

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.

⚠ 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.

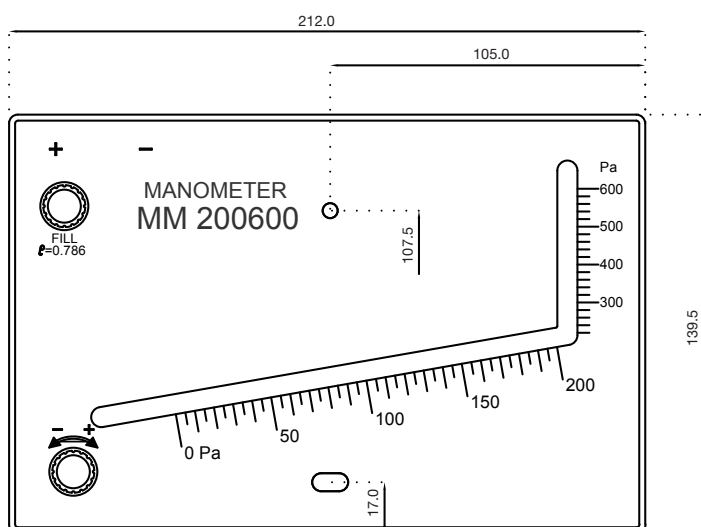
Conformance

Meets the requirements for CE marking:
RoHS Directive: 2011/96/EU

COMPANY WITH
MANAGEMENT SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 = ISO 14001 =

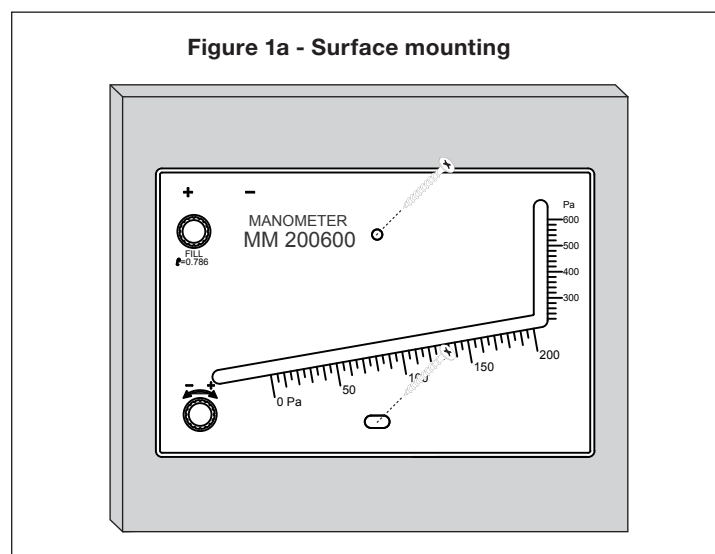


DIMENSIONAL DRAWINGS



INSTALLATION

- 1) Mount the device horizontally in the desired location.



- 2) Unscrew the zero adjustment knob (lower one) so that it is completely open and then turn one round backwards. Open the fill plug (upper one) and pour in the gauge fluid until it reaches the zero on the scale. Finetune with the zero adjustment knob until the fluid is exactly at the zero level. Screw the fill plug back to its place.
- 3) Connect the pressure tubes. Connect positive pressure to port labeled "+" and negative pressure to port "-".

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

RECYCLING/DISPOSAL

The parts left over from installation should be recycled according to your local instructions. Decommissioned devices should be disposed of as mixed waste according to your local instructions.

WARRANTY POLICY

The seller is obligated to provide a warranty of five years 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.