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Q: May I use your hygrometer in an incubator with temperature of 37°C and relative humidity of >90 %?

Edit: Mari Weng Feb. 2021

Answer:

The answer is YES but there are still many details must be taken take care of.

Most of the humidity sensor used in AZ's hygrometer is high accuracy and fast response capacitive humidity sensor. The measuring range is above 90%.

However, while using hygrometer in an incubator with temperature of 37°C and relative humidity of >90 %, the most critical factor to be taken care of is condensation. Once the water molecular is condensed on humidity sensor, it will cause wrong reading.

User may check the condensation temperature (called Dew Point temperature) from below calculation webpage:

https://www.rotronic.com/en/humidity_measurement-feuchtemessung-mesure_de_l_humidite/humidity-calculator-fechterechner-mr

While the temp. is set as 37°C and humidity as 91%RH, the dew point is nearly 36°C. It means if the temp. is dropped a little bit lower than 36°C, the water molecular will start to condense on humidity sensor. This should be avoided to keep sensor in good shape.