

### INTRODUCTION

Thank you for choosing an HK Instruments MM series liquid column manometer. The MM series is intended for use in commercial environments for air and non-corrosive gases. The MM series is designed with overpressure reservoir to protect the manometer liquid from leaking into the duct during overpressure.

The MM series includes a field adjustable zero point calibration and pressure limit stickers. The MM series is available with optional level bubble, burst proof protection and dual scale.



### WARNING

- READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THIS DEVICE.
- Failure to observe safety information and comply with instructions can result in PERSONAL INJURY, DEATH AND/OR PROPERTY DAMAGE.
- Retain these instructions for future reference.
- This product, when installed, will be part of an engineered system whose specifications and performance characteristics are not designed or controlled by HK Instruments. Review applications and national and local codes to assure that the installation will be functional and safe. Use only experienced and knowledgeable technicians to install this device.

### APPLICATIONS

MM series devices are commonly used in HVAC/R systems for:

- fan, blower and filter monitoring
- pressure and flow monitoring
- pressure monitoring in cleanrooms

### SPECIFICATIONS

#### Performance

**Accuracy:**

MM±50	±1 Pa
MM100	±1 Pa
MM±100500	-100...0 Pa ±5 Pa 0...500 Pa ±25 Pa
MM200600	0...200 Pa ±5 Pa 200...600 Pa ±25 Pa

**Overpressure:**

Max pressure 200 kPa

#### Technical Specifications

**Media compatibility:**

Dry air or non-aggressive gases

**Measuring units:**

Pa

**Measuring ranges:**

-50...0...50 Pa  
-20...0...100 Pa  
-100...0...100 Pa  
0...200...600 Pa

**Environment:**

Operating temperature:  
-40...+60 °C

**Gauge fluid:**

Red: s.g. 0.786 kg/dm (15 °C)  
(Isopar M)

MM±50 RED  
MM100 RED  
MM±100500 RED  
MM200600 RED

#### Physical

**Case:**

ABS

**Cover:**

PMMA

**Knobs:**

Polycarbonate (PC)

**O-ring:**

Nitrile rubber (NBR)

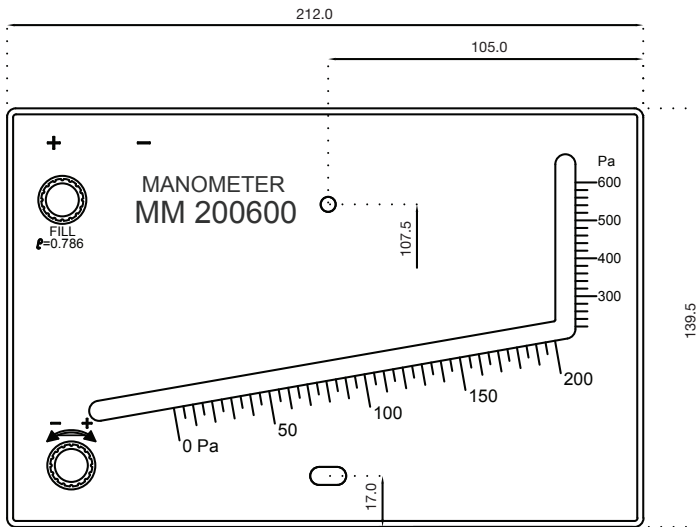
**Weight:**

420 g

**Safety**

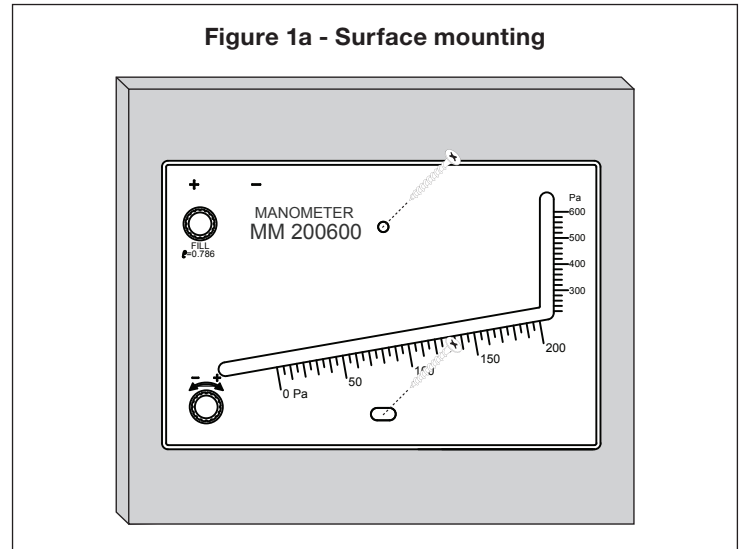
Product equipped with integral reservoir to prevent gauge fluid leakage during overpressure situation.

## DIMENSIONAL DRAWINGS



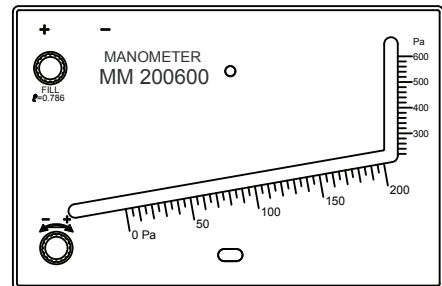
## INSTALLATION

1) Mount the device horizontally in the desired location.



2) Open the gauge fluid tank by unscrewing the knob and fill the tank with the gauge fluid provided with the device. Close the opening of the tank.

3) Adjust the zero point by turning the zero set screw.



4) Connect the pressure tubes. Connect positive pressure to port labeled "+" and negative pressure to port labeled "-".

NOTE! Only use gauge fluid approved by HK Instruments to guarantee accuracy and functionality of the device.

## WARRANTY POLICY

The seller is obligated to provide a warranty of 24 months for the delivered goods regarding material and manufacturing. The warranty period is considered to start on the delivery date of the product. If a defect in raw materials or a production flaw is found, the seller is obligated, when the product is sent to the seller without delay or before expiration of the warranty, to amend the mistake at his/her discretion either by repairing the defective product or by delivering free of charge to the buyer a new flawless product and sending it to the buyer. Delivery costs for the repair under warranty will be paid by the buyer and the return costs by the seller. The warranty does not comprise damages caused by accident, lightning, flood or other natural phenomenon, normal wear and tear, improper or careless handling, abnormal use, overloading, improper storage, incorrect care or reconstruction, or changes and installation work not done by the seller or his/her authorized representative. The selection of materials for devices prone to corrosion is the buyer's responsibility, unless otherwise is legally agreed upon. Should the manufacturer alter the structure of the device, the seller is not obligated to make comparable changes to devices already purchased. Appealing for warranty requires that the buyer has correctly fulfilled his/her duties arisen from the delivery and stated in the contract. The seller will give a new warranty for goods that have been replaced or repaired within the warranty, however only to the expiration of the original product's warranty time. The warranty includes the repair of a defective part or device, or if needed, a new part or device, but not installation or exchange costs. Under no circumstance is the seller liable for damages compensation for indirect damage.