The Clean Room monitor

HUMIDITY TEMPERATURE DIFF. PRESSURE

WIRING

CLEAN ROOM MONITOR

D.P   3.8.8.1   Pa
TEMP   29.7   °C
HUMI   61.9   %RH

ALM ACK

AI-CRM3-1-1   ACE INSTRUMENTS

HUMI - TEMP SENSOR
Humidity : 0.0 to 100.0% R.H.
Temperature : -30.0 to +60.0 Deg. C

AI-HTs   ACE INSTRUMENTS

AI-CRM3-1-1

TEMPERATURE HUMIDITY SENSOR

The Clean Room Monitor is designed to measure the vital parameters of temperature, Humidity & differential pressure in clean room application.

The Model AI-CRM3-1-1 is designed for minimum cabling & easy flush mounting in Modular wall or brick walls of clean rooms. The sensor for humidity & temperature is externally provided so that the sensor can be mounted in the operation theatre & the display can be outside the operation theatre. The differential pressure sensor is built inside the clean room monitor with 2 Nos. Hose Nipples for room & corridor connection.

The instruments find immense use in Pharma Clean Room, Hospitals, Operation Theatres, APIs, Bulk Drugs, Electronic Hardware manufacturing plants, test plants, green houses, etc. Easy integration to building management system (BMS) with the RS 485 Modbus RTU Protocol communication allow set up & great control.

The display of the AI-CRM3-1-1 is a large 0.8" High super bright display with integrated buzzer alarm for process limit violation alert for all the 3 parameters of temperature, humidity & differential pressure. The display LEDs also show the alarm status for easy identification & follow-up remedial action.

Specifications

Sensor Type	1) Combined external humidity & temperature sensor 2) Built in resistive sensor for differential pressure
Range	1) -30.0 to +50.0 Deg.C typical for temperature 2) 0.0 to 100.0%RH typical for relative humidity 3) -500 to +500 pascals / -50.0 to + 50.0 mm.W.C. (Any other customized range as per user specification)
Resolution	Fixed 0.1 for both temperature & relative humidity, 0.1 mm.W.C. or 1 pascals for differential pressure
Accuracy	1) ± 0.5^{0}C for -30 to 50^{0}C for Temperature 2) ± 1.8% for 10 to 95% RH for Relative Humidity 3) +/- 0.5% F.S. for Differential Pressure
Display	3 Line Red 7 segment LED display of Height 0.8" 3 Digits for Differential Pressure on line 1 3 Digits for Temperature (Deg.C) on line 2 3 Digits for % R.H. (Humidity) on line 3
Differential pressure entry	2 Nos. 4 mm. Hose nipples at top of clean room monitor enclosure entry
Setting	By 4 keys inside the instrument
Buzzer	Integrated buzzer for alarm Hi & Lo in case of process violation of any of the 3 parameters
Supply Voltage	24VDC, 500mA
Mounting	Wall mounting / Modular Wall mounting with stainless steel front flush plate for clean rooms
Sensors	External humidity & temperature sensor in stainless steel front flush plate enclosure. Built-in differential pressure sensor with brass hose nipples (chrome plated) for differential pressure at rear (4mm X 2 Nos.)
Communication	RS 485 Modbus RTU protocol
Dimension	Enclosure : 110(W) X 150(H) X 30(D) mm. Stainless steel front plate : 180(W) X 200 (H) mm.
Enclosure	M.S. Powder coated body with stainless steel front plate for Modular wall mounting/ optional brick wall mounting
Weight	700 gms. Approx.