

INSTRUCTION MANUAL

ELECTRONIC MANOMETER

EM 150 / EM 200



IMR Environmental Equipment, Inc.

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Introduction International Symbols

The EM 150 and EM 200 provide a simple, timesaving alternative to U-tube pressure measurements. Use the IMR EM 150 and EM 200 to measure gas supply and draft pressures in residential or light commercial properties. The EM 200 differential mode provides a convenient method to measure pressure drops.

Features include

EM150

- Single input to measure positive and negative pressure to ± 20 " wg
- Ruggedized, including rubber boot with integral magnet
- Simple two-button operation
- Measures in inches water gauge
- Auto power-off after 5 minutes of no activity
- One year limited warranty

EM200

- Dual input differential measurement to ± 60 " wg or ± 150 mBar
- Ruggedized, including rubber boot with integral magnet
- Measures in inches water gauge and mBar
- Auto power-off after 5 minutes of no activity
- MIN/MAX value capture
- Data Hold
- Backlit display
- One year limited warranty











Safety Notes

Before using this meter, read all safety information carefully. In this manual the word "**WARNING**" is used to indicate conditions or actions that may pose physical hazards to the user. The word "**CAUTION**" is used to indicate conditions or actions that may damage this instrument.

Before every use, check to be sure the meter and its tubing are free from breaks or blockage. While using the meter, if you suspect gas is leaking, or if you can smell gas, close off the gas supply and ventilate the occupied space. Identify and repair the source of the leak before continuing with the test.

In the interest of safety, this instrument should only be used by trained, competent professionals who know the hazards and consider the risks of working on and with industrial equipment.

These meters do not measure water pressure; under these conditions they will fail. **DO NOT** exceed 10 PSI input pressure.

 Dangerous Voltage	 Ground
 AC Alternating Current	 Warning or Caution
 DC Direct Current	 Double Insulation (Protection Class II)
 Either AC or DC	 Fuse
 Not Applicable to Identified Model	 Battery

Operating Instructions

Zero the meter

Prior to use, the meter must be zeroed. To do this, ensure the meter is in a non-pressurized area, and press and hold the "**ZERO**" button for approximately four seconds. The display will show "**888**" to indicate that the zero function has occurred.

Measure pressure

Connect the flexible tube between the meter and the pressure source.

The EM200's positive input is to the right when looking at the front of the instrument. Applying a positive pressure to this port will display a positive reading. The input to the left is the negative port. Applying a positive pressure here will display a negative reading. Use either input to measure a single source by venting the unused input to atmosphere. The instrument will continually provide a differential reading of the two inputs.


Scale (EM200 only) To select mBar press the "**SCALE**" button on the EM200. Press "**SCALE**" again to return to inches of water gauge.

MIN/MAX (EM200 only)

The EM200 will capture values for both the minimum and maximum values read. To reset zero the instrument or simply power the meter off, then back on. Captured values can be displayed in either inches water gauge or mBar.

Backlight (EM200 only)

The EM200 has a backlit display. Press "

" to turn on or off the back light feature.

Over-range If the input exceeds the meter range "**OL**" will be displayed. Immediately disconnect from the pressure supply safely to reduce chances of damage to the instrument.

Specifications

EM150	
Measurement:	-20" to +20" WG
Minimum readable pressure:	0.05" WG
Accuracy:	±1.5% FS
Resolution:	0.05" -9.95" to +9.95" WG 0.1" <-10", >+10" WG
Operating range:	0 - 40°C, 10 - 90% RH non condensing
Battery life:	50 hours min with alkaline battery

EM200	
Measurement:	-60" to +60" WG
Minimum readable pressure:	0.05" WG
Accuracy:	±1.5% FS
Resolution:	0.05" -9.99" to +9.99" WG 0.1" <-10", >+10" WG
Operating range:	0 - 40°C, 10 - 90% RH non condensing
Battery life:	40 hours min with alkaline battery

Pressure conversions

Multiply	By	To Get
In. of H ₂ O	1.868	mmHG
In. of H ₂ O	0.074	in HG
In. of H ₂ O	0.249	kPa
In. of H ₂ O	249.1	Pascals
In. of H ₂ O	2.491	mBar
In. of H ₂ O	0.036	PSI
In. of H ₂ O	25.40	mmH ₂ O

Warranty

IMR Environmental Equipment, Inc. states the following:

IMR hereby grants the following worldwide IMR warranty for an IMR analyzer purchased from an authorized dealer.

1. The IMR warranty shall entitle every IMR customer to demand a free replacement or repair of the defective parts from any IMR dealer authorized for the respective IMR unit.
2. The IMR warranty shall be granted on the factory new unit and shall commence on the date of the delivery of the original IMR unit to the customer. It shall last for a period of twelve months regardless of the type and the intensity of use and regardless of any change of owner, which may occur during this warranty period.
3. The IMR warranty shall refer to absence of faults with respect to the state of the art nature of the sold unit in terms of material and finish. The warranty for all parts fitted during the twelve-month warranty period shall end with the unit warranty.
4. After the establishment of a material or production fault by IMR or the authorized IMR dealer, the faults will be eliminated by means of free repair or replacement. Replaced parts shall become the property of IMR.
5. No warranty claims may be made for maintenance and setting work, cleaning or other utility materials required for the function of the unit and other wear parts unless they have a direct bearing on work performed under the warranty.
6. The terms and conditions for the acknowledgement of this warranty shall be the presentation of the fully completed warranty card, which must contain the confirmation from the authorized IMR dealer on its delivery and, if applicable, the prescribed maintenance work.
7. The IMR warranty shall only be applicable if
 - a. The analyzer has been maintained in accordance with the instructions issued by the manufacturers and the operating instructions by an authorized IMR dealer.
 - b. Only original IMR spare parts have been used for any repairs.
 - c. The unit has been used properly, the operating instructions observed and the unit has not been used for a purpose other than the one for which it has been designed.
 - d. The IMR unit has been left in its original design and meets the original IMR specifications.
 - e. The fault is not due to external influences or use for a purpose other than the one for which it has been designed.
 - f. Exclusively authorized IMR dealers have made repairs to the IMR unit.
 - g. The IMR unit has been sent to an authorized IMR dealer immediately after the fault was discovered.
8. Warranty time for the analyzer, including electrochemical sensors is 12 months.

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