

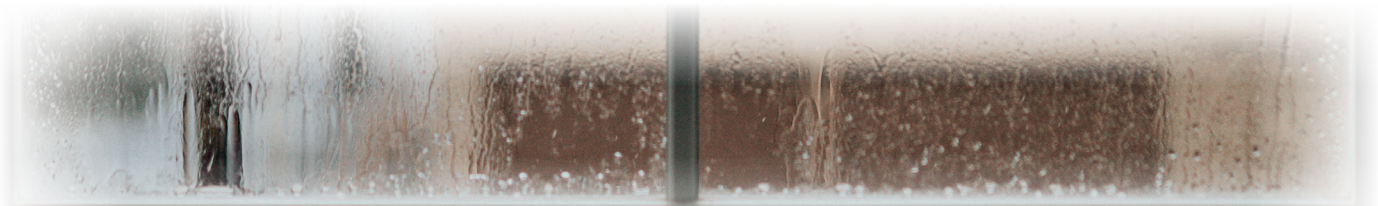
Monitoring Environmental Conditions within Private and Residential Properties



Businesses have a legal obligation to ensure that the working environment for their employees is suitable; comfortable workstations, adequate lighting and the temperature and humidity set at an appropriate level. These conditions are constantly monitored to make sure that the Health and Safety of their employees is maintained. But what about maintaining that same diligence in private and residential properties? We buy furniture that is comfortable to our own needs and lighting with dimmer switches to set a desired ambiance. But what about setting the correct temperature and humidity in our homes?

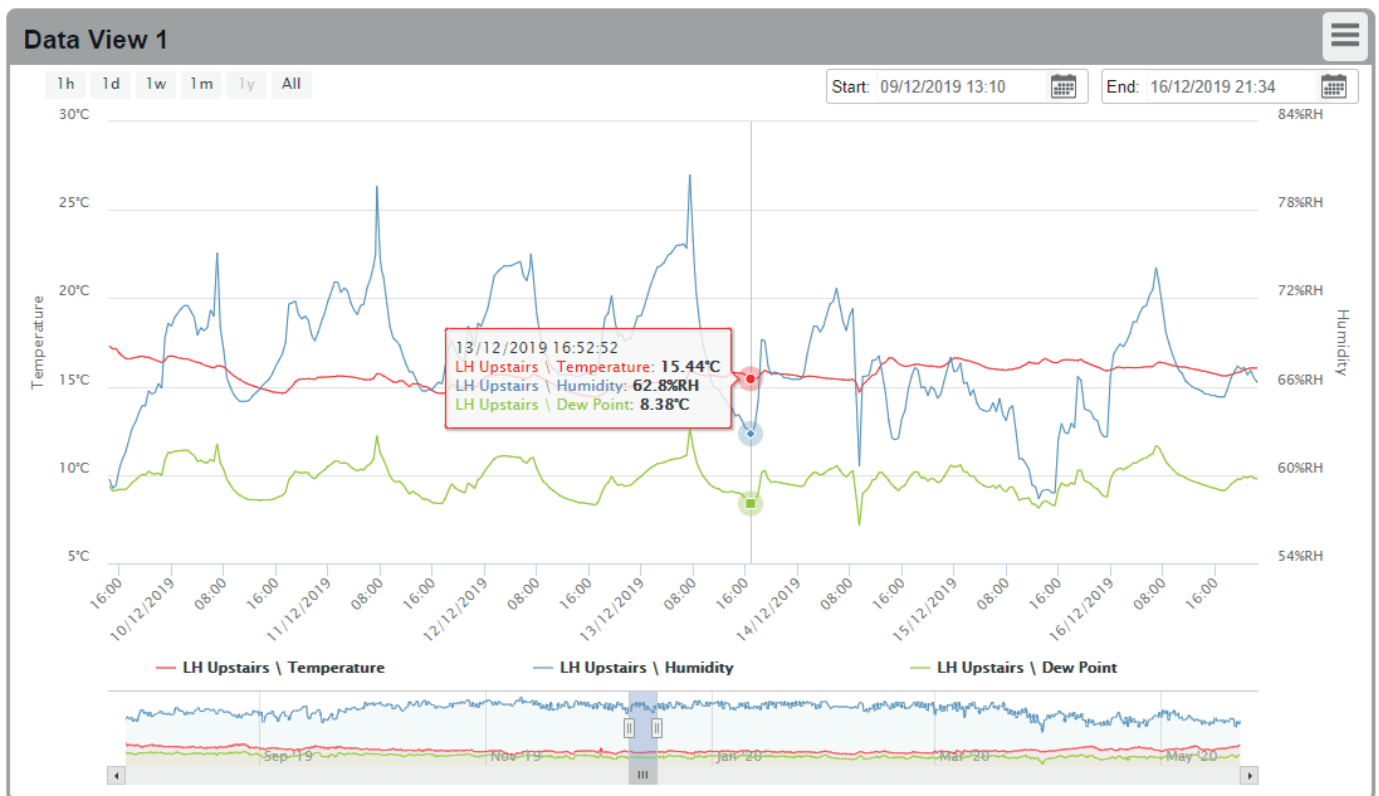
The rise of smart thermostatic controls has certainly enabled the population to gain a better understanding of the heating requirements for their home, however most systems rely on a single thermostat which often leads to excessive heat and/or not enough heating in other areas of the household such as bedrooms, kitchens and bathrooms. Critically, humidity is not factored in at all which can lead to damp issues and the growth of mould harmful to resident's health and wellbeing.

Humans are most comfortable in levels of relative humidity between 40% and 60%. Below this the air feels dry and the temperature is perceived as cooler. Above this level and the air is close and sticky making temperatures appear warmer than they are. This is why a steam room is set to a much lower temperature than a sauna (typically 60°C and 100% RH compared to 85°C & less than 20% RH). By monitoring both temperature and humidity, it is possible to calculate and monitor the dew point. This is the temperature at which condensation will occur, given the level of humidity. This is most easily visualised in winter where the air is warm inside the home but due to high humidity levels condensation builds on cold surfaces such as windows and poorly insulated walls.



How do you control humidity within the home? Firstly, you must be able to monitor and record humidity levels throughout the home to gain an understanding of the dynamics at play. This will vary day to day but most notably with the different seasons. Key factors to look at are adequate heating and ventilation, quality insulation and managing sources of humidity such as kitchens and bathrooms. Even our own occupancy can impact humidity levels as shown in the graph below.

1. Illustration of humidity levels rising throughout the night in a bedroom without adequate ventilation.



Continual monitoring allows you to see the results of your actions to keep residents safe, healthy and comfortable. Here at Lascar Electronics, we have the solution...



Since 1977, Lascar Electronics has been providing digital display, data logging and custom instrumentation solutions to customers across the world. We can help you monitor and control the temperature and humidity in your home whether that's through our WIFI devices connected to the EasyLog Cloud, or our ever-popular USB devices. For an easy way to ensure your environment is healthy and comfortable for you, Lascar are here to help.