Differential Pressure Monitoring System
enviroDPMS
Assists in GMP and Data Integrity in multiple Pharma Clean Rooms

With **enviroDPMS** and its Enviro Multiple Clean Rooms Monitoring Software, it is now possible to simultaneously, accurately, effectively and conveniently monitor the Differential Pressure, Temperature and RH, in multiple clean rooms in the Pharma plant, with due Data Integrity about the logging of these parameters.

- **Real Time Monitoring** can be done 24x7 from one single central location, even if there are hundreds of such Clean Rooms in a single plant.

- **The recommended option of Data Logging**. Logs the readings at set intervals, or events at any time, in a tamper proof manner. So vital for GMP and data integrity.

- **Alarms**. In the event of any deviations from the set limits of the parameters, it raises a number of equipment specific alarms, to enable necessary corrective actions in time:
  - A pop up on the monitor of the central administrator
  - A text message and an email to the officials concerned
  - A hooter in the corridor

- Inbuilt **MODBUS** Protocol to integrate the device with any BMS (Building Management Software) System

- **The Clean Room door open/close event** is duly logged by **enviroDPMS** and any Differential Pressure changes at such times are correlated for audits.

- **Real Time Audit**. The designated officials at the HO can access the monitoring being done in any of the plants across India, using the **enviroCMS** software, for a real time audit if and when they want to.

- **MIS**. Feature rich MIS reports generated by the system in a tamper proof manner in PDF format, in compliance with the 21 CFR guidelines of the US FDA, thereby assuring of accuracy and Data Integrity.

Solutions of Enviro Technologies for Accurate, Tamper Proof and therefore Authentic and Reliable monitoring of environmental parameters - to ensure GMP, GDP & Data Integrity.

Part 11 Compliant

Enviro also offers enviroSCAN to monitor the Pressure, Temperature and RH in the network of pharma warehouses and enviroSUDL, the Single use Data Logger to monitor sub zero to low temperatures in pharma export consignments, in the Cool Chain.

Technical Specifications:

Display Type	Seven Segment 4 Digit Display Row1 : Time Row 2 : Process Value
LED Indication	Channel Number, Alarm : High/ Low, Memory Full Alarm, Negative Sign, Unit's Parameter (Pascal/ mm WC, °C/ °F, % RH)
Transaction Capacity	10,000
Number of Channels	3
Channel Types	1. Differential Pressure 2. Temperature 3. Relative Humidity
Communication Protocol	MODBUS
Sensor Types	1. Differential Pressure (Internal Analog Sensor). 2.Temperature sensor external : PT100, 4-20 mA, 0 to 1V (factory settable), 3. Humidity sensor external : 0 to 1V, 0 to 3.3V, 4-20 mA (factory settable).
Input Range Specification	1. Diff. Pressure : (0 to 100mm WC) (Inbuilt) 2. Temperature : PT 100: (- 090 °C to 390 °C) 3. Relative Humidity : (0 to 100% RH)
Channel Resolution	1. Diff. Pressure : 0.1 mm WC 2. PT100 : 0.1 °C (depend on sensor) 3. Relative Humidity : 0.1%RH (depend on sensor)
Keypad	4 Keys (Menu, Up, Down, Enter)
Communication Port	2 no. RS485 (1st RS485 for PC Comm./MODBUS & 2nd for External Display)
Alarm Output	External potential free relay output for external Hooter / Buzzer

Software Feature

Software Architecture	Multiple Cleanrooms & Multiple Plants can be monitored centrally
Alarm & Alerts	Alarms & Alerts by way of Pop ups, Email & SMS can be sent to multiple authorities
Interface	Cloud Enabled Web Interface
Database	SQL Server
Audit Trail	Database (SQL) & GUI both supports audit trail
Reports	MIS Reports & Graphs for audit & analysis. Also value added Customization of reports is possible