



**Lenox Instrument Company, Inc.**  
265 Andrews Road • Trevoze, PA 19053  
USA 800-356-1104 • Worldwide 215-322-9990  
Fax 215-322-6126 • sales@lenoxinst.com

## **Basic Monitoring Station (BMS)**

***Provides a local point of connection and status monitoring of coolant flow, purge air pressure, and electrical terminations - used with high-temperature, water-cooled, boiler and furnace cameras***

The **Lenox Basic Monitoring Station (BMS)** includes the following major components mounted onto a 24" square aluminum panel:

- 10" x 12" NEMA 4 Electrical Junction Box and Digital, Temperature Display
- Adjustable Air Pressure Switch
- Water Flow Alarm Switch
- Two Manifold Blocks - which are provided for piping the air purge and water supply connection



**Electrical Junction Box** - The Electrical Junction Box is a carbon steel box with continuous hinge and has four penetrations in the bottom side through which electrical and video connections are routed. These electrical connections are for the air pressure switch, water flow alarm switch, and the power umbilical cord for the **Lenox Camera**. The video connection is a separate line, attached to the power umbilical, which carries the video signal from the **Lenox Camera** to the junction box. The video termination, located inside the junction box is a BNC type. The junction box is furnished with a clearly marked barrier strip, to which the various connections are terminated. A digital, temperature display is mounted on the door of the enclosure to monitor camera temperature during operation.

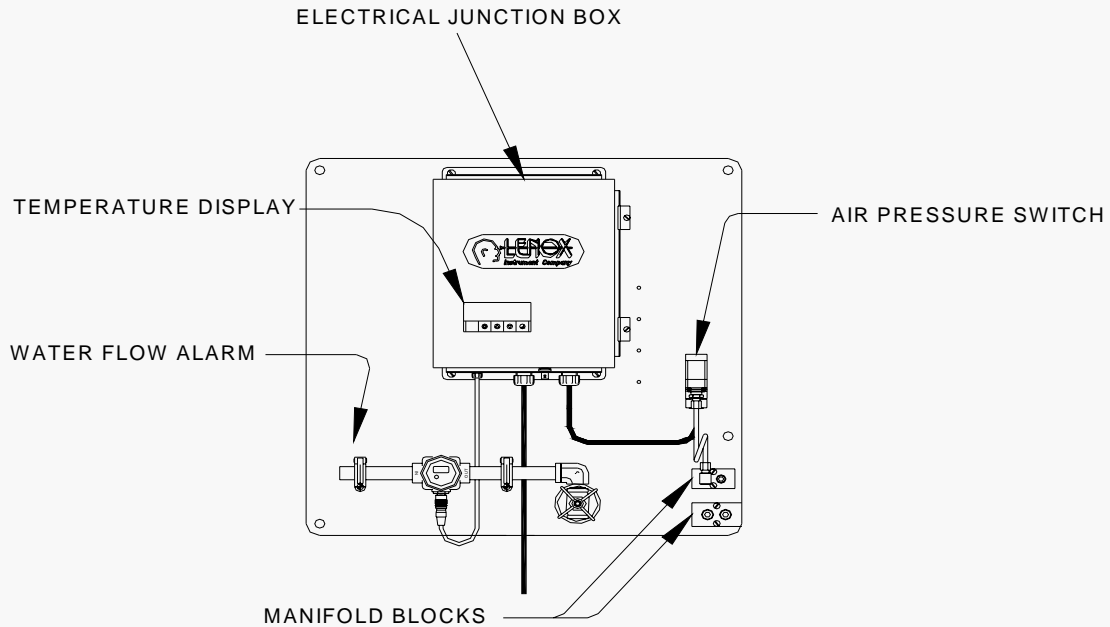
**Air Pressure Switch** - The Air Pressure Switch has an adjustable range of 3 to 30 PSIG. The pressure switch is factory set and when the switch operates, the NC (normally closed) contact will open and the NO (normally open) will close. When the pressure drops approx. 1.5 –2.5 PSIG below the factory set point, the switch function will return to the NC and NO conditions. Under normal conditions the factory set point will provide sufficient flow through the camera. Should an adjustment to the pressure switch be required, consult the Sales Department at **Lenox** for detailed information.

**Water Flow Alarm Switch** - The Water Flow Alarm Switch is used to monitor the cooling water flow for the **Lenox Camera**. The flow alarm is placed in the outlet water line. The flow measured is actually after completing the circuit through the camera. The switch has an adjustable range of 1.5-15 GPM (gallon per minute) and is factory set for the appropriate **Lenox Camera**. The switch has an optically isolated solid state relay that is closed when the water flow drops below the set point. (As shipped from the factory, the alarm switch is closed across the relay terminals.) When the switch operates, the relay contact will open after the flow set point has been exceeded. The switch is adjustable, but the factory set point should be considered a **minimum** condition. In installations where excessive heat is encountered, the water temperature should be monitored and flow increased if the outlet water temperature exceeds 150°F (66°C).

**Manifold Blocks** - Located near the lower right corner of the mounting panel are two black anodized Manifold Blocks with pipe sizes of 3/8 NPT and 1/2 NPT. These blocks are provided to allow the user to pipe the cooling water supply and purge air or gas directly to the monitor station. The water supply hoses and purge gas hose supplied with the **Lenox Camera** are to be connected to these manifold blocks. The blocks have two additional ports that are plugged at the factory. These are provided for future use. Typically, the temperature of the cooling water inlet can be monitored, by placing a thermocouple into one of the additional ports, and purge gas pressure can be monitored by installing a simple analog gauge or pressure transducer for DCS use.

### Major Components of the **Lenox Basic Monitor Station (BMS)**

For complete details and operating instruction request a Lenox operating manual



### **Lenox Basic Monitor Station (BMS) Panel Mounting Hole Locations**

The **BMS** is supplied with four (4) 9/16" diameter holes in the back plate (see below). The **BMS** should be located as close as is practical to the **Lenox Camera**. When the **BMS** is supplied from the factory with **Lenox Cameras**, the electrical and video cabling will be connected to the **BMS**.

