

TECHNICAL BULLETIN ACCESSORY INFORMATION



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DIGITAL MANOMETER MONITOR FOR EXHAUSTING CONTAINMENT CABINETS

Specifications

Power: 24 VAC

Operating Pressure Range: ± 0 to 1.99" w.g.

Operating Pressure Setpoint Repeatability ± 0.02 " w.g.

Operating Pressure Accuracy $\pm 0.5\%$ of reading

Operating Temperature: 50°F to 104°F (10°C to 40°C)

Alarm: Audible - 73 dba

Visual - Flashing Yellow/Red LED

Installation Method

The Digital Manometer Monitor comes installed on the Nu-156, NU-121, or other units if ordered as an option. The monitor is typically installed on the control center, or left or right window faring. The unit is powered by 24 VAC, typically through a plug in transformer/outlet located within the control center or service wall of the unit.

The monitor's pressure transducer is connected to the unit rear plenum monitoring the exhaust system negative pressure. All service for the monitor is provided from the front or rear of the unit via (2) fasteners.

Digital Manometer Monitor Operation

General

The Digital Manometer Monitor uses an integrated digital pressure transducer to monitor exhaust system negative pressure. The monitor indicates through both a segment display and LED's. The segment display is green and operates to ± 0.01 " w.g. sensitivity. The LED's indicate acceptable pressure (green), caution or near alarm points to within 0.005" w.g. (yellow) or alarm condition (red).

When the unit is plugged in, all the segment displays and LED's will light and a short audible alarm will sound to indicate a properly functioning monitor. During the next 4 minutes, the segment display will indicate dashes and the green LED will blink during the warm-up period. The warm-up period may be skipped by pressing the reset key. Once the 4-minute warm-up period is complete, the monitor will measure and display the current pressure. If the monitor is not functioning properly, the green, yellow and red LED's will blink to indicate an error.

All user interaction is accomplished through the arrow and reset keys. IT IS RECOMMENDED THAT THE MONITOR BE CALIBRATED ANNUALLY.

Nominal Pressure Calibration

The monitor is factory calibrated at the nominal flow requirement of the cabinet. A comparable NIST traceable manometer gauge may be used to verify the exhaust system negative pressure. If the monitor does not match the standard, it would be advantageous to calibrate or offset the display value to the known pressure value of the standard. To accomplish, set to nominal pressure and perform the following procedure:

- Press and hold [↑] and [↓] arrow key simultaneously for 3 seconds until the red LED blinks and the display alternates "In" and a pressure value.
- Use [↑] and [↓] arrow keys to adjust the display value desired.
- Press [RESET] key to enter the nominal pressure value (red LED will stop blinking and display will indicate pressure value).

High/Low Alarm Setpoint Calibration

The monitor's high/low alarm setpoint is factory calibrated to ± 0.1 " w.g. from the factory calibrated nominal setpoint. This value assures that the monitor will alarm when the total exhaust volume minimum and maximum values exceeds 20 % of the nominal exhaust volume. These values may be verified and altered from the factory default values. To alter the high or low alarm setpoint, perform the following:

NOTE: Since the monitor is displaying a negative value, the high alarm will be the closest value to 0.00" w.g.

- Press and hold either [↑] key for high alarm or [↓] key for low alarm for 3 seconds until the red LED blinks and the display alternates either "Hi" or "Lo" and a pressure value.
- Use [↑] or [↓] arrow keys to adjust the display value desired.
- Press [RESET] key to enter the alarm setpoint value.

Audible Pressure Alarm

The audible alarm should be activated whenever the pressure reaches the high or low alarm setpoint. However, once the alarm pressure is reached, it must stay on the alarm limit for 5 seconds consistently or it will not recognize it as an alarm. If at any time, the pressure returns to acceptable limits, the alarm would be reset and silenced. Once the 5 second period of constant alarm is present, the audible should sound for 30 seconds, then ringback 1 second every 10 seconds. If the Reset key is pressed, the alarm should be silenced for 5 minutes, then continue to ringback for 1 second every 10.

Replacement Parts

<u>Description</u>	<u>Part Number</u>
PCBD Monitor	A-437-7315A
Plug-In Transformer (24 VAC)	X-999749-04
Label	B-990157-03

Warranty

NuAire, Inc. warrants that it will repair F.O.B. its factory or furnish without charge F.O.B its factory, a similar part to replace any material in its equipment within 12 months after the date of sale if proved to the satisfaction of the company to have been defective at the time it was sold provided that all parts claimed defective shall be returned, properly identified to the company at its factory, charges prepaid. Factory installed equipment or accessories are warranted only to the extent guaranteed by the original manufacturer and this warranty shall not apply to any portion of the equipment modified by the user. Claims under this warranty should be directed to NuAire, Inc. setting forth in detail the nature of the defect, the date of the initial installation and the serial and model number of the equipment.

This warranty shall not apply to any NuAire product or part thereof which has been subject to misuse, abuse, accident, shipping damage, improper installation or service or damage by fire, flood or acts of God. If the serial number of the product is altered, removed or defaced as to be illegible, the warranty shall be null and void in its entirety.

The warranty is for the sole benefit of the original purchaser and is not assignable or transferable.

Shipments

NuAire takes every reasonable precaution to insure that the NuAire product arrives without damage. Motor carriers are carefully selected and shipping cartons have been specially designed to insure your purchase. However, damage can occur in any shipment and the following outlines the steps you should take on receipt of the NuAire product to be sure that if damage has occurred, the proper claims and actions are taken immediately.

Damaged Shipments

Terms are factory, unless stated otherwise. Therefore it is important to check each shipment before acceptance.

If there is visible damage, the material can be accepted after the driver makes a notation on the consignee's copy of the freight bill. Then an inspection must be made to verify the claim against the carrier. This inspection is the basis of your filing the claim against the carrier.

If concealed damage is found, it is absolutely necessary to NOTIFY THE FREIGHT AGENT AT ONCE, and request an inspection. Without this inspection, the transportation company may not accept a claim for loss or damage. If the carrier will not perform the inspection, an affidavit must be prepared stating that he was contacted on a certain date and that he failed to comply with the request. This, along with other papers in the customer's possession, will support the claim.