

# MDM300 & MDM300 I.S. Quick Start Guide

This guide provides an overview of the correct measurement procedure for the MDM300 at dew points above -70°C.

For any further information regarding these procedures, measurement below -70°C, or any other aspect of operation, please refer to the User's Manual.

## Quick Start

1. Follow procedure A and note the result.
2. Turn the instrument off.
3. If you wish to measure at sample pressure then use the Michell Humidity Calculator to convert this result back to the equivalent at your sample pressure.
4. Using this converted result, and the table below, find the appropriate procedure to measure your sample.

Dew Point	Measure at System Pressure >2.5 barg (36 psig)	Measure at Atmospheric Pressure
> -40°C	Procedure B	Procedure A
< -40°C	Procedure C	Procedure A

## Procedure A: Standard Purge (Atmospheric Pressure)

1. Connect the MDM300 to the sample gas stream.
2. Adjust the flow rate, using the **inlet flow control valve**, to between 0.2 & 1.2 NI/min (0.5 & 2.5 scfh) {**MDM300 Version**} **OR** 0.2 & 0.5 NI/min (0.5 & 1 scfh) {**MDM300 I.S. Version**} and ensure that the **outlet flow control valve** is fully open.
3. Turn the instrument on - the initialization period begins automatically. The screen will show a countdown of the remaining initialization time. The status display will read 'Initializing internal sensor'.
4. After the Initialization period is complete, the instrument will begin measurement. The flow rate should now be adjusted, using the **inlet flow control valve**, to 1.0 NI/min (2.1 scfh).
5. During the first few minutes of measurement, the displayed moisture value will drop rapidly below the actual moisture value, before returning to a stable reading. The instrument display will show an initial measured value, and the status display will show 'Measurement in progress'.
6. Once 'Measurement in progress' has disappeared, the instrument is close to the final dew point. Depending on the conditions, it may continue to respond for a number of minutes before tracking the measured dew point.

## Procedure B: Standard Purge (System Pressure)

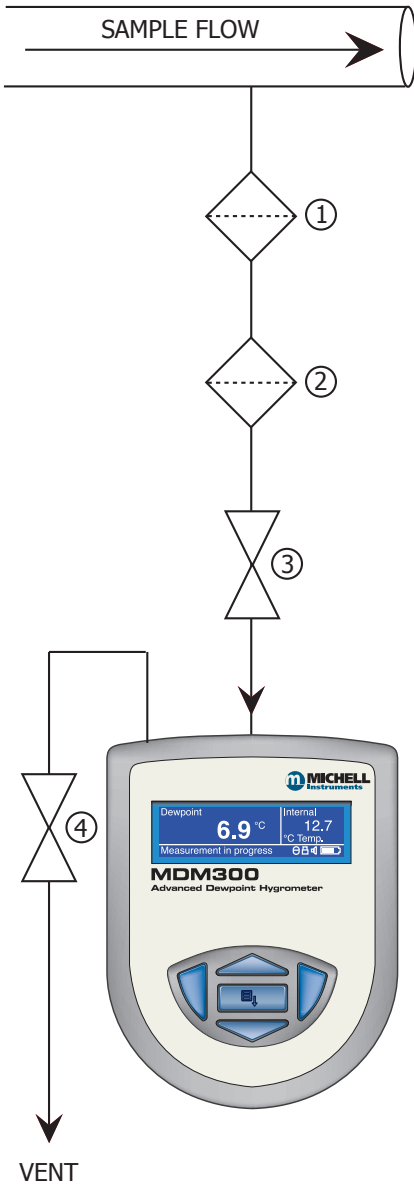
1. Connect the MDM300 to the sample gas stream.
2. Adjust the flow rate, using the **outlet flow control valve**, to between 0.2 & 1.2 NI/min (0.5 & 2.5 scfh) {**MDM300 Version**} **OR** 0.2 & 0.5 NI/min (0.5 & 1 scfh) {**MDM300 I.S. Version**} and ensure that the **inlet flow control valve** is fully open.
3. Turn the instrument on - the initialization period begins automatically. The screen will show a countdown of the remaining initialization time. The status display will read 'Initialising internal sensor'.
4. After the Initialization period is complete, the instrument will begin measurement. The flow rate should now be adjusted, using the **outlet flow control valve**, to 1.0 NI/min (2.1 scfh).
5. During the first few minutes of measurement, the displayed moisture value will drop rapidly below the actual moisture value, before returning to a stable reading. The instrument display will show an initial measured value, and the status display will show 'Measurement in progress'.
6. Once 'Measurement in progress' has disappeared, the instrument is close to the final dew point. Depending on the conditions, it may continue to respond for a number of minutes before tracking the measured dew point.

## Procedure C: Enhanced Purge

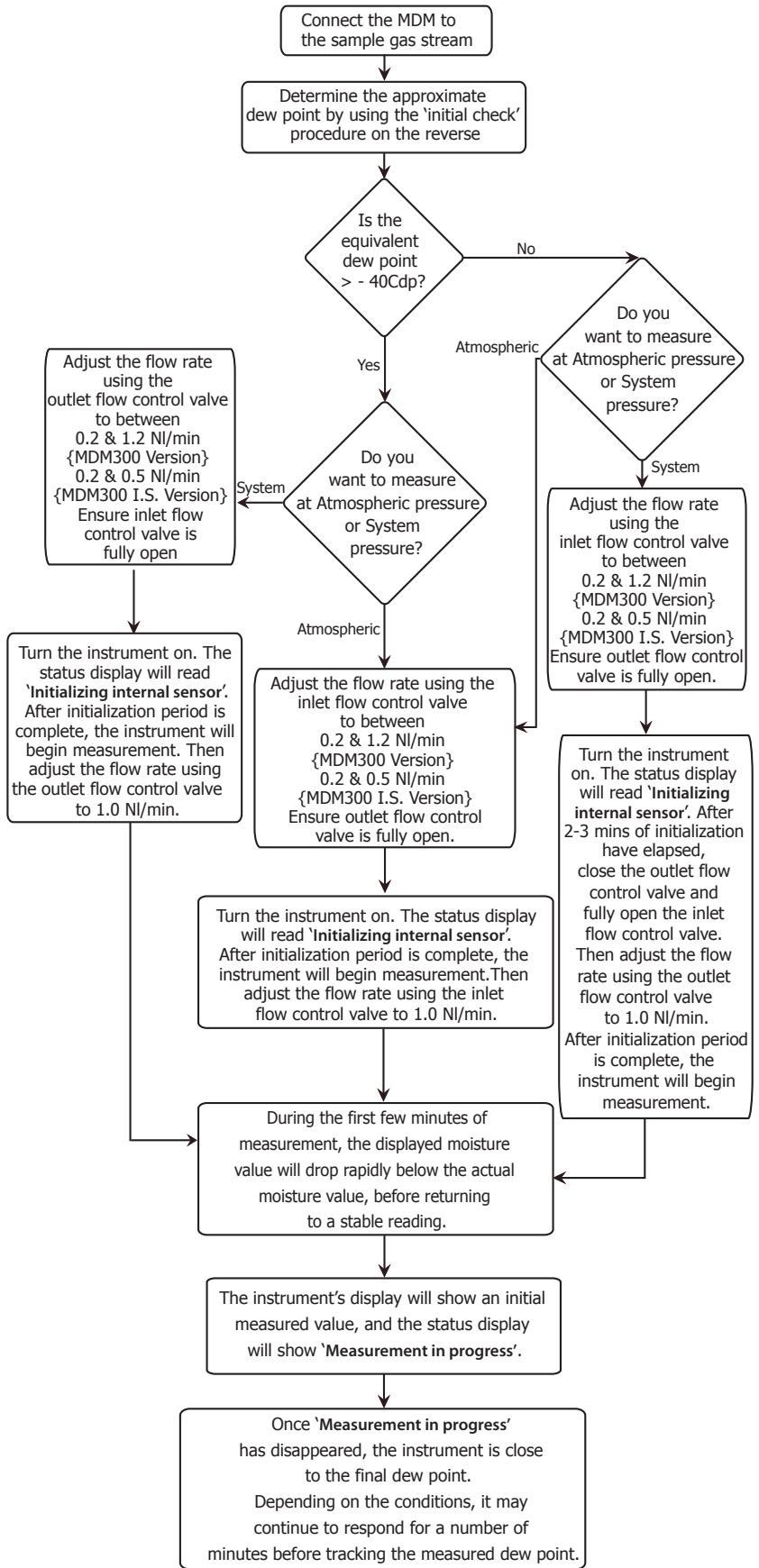
1. Connect the MDM300 to the sample gas stream.
2. Adjust the flow rate, using the **inlet flow control valve**, to between 0.2 & 1.2 NI/min (0.5 & 2.5 scfh) {**MDM300 Version**} **OR** 0.2 & 0.5 NI/min (0.5 & 1 scfh) {**MDM300 I.S. Version**} and ensure that the **outlet flow control valve** is fully open.
3. Turn the instrument on - the initialization period begins automatically. The screen will show a countdown of the remaining initialization time. The status display will read 'Initialising internal sensor'.
4. After 2-3 minutes of Initialization have elapsed, close the **outlet flow control valve** and fully open the **inlet flow control valve**. The flow rate should now be adjusted, using the **outlet flow control valve**, to 1.0 NI/min (2.1 scfh).
5. After the Initialization period is complete, the instrument will now begin measurement. During the first few minutes of measurement, the displayed moisture value will drop rapidly below the actual moisture value, before returning to a stable reading. The instrument display will show an initial measured value, and the status display will show 'Measurement in progress'.
6. Once 'Measurement in progress' has disappeared, the instrument is close to the final dew point. Depending on the conditions, it may continue to respond for a number of minutes before tracking the measured dew point.

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Typical MDM300 Sampling Arrangement



- ① Coalescing Filter
- ② Particulate Filter
- ③ Inlet Flow Control Valve
- ④ Outlet Flow Control Valve



**HIGH PRESSURE!** High pressure gases are potentially hazardous. Energy stored in these gases can be released suddenly and with extreme force. High pressure systems should be assembled and operated only by people who have been trained in proper safety practices.