



Name of the Technology: **Environmental Conditions Monitoring Device**

Summary: Environmental conditions play vital role in the metrological and calibration laboratories. These conditions have direct impact on the sensors, transducers and other metrological standards. Recently CSIR-National Physical Laboratory, India has indigenously developed, high precision environment monitoring device. The environment monitoring device has the capability to continuously monitor and record the ambient temperature, barometric pressure, relative humidity and air density.

Product specifications:

- Temperature Range : (0 - 85) °C
- Atmospheric Pressure Range : (300 - 1100) hPa
- Relative Humidity Range : (10 to 100) %
- Display of prevailing air density in the room
- Resolution of temperature : 0.01 °C
- Resolution of atmospheric pressure : 0.01 hPa
- Resolution of relative humidity : 0.01%
- Resolution of Air Density : 0.00001 kg/m³
- Display Type : Liquid Crystal Display (LCD) with backlight large display



Fig: Laboratory model of the device

Applications:

In calibration and testing laboratories; research and development laboratories, institutes and universities having requirements of recording and monitoring of environmental condition; process, chemical industries, manufacturing industries etc.



Advantages over existing environmental conditions monitoring devices:

The parameters mentioned above are integrated in a single device. Such comparable devices are not commercially available in the market. Use of present device would avoid use of separate devices for individual parameter. The cost effective solid-state electronic circuit design, high resolution and precision are other added advantages.

Related Patent: Nil

Year of introduction: 2019

Broad Area/Category: Electronics & Instrumentation

Idea	Concept Definition	Proof of Concept	Prototype	Lab Validation	Technology Development	Technology Demonstration	Technology Integrated	Market Launch

User Industries:

- 1) All the accredited calibration, testing and metrological laboratories.
- 2) All the process, chemical and manufacturing industries, institutions, universities and research laboratories.