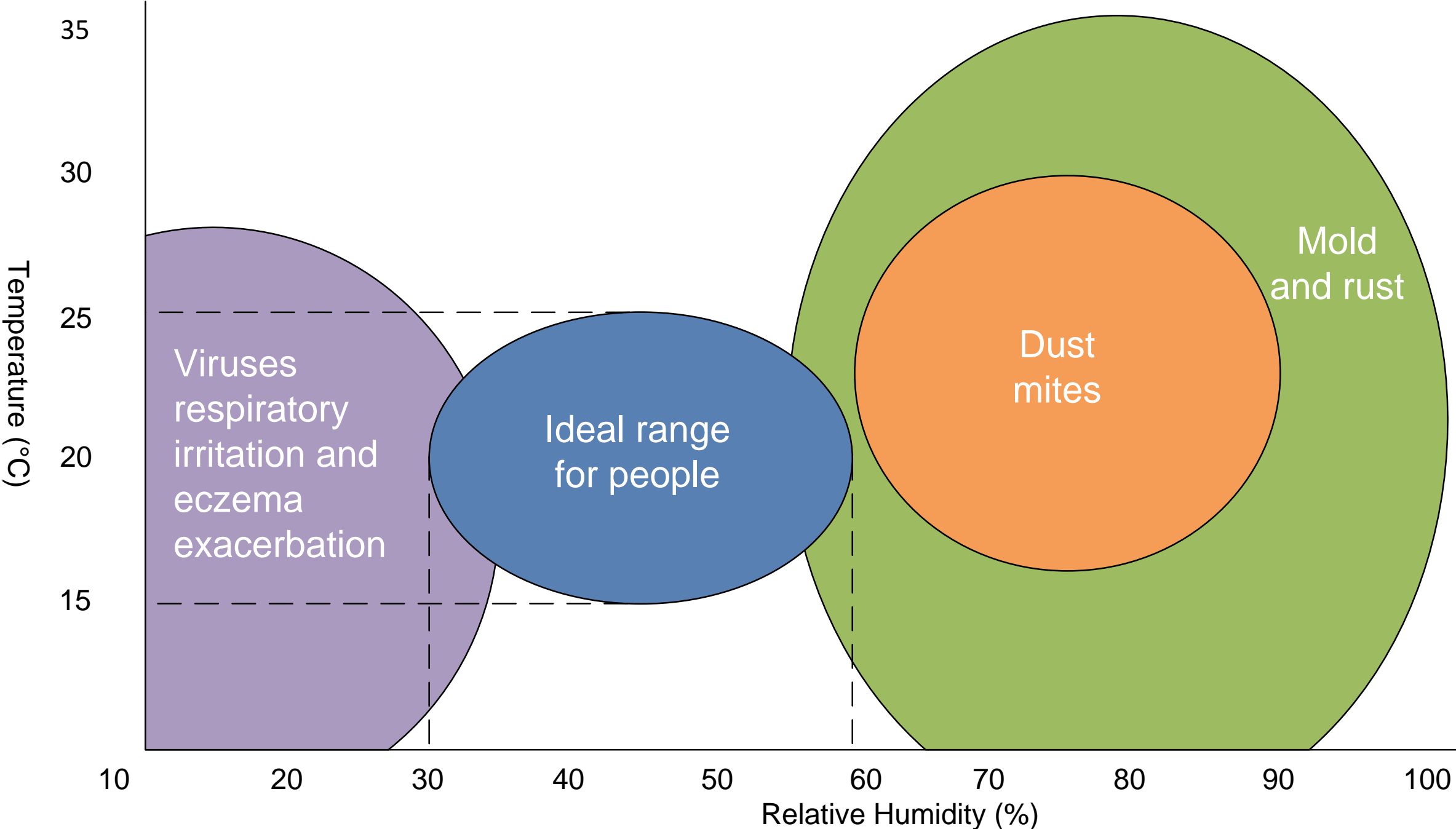
# What is a Humidity Sensor?

## Analog Humidity Sensor



## Digital Humidity Sensor

# Humidity Use Cases



# Getting Started with TI's Digital Solutions



App Notes

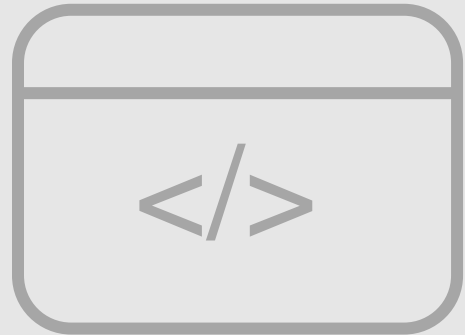
[Humidity Portal Page](#)  
[Storage and Handling](#)  
[Optimizing Placement and Routing](#)  
[Programming the HDC20x0](#)

[Sensors Forum](#)  
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Forums

# Getting Started with TI's Digital Solutions



Firmware

[EVM GUI](#)

[MSP SDK](#)

[Header and .C files](#)

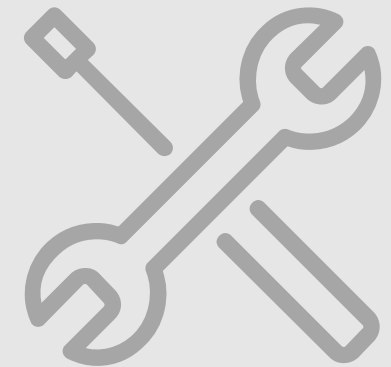
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TIDAs

**Thank you!**

**To find more temperature sensor resources and products visit [ti.com/humidity](https://ti.com/humidity)**