Rugged, lightweight IP66 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 use in hazardous areas.

- 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.

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 mobile app is available for display of readings on smartphone or tablet.

KEY FEATURES

- Certified Intrinsically safe for use in hazardous areas to ATEX, IECEx & cULus Listed.
- Full colour 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 °C or °F dewpoint, ppm(v), ppm(w), g/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 mobile 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 with a strong, durable and rugged body.
- Rechargeable batteries, 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.
Specifications

**Hazardous Area Certification**
- II 1G Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +50°C)
- II 1D Ex ia IIIB T60°C Da (-20°C ≤ Ta ≤ +50°C)
- Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +50°C)
- Ex ia IIIB T60°C Da (-20°C ≤ Ta ≤ +50°C)

**Sensor type**
Ultra-high capacitance aluminium oxide.

**Ranges**
- -110°C to -20°C (-166°F to -4°F) dewpoint, Silver
- -100°C to 0°C (-148°F to +32°F) dewpoint, Purple
- -80°C to +20°C (-112°F to +68°F) dewpoint, Blue

**Calibration**
Supplied with a Certificate of Test and Calibration traceable to NPL/NIST.

**Accuracy**
Better than ±2°C dewpoint (±3.6°F)

**Repeatability**
Better than ±0.3°C dewpoint (±0.54°F)

**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 colour LCD graphical display with backlight.

**Power supply**
Rechargeable Li-ion battery.
Charges from USB or universal mains charger supplied.

**Battery 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**
1.4 kg (3.1 lb)

**Dimensions**
215 x 108 x 124 mm (8.47 x 4.25 x 4.88 inches)

**Ingress protection**
IP66/NEMA4X

**Operating temperature (ambient)**
-20°C to +50°C (-4°F to +122°F)

**Operating humidity (ambient)**
Max. 95% non-condensing

**Storage temperature and humidity**
-20°C to +50°C (-4°F to +122°F) 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.

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**Desiccant Dry Down Technology**

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.

[Diagram showing Desiccant Head Assembly]

- The Desiccant and sensor are always isolated from ambient air during measurement.
- Sensor exposed to gas sample after purging.

[Diagram showing Desiccant Dry Down Technology]

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.

[Diagram showing Desiccant Head Assembly]
**SADPmini2-Ex**

**Dimensions**

- **Full Colour Graphical LCD Display**
- **Desiccant Head raised and in the READ position**
- **USB Connection**
- **Micro SD Card**
- **Positioning bracket**
- **Anti-slip hand strap**

**How to Order**

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

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

**SAMPLE CONNECTION - LEFT:**
- [F] Push Fit Pipe - Fir Tree Type 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

**SAMPLE CONNECTION - RIGHT:**
- [F] Push Fit Pipe - Fir Tree Type 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**
- [UK] Standard UK, 3 Square pin
- [US] 2 Vertical Flat Blade
- [EU] 2 Round Pins
- [AU] 2 Oblique Flat Blades with Ground

**ORDER EXAMPLE:**
To order this instrument with a range of -100°C to 0°C dewpoint, 6mm compression fitting (LEFT), Fir Tree Fitting (RIGHT), an EU AC power plug the order code is:

Model SADPmini2-Ex - [PL]-[6]-[F]-[EU]

**Standard Accessories (Included with each instrument)**

**Included:**
- Anti-static carry bag with adjustable shoulder strap
- 2m PTFE Sample Pipe
- Pipe Fittings
- Mains Battery Charger & Cable
- Adjustable Carrying Strap
- Logging Software

**Optional Extras**

- Bluetooth Printer
- Portable Sample System
Note: Model SADPmini2-Ex is ideal for most industrial gases, but is not suitable for use in the presence of Ammonia (NH₃), Chlorine (Cl₂), Hydrogen Chloride (HCl), Hydrogen Fluoride (HF), Nitrous Oxide (NO₂) and its hydrolysed form, Nitric Acid (HNO₃). Sulphur Dioxide (SO₂) can be monitored if the moisture content is low, less than 100ppm(v).