Server Room Monitoring

The equipment in server rooms uses more power and makes more heat than ever before. High temperatures can cause gear to work poorly or even cause damage. Internal pieces swell and pull away from each other or can simply burn. Efficient server room temperature monitoring and maintenance is critical to keep your gear safe and performing at 100%.



Using a remote telemetry unit (IOT), you can protect your computer and server room from environmental conditions

HVAC and CRAC units are expected to maintain a controlled temperature between roughly 61 and 75 F. Chances are you won't want the room temp to spend much time on the upper end of that range. It's also likely that the equipment in the room will generate more heat and require more cooling power.

In order to avoid problems that affect your revenue, it's important to know how you can monitor temperature. So, let's talk about some ways you can do that effectively.

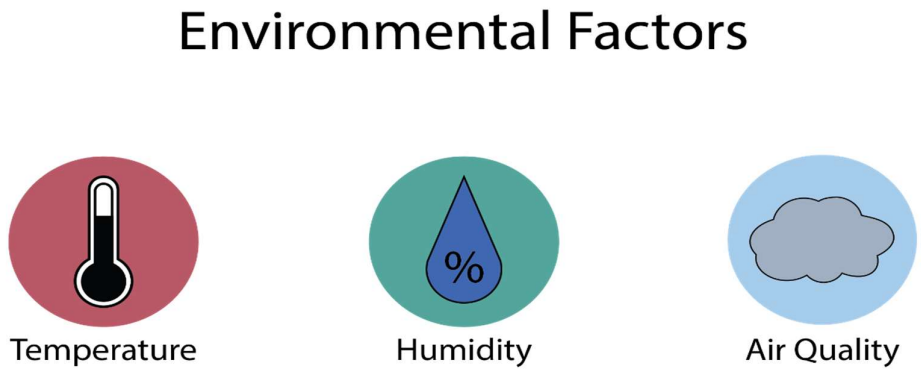
What Actually Needs to be Monitored in Your Server Room?

Not only you can't simply let your servers run at high temperatures for fear of damage. Nor can you let your server room suffer high or low humidity, which can shorten your equipment. While this sounds easy enough, as equipment pushes 750 watts per square foot, it isn't enough to simply crank up the air conditioning and expect your server room to stay cool.

The air in your server room, especially nearest the processors in your equipment, will rise to dangerous temperatures quickly if not properly cooled and circulated.

You don't want your servers and rack-mounted equipment taking in the hot air exhausted from other servers, otherwise you'll start seeing equipment failure, or, at the very least, inefficient server activity.

Even if you had enough air conditioning units that could keep your server room at a reasonable temperature, you would expend a costly amount of energy doing so. There are more efficient ways to keep your server room cool.



Features:

- Temperature And Humidity Monitoring
- Fuel Level Switch (If Applicable) (optional)
- Door Open/Close(optional)
- Electrical Cutoff (optional)
- Generator Status (If Applicable)
- Included 5 Dry Contact With (4 Contactor 1ph +1 Contactor 3ph)
- Schedule For Air Condition operation
- SMS alarm 200 Message/ Month (optional)
- Email Alarm
- Water leakage as Point (Not Robe)
- For a system with a camera for high quality photography and video
- Automatic Alerts
  IoT technology enables the automatic sending of alerts
  in enables the automatic sending of alerts in of sensor detected drops, enhancing immediate response and avoiding intervention delays.
  Siren - Optional 🚨



Why is It So Important to Keep your Server Room Cool?

You know it's important to keep your server room and equipment cool, but do you really understand why?

Extreme heat and high humidity can cause major damage to mission-critical gear. In the case of high- heat, many of the components in your equipment are only rated to operate within a specific temperature range. If your server room temperature exceeds that limit, pieces of your equipment can stop working - or even worse, fry completely, making them permanently damaged.

For humidity, it's a known fact that water and electronic equipment don't mix very well.

Your gear can handle a small amount of water that's naturally in the air. However, if the humidity hits a certain percentage, you might start experiencing some trouble. If the humidity levels in your server room get too high, the water in the air can actually cause your equipment to have electrical shorts.

While you may get lucky just drying it out, most of the time the water damage leaves the equipment permanently damaged, and it'll need to be replaced. To save yourself from having to replace expensive gear due to preventable damage, make sure your server room is appropriately monitored.

Keep your Server Room Colling in Check with the Help of Remote Monitoring

Server room cooling relies on a number of different variables. These include:

- **Air flow**
- **Humidity**
- **Return**
- **Equipment distribution**

Three Strategies for Monitoring your Server Room

If you're looking for the best ways you can keep an eye at your server rooms, the following points are the best strategies you can adopt.

1. You can monitor the areas in the room most likely to suffer extreme conditions.

If temperature, air flow, and humidity are all within proper ranges in the most extreme spots in your server room, you can rest assured that your cooling systems and equipment distribution are working out.

2. You can monitor temperature, humidity, and air flow at the rack-level.

If environmental levels are within normal ranges at the server level, inside the racks, then, obviously, your HVAC equipment is working fine.

3. You can combine the two strategies to mitigate weakness in either one.

This is the most expensive route, but the most thorough and most recommended to ensure the safety of your equipment.

How Can You Put Those Strategies into Practice?

Of course, no matter what strategy you choose, you're going to need to guarantee that your server room maintains a cool temperature either way. You can't afford to wait until a server melt to find out that a part of your server room's temperature management system has failed.

It's expensive both in the cost of gear and potentially the number of clients you may lose due to a service-affecting outage. So, you'll need a proactive monitoring system to keep you informed about what's going on within your server room, this way you can take action before a major failure occurs.

Therefore, in order to put those monitoring strategies in practice, you need good IOT that can give you the best visibility possible.

Sensors for Monitoring Your Server Room

It's also important to have sensors that operate seamlessly with your IOT to give you complete environmental visibility of your server room. Sensors allow you to monitor your server room conditions instantaneously, so that you can fix a problem before it gets worse.

The D-Wire sensors feature temperature, humidity, and air flow measuring capabilities and up to 16 sensors can be daisy chained together. Other sensor options include temperature sensor with a probe, non-D-Wire analog temperature and humidity sensors, smoke detectors, and exterior weather sensors.

DASHBOARDS

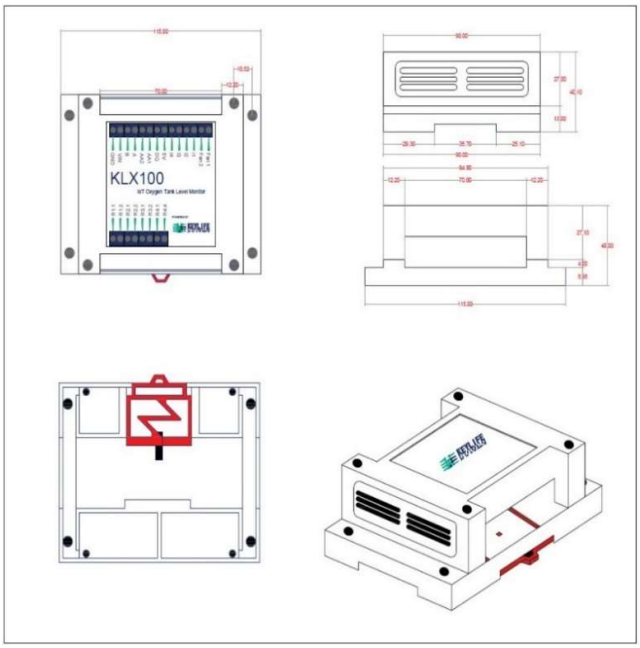
Environmental Monitoring



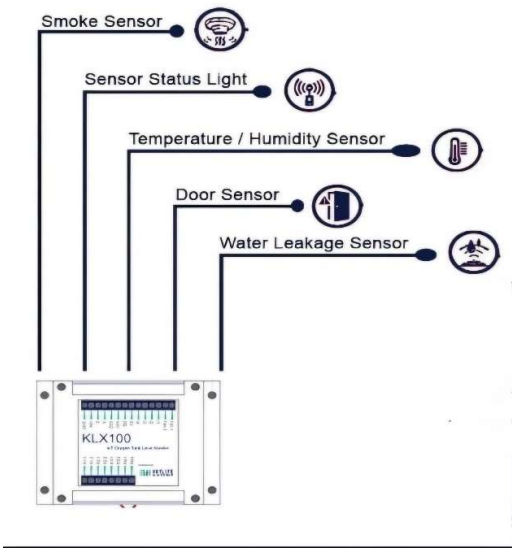
HOW IT WORKS

1. Each data acquisition device has a unique identification code and periodically transmits the digital data using GPRS technology to the cloud-hosted server.
2. The data stream received is recorded and analyzed against a preset custom configuration.
3. In addition, the system initiates threshold alerts via email\SMS\ Telegram Bot, Push Notifications for pressure, level, communication, power failure, and temperature.
4. Compatibility with Web Mobile browsing.

IOT Devices– Deamination



Installation Manual



Technical Specifications

Working Voltage 12-24V	Consumption Current 0.5A	Working Temperature -10°C to 50°C

Hardware

Item
Sensor **Smoke, Status Light,** **Temperature /Humidity,** **Door, Water Leakage**
Metal Box

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