MIAL®
INSTRUMENTS PVT.LTD.
Measuring & Beyond

MIRM

MULTI FUNCTION ROOM
PRESSURE MONITOR

Measuring & Beyond

CE

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MIRM

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Multifunction room pressure monitor

DESCRIPTION

Mial MIRM Multifunction Room Pressure Monitor stands out as a high-performance, cost-effective solution for environments requiring precise and reliable monitoring of temperature, humidity, and pressure differentials. Its robust design, versatile features, and compatibility with various systems make it an essential tool for maintaining optimal environmental conditions across various applications.

APPLICATIONS

Healthcare Facilities:

In healthcare settings, maintaining specific pressure differentials between rooms is crucial to prevent cross-contamination. For instance, isolation rooms require negative pressure to contain infectious agents, while operating rooms and intensive care units need positive pressure to keep contaminants out. Similarly, clean rooms used in laboratories and pharmaceutical environments must maintain strict control over temperature, humidity, and pressure to ensure a sterile environment. The Mial MIRM Multifunction Room Pressure Monitor helps in maintaining these parameters within specified limits, ensuring the integrity of sensitive experiments and processes.

Pharmaceutical Manufacturing and Research & Development:

In pharmaceutical manufacturing, controlling the environment is essential to ensure product quality and safety. The Mial MIRM Multifunction Room Pressure Monitor helps to maintain precise conditions required for the production of drugs and vaccines, protecting them from contamination and degradation. Laboratories involved in R&D require stringent environmental control to achieve accurate and reproducible results. The MIRM Multifunction Room Pressure Monitor ensures that the environmental conditions remain consistent and within the desired range throughout both production and research processes.

HVAC System:

In both large commercial buildings and high-end residential properties, HVAC systems are pivotal in maintaining a comfortable and healthy indoor environment. The Mial MIRM Multifunction Room Pressure Monitor assists in optimizing the performance of these systems by providing accurate data on temperature, humidity, and pressure, resulting in improved energy efficiency and occupant comfort. Whether in commercial or residential settings the MIRM Multifunction Room Pressure Monitor ensures precise control over environmental parameters, enhancing indoor air quality and overall comfort for occupants.

Data Centers:

Data centers and networking rooms house sensitive electronic equipment that requires specific environmental conditions to operate efficiently and avoid overheating. The MIRM Multifunction Room Pressure Monitor helps maintain ideal temperature and humidity levels, ensuring the reliability and longevity of servers and other equipment. Whether it's servers in data centers or networking equipment, The MIRM Multifunction Room Pressure Monitor assists in maintaining the necessary conditions to prevent equipment failure and data loss.

Multifunctional room pressure monitor

FEATURES

The Flush Mount Design:

The MIRM Multifunction Room Pressure Monitor's flush mount design ensures a seamless and unobtrusive installation, blending effortlessly into any setting without protruding or disrupting the aesthetic appeal.

Environmental Monitoring:

The MIRM Multifunction Room Pressure Monitor is capable of measuring and displaying environmental parameters such as temperature, humidity, and differential pressure, the monitor provides comprehensive monitoring crucial for maintaining optimal conditions in various settings.

Durable Construction:

Featuring a 316L stainless steel front panel and a PMMA window, the MIRM Multifunction Room Pressure Monitor boasts a robust and durable construction. Its flat surface design prevents dust accumulation, simplifying cleaning procedures and ensuring longevity. Additionally, it is resistant to harsh cleaning agents, sanitizers, and bactericides, making it suitable for demanding environments.

Versatile Display Options:

The MIRM Multifunction Room Pressure Monitor offers flexible display options, allowing users to showcase input channels 1 to 3 either in parallel or alternately. This versatility enables customization in presenting data based on specific preferences or requirements.

Multiple Inputs and Outputs:

Equipped with various input and output options, the MIRM Multifunction Room Pressure Monitor seamlessly integrates into different applications and systems, enhancing its adaptability and usability across diverse settings.

High Accuracy Sensor:

The MIRM Multifunction Room Pressure Monitor is equipped with a high accuracy sensor that ensures precise and reliable measurement of environmental parameters. Additionally, the sensor is field changeable, facilitating easy maintenance and ensuring consistent performance over time.

Optional Connectivity:

Optional RS485/Modbus RTU and key functions enhance the the MIRM Multifunction Room Pressure Monitor communication capabilities, enabling compatibility with various control and data collection systems. This optional connectivity expands its functionality and interoperability within complex infrastructures.

System Compatibility:

The MIRM Multifunction Room Pressure Monitor is compatible with a wide range of systems, including Direct Digital Controllers (DDCs), Programmable Logic Controllers (PLCs), Supervisory Control and Data Acquisition (SCADA) systems, and other data collection and control systems. This compatibility ensures seamless integration and interoperability within existing infrastructure, simplifying deployment and enhancing operational efficiency.

Cost-Effectiveness:

With a very high performance-to-price ratio, the monitor offers exceptional value for money. It replaces single-channel temperature, relative humidity, and differential pressure display instruments, providing a cost-effective solution that combines local measurement, displaying, and networking capabilities. This cost-effectiveness makes it an attractive choice for businesses seeking to optimize their environmental monitoring systems without compromising on performance or functionality

BENEFITS OF ROOM PRESSURE MONITOR

- Enhanced safety through precise pressure differentials, vital for healthcare environments.
- Improved efficiency by optimizing HVAC systems in commercial buildings.
- Equipment reliability ensured by maintaining ideal conditions in server rooms.
- Research integrity preserved with consistent environmental control in laboratories.
- Cost-effectiveness achieved through versatile functionality and long-term reliability.
- Analog outputs for seamless integration with existing systems.
- Large high light 3.2" color TFT LCD display
- It has High & Low Alaram Features

MIRM specifications*

Operation and performance

Display Unit

Display

High light 3.2" color TFT LCD,resolution 320 X 240

Disply Panel Material

PMMA

Resolution

±0.1Engineering unit

Channels:

1~3 channels, parallel (simultaneously) or single row(alternate) display

Engineering unit:

3 preset units, ℃/℉, %RH and Pa

Update time:

<1s

Housing

Front panel Material

316L stainless steel, 1.5mm thick

Front panel IP rating

IP65

Built-in temperature and humidity sensor cap IP54

Back housing parts

fire-proof ABS+PC UL94 V-0 class

Weight

Horizontal: about 450g

Power Supply

24 VDC

Built-in sensor:

Range

Temperature : 0 - 50℃

Humidity : 0 - 100 % RH

Diff.Pressure : 0 - 60 Pa

Accuracy

Temperature : 0.5℃ to 0.3℃(@15~35℃)

Humidity : 20 - 80% RH

Diff.Pressure : 1% to 0.5% FS

Non Linearity

Humidity : <0.1% RH

Repeatability

Temperature : ±0.1℃

Humidity : ±0.1% RH

Hysteresis

Humidity :±1.0% RH

Long term Driff

Temperature : < 0.02 ℃/Year

Humidity : < 0.25% RH/Year

Diff.Pressure : < 0.5% FS/Year

Response time

Temperature : <120s

In slow Air

Humidity : <40 s

25℃, in slow air

Diff.Pressure : 0.5~30s

Temp drift

Diff.Pressure :<0.05%FS/℃(zero)

<0.08%FS/℃(span)

Temp comp

Diff.Pressure :0~50℃

Medium Temperature

Diff.Pressure: 0~60℃

Work Temp.

Diff.Pressure :10xFS(over load) 15xFS(burst)

Analog inputs

max. 3×(4~20mA/0~10V);

Accuracy <0.1%FS;

range:default 0~50℃/0~100%RH/0~60Pa,

available range-50~100℃/0~100%RH /-100~100Pa

Standard output

Analog output : max. 3×(0~10V); over voltage and reverse

polarity protection; accuracy as low as 0.2%FS; load resistance >2kΩ range: same as analog inputs

Keys:

set/reset alarm, DP re-zero, calibration, set display mode, etc

Communication

1 USB for parameter checking and setting,1 RS485/Modbus RTU, R/W enable, 9600 baud rate

Terminals

max Ø1.5mm²

Work Environment

0~50℃, 0~95%RH (no cond.)

Storage Environment

10~70°C

Process connections

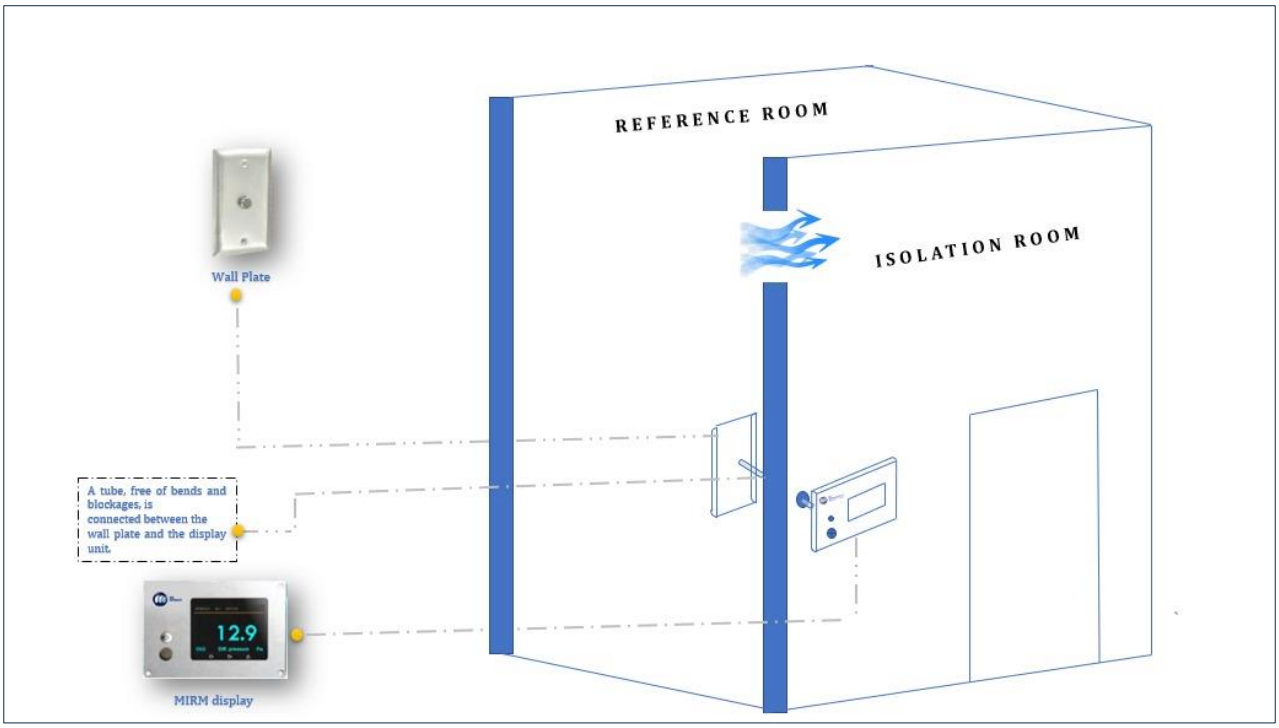
Built-in T/RH sensor: a waterproof, air breathable filter and sensing cap on front panel. Built-in diff. pressure sensor: 2 conical nozzles, Ø 5 mm tube connection on back, or 1 pressure sampling screw on front panel

Certification

Calibration certification

*Specifications are subject to change without prior notice.

INSTALLATION DIAGRAM



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