

MDM300

Advanced Dew-Point Hygrometer



The MDM300 High-Speed Dew-Point Hygrometer provides the fastest spot check measurement of dew-point or moisture content in a small portable instrument packed with features and intelligent engineering.

An extremely fast response and accurate, stable measurement is complemented by an instrument which is easy to use, has data-logging and built in sampling components as standard, and can be supplied with a range of accessories including a stand-alone sampling system and a professional carry case.

Highlights

- Repeatedly fast measurements in less than 10 minutes for T95 down to -70°C / -94°F
- Long battery life with more than 48 hours of typical usage between charges
- Best in its class: 1°C / 1.8°F accuracy
- External device input 4-20 mA for dew-point, temperature or pressure transmitters
- Bluetooth connection for less trouble with missing cables
- Built-in basic sensor protection can be extended to 4 variants of sampling system allowing measurements up to 400 bar / 5800 psi
- Easy operation

Technical Specifications

Performance

Measurement technology	Michell ceramic sensor
Accuracy	$\pm 1^{\circ}\text{C}$ from -60 to $+20^{\circ}\text{C}$ / -76 to $+68^{\circ}\text{F}$ dew point $\pm 2^{\circ}\text{C}$ from -100 to -60°C / -148 to -76°F dew point $\pm 0.2^{\circ}\text{C}$ / 0.3°F temperature
Measurement range	Calibrated -100 to $+20^{\circ}\text{C}$ / -148 to $+68^{\circ}\text{F}$ dew point Readings to $+30^{\circ}\text{C}$ dew point
Measurement units	$^{\circ}\text{C}$, $^{\circ}\text{F}$, K dew point ppm _v , ppm _w for air, N ₂ , H ₂ , CO ₂ , SF ₆ Gas temperature: %RH, gm ³ , gkg ⁻¹ Option: active pressure (bara/g, psig, MPa, KPa)
Resolution (display)	0.1 for all dp derived units and autoranging where appropriate, e.g. ppm
Resolution (measurement)	0.01°C dew point
Typical response speed	T95 in ≤ 10 minutes to -70°C / -94°F
Repeatability	Better than 0.1°C / 0.2°F
Stability	0.1°C / 0.2°F
Sensitivity	0.01°C / 0.02°F or better
Hysteresis	0.05°C / 0.1°F

Electrical output/input

Auxiliary inputs	4-20 mA external input selectable as either dp, temperature or pressure
Battery type	NiMH 4.8V
Battery operating life	More than 48 hours of typical usage between charges
Battery charger	Intelligent charger (supplied)

Operating conditions

Operating pressure range	35 MPa (350 barg / 5000 psi) max
Operating environment	Outdoors 0 to +100% RH condensing
Operating temperature	-20 to $+50^{\circ}\text{C}$ / -4 to $+122^{\circ}\text{F}$
Storage/transport temp	-40 to $+70^{\circ}\text{C}$ / -40 to $+158^{\circ}\text{F}$

Mechanical specification

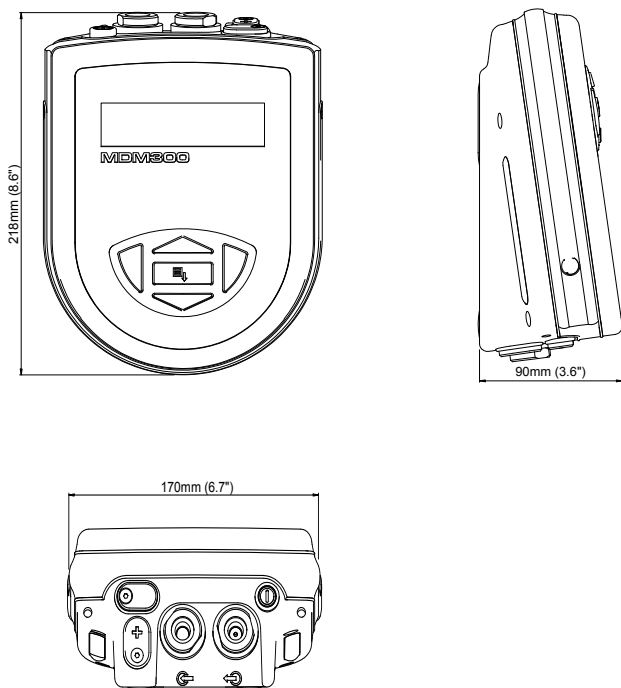
Display	Blue LCD graphical display
Enclosure type	Molded high impact grade nylon
IP/NEMA rating	IP66/NEMA 4
Gas connections	1/8" NPT female (other options available)
Flow across sensor	0.2 to 2.0 NI/min
Filters	50 micron stainless steel sinter in the inlet port (other porosities available)
Gas wetted materials	316 stainless steel
Outline dimensions	218 x 170 x 90mm / 8.6 x 6.7 x 3.5" (D x W x H)
Weight	1.3kg / 2.9lbs

Technical Specifications (continued)

General

Data Logging	8 megabytes; Log interval: 5 to 60 second; Logs per log file: Up to 10,000
Communications	(Wireless) Bluetooth™ range up to 5m / 16.5ft
Languages	English, Spanish, Portuguese, Italian, French, German

Dimensions



Order codes

Order code	Description
MDM300 STD	MDM300 Advanced Dew-Point Hygrometer Standard version
MDM300 IS	MDM300 Advanced Dew-Point Hygrometer I.S. version

Accessories available

- Carry bag – for standard and I.S. instruments
- Swagelok gas fittings – various sizes available
- Cable for external dew-point sensor – various lengths available
- External temperature sensor – various cable lengths available
- External pressure sensor – various cable lengths available
- External dew-point sensor for standard instrument – versions for standard and I.S instruments available

Please contact us for a full list of accessories and spares with order codes and prices

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. MDM300_97156_V2_UK_2pp_1209



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.