alphamoisture
S Y S T E M S

SADPmini2-Ex Hand-Held Dew Point Meter

Next Generation Intrinsically Safe Hand Held Dewpoint Meter

Rugged, light weight NEMA4X construction makes **Model SADPmini2-Ex** the most reliable dewpoint hygrometer available for rapid spot checks of dewpoint or trace moisture content in most gases and compressed air, where a certified instrument is required. The ultra-high capacitance sensor gives unsurpassed sensitivity, speed of response, repeatability and stability.

Model SADPmini2-Ex is ideal for hazardous area use.

ATEX
● Ex IEC IECEx c(UL)us LISTED

● Fast Repeatable Measurements

Reduced volume of the redesigned stainless steel sample chamber gives rapid spot check measurements of moisture in gases and dry compressed air.

The unique innovative keypad design allows quick, intuitive, selection of the versatile features incorporated in the instrument and modification of all set up choices. The full colour LCD display shows the measurement in two, independently selectable, units simultaneously, together with a linear analogue representation of the main unit. A single button press changes the display to a real time graph of the readings in the main units.

USB	☑
BLUETOOTH	☑
LOGGING	☑
SD CARD	☑
LI-ION CELL	☑
CALCULATOR APP	☑
2 YEAR WARRANTY	☑

Connection to a PC/Laptop via USB or Bluetooth also enables the user to modify and save the set up and save details via the PC. Powerful logging and graphing capabilities and Bluetooth communication are standard features.
A cellphone app is available for display of readings on smartphone or tablet.

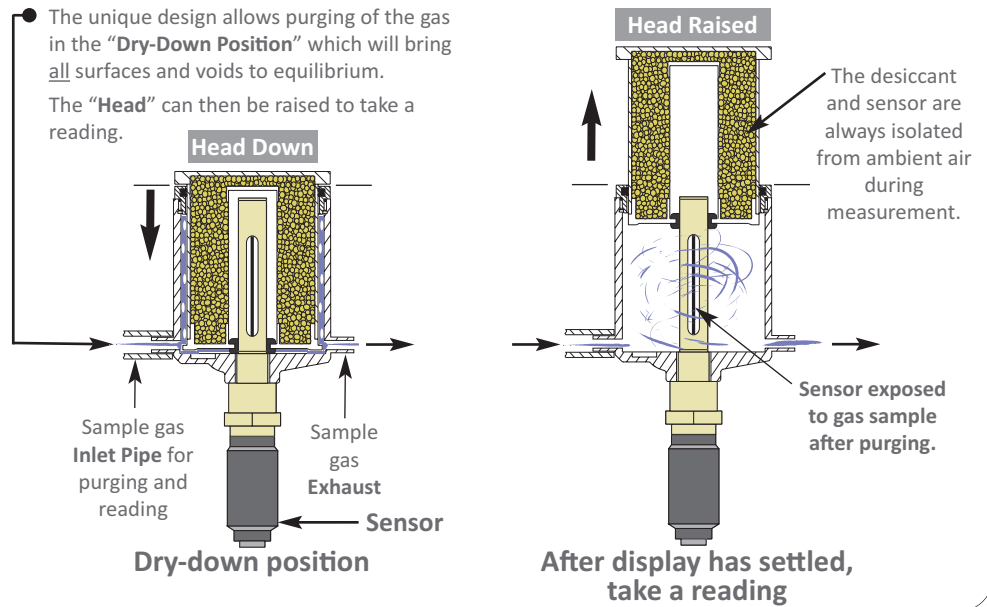### KEY FEATURES

ATEX
● Ex IEC IECEx c(UL)us LISTED Certified Intrinsically safe for use in hazardous areas to ATEX, IECEx & cULus Listed.

- Full color graphical display showing multiple units simultaneously.
- Desiccant Dry-Down Chamber for faster response by keeping sensor dry between tests.
- AutoCal Span Correction, for optimum accuracy between laboratory calibrations.
- Measurement units selectable in °F or °C dewpoint, ppm(v), ppm(w), mg/m³ or lb/MMSCF.
- User selectable display in choice of 10 languages: English, French, German, Spanish, Italian, Portuguese, Russian, Chinese, Japanese & Korean.
- Flexible programming for Data Logging with capacity in excess of 300,000 values.
- Real time logging/graphing of results with Quick Log and Snapshot features.

- Wireless Bluetooth & USB connectivity for configuration & data upload/download to pc or laptop.
- View display screen on smart phone, or tablet, via cell phone App.
- Wirelessly print results to dedicated Bluetooth printer.
- Integral pressure calculator to display pressure dewpoints.
- Easy to use, with icons, intuitive control and latest user interface.
- Compact ergonomic design.
- Rechargeable cells, allowing in excess of 150 hours use in continuous operation.
- SD micro-card installed for data and settings backup, user manual retrieval and calibration history.
- User ability to update latest firmware from factory.
- Includes Certificate of Test & Calibration, referenced to National & International Standards NPL/NIST.
- Anti-static carry bag included.

Desiccant Dry Down Technology

The Desiccant Head Assembly

Keeping the sensor dry between tests ensures that the **SADPmini2-Ex** is always ready to carry out rapid spot checks. The unique design of the Desiccant Head achieves this by surrounding the sensor with desiccant before the head is raised for sampling. At no time is the sensor allowed to come into contact with ambient air. The chamber is also designed so that the void space and chamber wall surfaces are purged with sample gas, before exposure of the sensor, so giving faster, more accurate and reliable results.

- The unique design allows purging of the gas in the "**Dry-Down Position**" which will bring all surfaces and voids to equilibrium.

The "**Head**" can then be raised to take a reading.

The desiccant and sensor are always isolated from ambient air during measurement.

Head Down

Head Raised

Sample gas **Inlet Pipe** for purging and reading

Sample gas **Exhaust**

Sensor

Sensor exposed to gas sample after purging.

Dry-down position

After display has settled, take a reading

Specifications

Hazardous Area Certification

II 1G Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +50°C)
II 1D Ex ia IIIB T60°C T$_{50}$80°C Da (-20°C ≤ Ta ≤ +50°C)

Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +50°C)
Ex ia IIIB T60°C T$_{50}$80°C Da (-20°C ≤ Ta ≤ +50°C)

INTRINSICALLY SAFE / SÉCURITÉ INTRINSÈQUE Exia
Class I Div 1 Groups A, B, C and D T4
-20°C ≤ Ta ≤ +50°C

Sensor type
Ultra-high capacitance aluminium oxide.
Ranges
-166°F to -4°F (-110°C to -20°C) dewpoint, Silver
-148°F to +32°F (-100°C to 0°C) dewpoint, Purple
-112°F to +68°F (-80°C to +20°C) dewpoint, Blue
Calibration
Supplied with a Certificate of Test and Calibration traceable to NIST/NPL.
Accuracy
Better than ±3.6°F (±2°C) dewpoint
Repeatability
Better than ±0.54°F (±0.3°C) dewpoint
AutoCal
Span check and correction carried out by following simple on screen instructions.
Temperature coefficient
Temperature compensated for operating range.
Typical sensor response times
Dry to Wet: -110°C to -20°C dewpoint, <20 secs
Wet to Dry: -10°C to -60°C dewpoint <180 secs
Sample flow
Flow independent, recommended 5 to 10 lt/min, max 20 lt/min.
Sensor life
Typically 7-10 years, dependant on application.
Pressure dewpoints
Integral calculator for display of dewpoints at pressure for both "ideal" gases and natural gas.

Electrical

Electromagnetic compatibility
Conforms to EMC Directive 89/336/EEC, amended 95/31/EEC
Display
3.5 inch full color LCD graphical display with backlight.

Power supply
Rechargeable Li-ion cell.
Charges from USB or universal mains charger supplied.
Cell life
In excess of 150 hours continuous use on full charge.
Time to full charge
Empty to full, approx. 14 hours.
Warm up time
2 seconds
Micro SD card
Used as a data log backup. Also contains User Tool software and pdf of Operating Manual.

Mechanical

Weight
3.1 lb (1.4 kg)
Dimensions
8.47 x 4.25 x 4.88 inches (215 x 108 x 124 mm)
Ingress protection
NEMA4X/IP66
Operating pressure
Atmospheric pressure. 4 psig (0.3 barg)
Operating temperature (ambient)
-4°F to +122°F (-20°C to +50°C)
Operating humidity (ambient)
Max. 95% non-condensing
Storage temperature and humidity
-4°F to +122°F (-20°C to +50°C) Max. 95% non-condensing

Warranty

24 months faulty workmanship and materials.

Logging

Integral data storage
Up to 300,000 date and time stamped readings
Stored in up to 20 user definable folders.
Logging frequency
User definable from 5 seconds to 1 hour.
Data display
Graphical and numerical
Real time logging
Can log directly to PC when connected via USB or Bluetooth.
Bluetooth
Bluetooth connectivity provided with logging package.

The SADPmini2-Ex

Dimensions

4.3" (108mm)

Full Color Graphical LCD Display

Desiccant Head raised and in the READ position

10.2" (258mm)

8.5" (215mm)

Serial Number and manufacture date labels

USB connection

Micro SD Card

Positioning bracket

Sample connection (Compression)

Sample connector (Hose Type)

Navigation keypad

Anti-slip hand strap

Front

Rear

How to Order

Model SADPmini2-Ex - [XX] - [F] - [X] - [XX]

RANGE IN DEW POINT:
SR: -166°F to -4°F (-110°C to -20°C)
PL: -148°F to +32°F (-100°C to   0°C)
BL: -112°F to +68°F   (-80°C to +20°C)

F: Stardard Supply - Fir Tree Fitting

4: 0.25" (1/4") - Swagelok SS Compression Type
6: 6 mm - Swagelok SS Compression Type
8: 0.125" (1/8") -Swagelok SS Compression Type

MAINS/AC PLUG TYPE - For Charger = XX

US: 2 Vertical Flat Blade
UK: Standard UK, 3 Square pin
EU: 2 Round Pins
AU: 2 Oblique Flat Blades with Ground

US Type	UK Type	EU Type	Australian Type

Fitting 1: Fir Tree Fitting

Fitting 2: Compression Fitting

EXAMPLE: To order this instrument with a range of -112°F to +68°F dewpoint, 0.25" compression fitting, and a US AC power plug, the order code is:- **Model SADPmini2-Ex - BL - F - 4 - US**

Standard Accessories (Included with each instrument)

Included:
Anti-static carry bag with adjustable shoulder strap, 6.6'ft (2m) PTFE sample tube, adjustable lanyard, micro USB to USB communication battery/cell charger cable, universal 110/240 Vac charging plug, 4GB micro SD card, illustrated operating manual.

Optional Extras

Bluetooth Printer.

Portable Sample System.

Notes

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Authorized Distributor Information

Distributed throughout USA / Canada by:

Delta Instrument® LLC

www.deltainstrument.com

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or 866-628-8457 Toll Free
Fax New Jersey: 201-768-5020**

Corporate Office: 148 Veterans Drive, Northvale, NJ 07647

Stoney Creek, Ontario, Canada
(Sales Office)
Telephone: 905-643-3500

Corrosive Gases: The Sensor should not be exposed to corrosive gases (or corrosive contaminants in the gas sample) as these can chemically attack the sensor, impairing calibration accuracy and/or damaging it beyond economic repair. Examples of such gases are mercury (Hg), ammonia (NH_3), chlorine (Cl_2) etc. Strong oxidising agents such as ozone (O_3) should also be prevented from coming into contact with the sensor.

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