SADPG

SDG

SSDIRG

POCKET SIZED

BE SURE

WITH SHAW

Instant moisture checks in 'Dry' Air or Gas

Please bookmark this site:-

www.shawmeters.com

for the latest updates and developments.

SHAW

Dry air hygrometers, water vapour pressure hygrometers scaled in milli-bars and pascals, Peltier cooled mirror hygrometers and Shaw Automatic sensor calibration, were invented by Leonard Shaw, Honorary Professor of Hygrometer Technology, The Royal Institute of Great Britain, London.

World's Largest Hygrometer Sales

Established over 50 years

www.shawmeters.com

Automatic Dewpoint Meter

Certified intrinsically safe.

Quick Moisture readings on flowing dry air or gas.

Easily portable, ready for spot checks or continuous use, this battery powered hygrometer indicates both dew point temperatures and water vapour to less than one part per million, on the large meter dial. As the reading is specific to water vapour, calibration is accurate for different gases. Accuracy is guaranteed to better than one part in a million of moisture in very dry air or gas.

The self extending head allows up to 20 litres a minute flow for clearing the air supply pipe work without wetting the test chamber. Note the absence of knobs, calibrating, cooling, and servicing as required by other methods. The automatic dry down measuring head ensures a quick response from the sensor.

The heart of the meter is a Shaw molecular sieve moisture sensor with a gold internal filter and gold plated exterior, a jewel of a sensor in fact with a rapid one second response time from dry to wet. (99%) Flow rate has no effect on the accurate measurement.

So simple to use, blocking the outlet with a finger for a moment raises the measurement head which exposes the sensor to the sample air or gas.

Easy calibration check in seconds by Shaw Automatic Calibration.

Each SADP hygrometer has three weeks of daily laboratory checks at Bradford, subject to stringent ISO9001:2000 (pending) quality control and traceable to NPL. Every meter is CE marked and is certified intrinsically safe to: **BASEEFA 2001** Certificate No: baseefa03ATEX0065X (Ⓜ II G EEx ia IIC T6.) **FM** (pending).

SPECIFICATION

Quality stove enamelled zinc plated steel. 202mm wide, 225mm deep, 276mm high. With head extended 320mm. high, Weight app. 5 Kgs. High quality padded carry case, Small screwdriver and Allen key. Two metre length of PTFE (Teflon) flexible sample pipe. Free Slide rule circular indicator for; Fahrenheit, Water vapour pressure, ppm water, Pounds water per million cubic feet, Milligrammes water per litre. Accurately calibrated and ready for use. Operating temperature -20ºC to +40ºC. One calibration for different gases. Certificated intrinsically safe. Quality to ISO9001:2000 (pending).

The SADPG -80/0ºC DP model (illustrated) is undoubtedly the world's most popular dry air hygrometer.

Other ranges to order. Model SADPP -100/0ºC DP. Model SADPR -80/-20ºC DP.

Dry air hygrometers, scaled in dew point, milli-bars and pascals, Peltier cooled mirror hygrometers and Shaw Automatic Calibration were invented by Prof. Leonard Shaw, Honorary Professor of Hygrometer Technology, The Royal Institution of Great Britain.

Shaw have the World's largest Hygrometer sales.
Established 50 years.

Only Shaw has a two years, no quibble, meter and sensor guarantee.
www.shawmeters.com


SHAW
GREY SPOT SENSOR
AUTOMATIC CALIBRATION
OFF
BATT.
READ
SHAW
AUTOMATIC DEWPOINT METER

SuperDew

Model SDG. -80/0°C DP

See any moisture in dry air or gas.
From less than one part per million to room air.

SuperDews have a practical range down to less than one part per million of water vapour in still or flowing dry air or gas.

There is much more to the SuperDew than first meets the eye as the user can make instant checks for accuracy without any laboratory equipment. This is known as 'Shaw Automatic Calibration' and is used worldwide.

The SuperDew is simple to use, has an economic price, and can be connected by ordinary t/v cable to a remote site up to half a mile distant.

There are two alarm positions, easily set by the user, to provide instant alarms on green and red panel lamps, and switch external equipment.

Users report 20 years accurate readings on dry air without maintenance or routine attention as needed by copies. The guaranteed accuracy of better than one part per million of moisture in very dry air or gas, is simply unique to Shaw at the normal dry air state of -75/-80°C DP and this accuracy cannot be maintained by any other hygrometer. The electronic corrections used by all other hygrometers are not needed by the SuperDew as the sensors are linear.

- Calibrated from dry to wet with 20 years sensor life.
- Fast one second response from Dry to Wet 99%.
- Indication of any moisture.
- User 5 second calibration check.
- No special calibration is needed for different gases.
- Flow rate has no effect. 4/20 ma. output.
- Shaw sensors have a filter coating of pure gold.
- The indication is specific to moisture.
- Guarantee includes free replacement sensors.
- Accuracy better than one p.p.m. on dry air or gas.
- Table stand and panel mounting springs included.
- Free Rotary slide rule ppm/ deg Fah/ deg C. etc.

Range.
SDG -80/0°C DP,
SDP -100/0°C DP,
SDR -80/-20°C DP

Please state mains of either 240 v or 110 v. with order.

SHAW MOISTURE METERS,
WESTGATE, BRADFORD,
BD1 3SQ. ENGLAND.
Phone +44-1274-733582.
Fax +44-1274-370151.

Shaw have the
World's largest Hygrometer sales.

Established 50 years,

Shaw Moisture Sensors Explained

Capacitance was discovered by Michael Faraday at the 'Royal Institution' London, founded in 1799, and now known as the Ri.

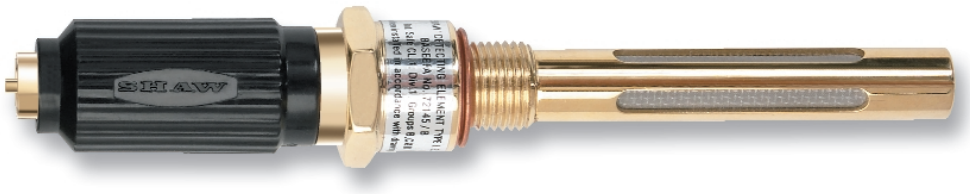
The Farad, named after him, is a large quantity, but we are more familiar with micro-farads capacitance as in Shaw sensors. This again, is much larger than the usual nano-farad capacitance of others.

The Shaw gold plated moisture sensor has an internal pure gold filter. No corrections are needed for variable flow rates at room pressure, or even for a different gas, as the 20 years life sensor is specific to water vapour and has a linear response to dew point.

There is a rapid response from dry to wet in one second in still or flowing air or gas with an instant user check, of both sensor and meter, from parts per billion of moisture to room air.

The guaranteed accuracy of better than one part per million of moisture in very dry air is simply unique to Shaw high capacitance moisture sensors, as others have errors owing to the electronic amplifiers needed.

Leonard Shaw
Hon. Professor Hygrometer Technology,
The 'Royal Institution' London.



BASEEFA 2001 Certificate No: baseefa03ATEX0067 (℗ II G EEx ia IIC T6.) **FM** (pending).

SuperDew De Luxe

Displays any moisture in still or flowing dry air or gas.

Mains operated dual hygrometer for flowing or still air.

SDDLX. Can be used as a 240 v. portable. No measuring head.
SDDL. Standard internal sensor fitted inside the measuring head.

The internal/external switch on the front panel selects either the enclosed measuring head sensor, for flowing air supplies, or switches to an external sensor for checks on still air or gas. Accuracy is guaranteed better than one part in a million of moisture in very dry air or gas, and the user can check the calibration in seconds without any external equipment. The automatic dry down measuring head, accelerates the remarkably quick response of the sensor in very dry air or gas and is simple to use, as blocking the outlet with a finger for a moment, raises the measurement head, and directs air or gas to the sensor.

Note the absence of knobs, calibrating, or cooling, also complicated correction methods and servicing, which are required for hygrometers by other makers, which do not have the unique Shaw Automatic Calibration facility. 50 years experience has produced the heart of the meter, the Shaw modified molecular sieve moisture sensor with a gold internal filter and gold plated exterior, a jewel of a sensor in fact. This has a rapid, one second response time from dry to wet. (99%) As the reading is specific to water vapour, calibration is accurate for different gases. The self extending head allows up to 20 litres a minute flow for clearing the air supply pipe work without wetting the test chamber. Flow rate has no effect on the accurate measurement.

Each SDDL hygrometer has already had three weeks of daily laboratory N.P.L. related checks at Bradford before dispatch. This hygrometer can be supplied without the dry down head.

Please state with order, for either 240 v or 110 v. mains supply.
4/20 m/a output.

Only Shaw has a two years, no quibble, meter and sensor guarantee.

NEW ‘Dry Air’ NEW

vest pocket hygrometer

measure from parts per billion of water vapour

This miniature match box size meter, is a giant leap forward from contemporary technology. Simple, reliable and accurate with a clear display of dew point of any moisture from parts per billion, it is self contained with a five years life lithium cell, fitted ready for use. Shaw Automatic Calibration provides instant user checking.

This new design by Hon. Professor Shaw, can be used either from a vest pocket, or a half mile distant from it’s moisture sensor by connecting it with an ordinary t/v cable for continuous use or for spot checks. The guaranteed accuracy of better than one part per million moisture in very dry air, is simply unique to Shaw sensors, as they have a large micro farad capacitance. Other sensors have less capacitance and need electronic amplifiers.

The gold plated, easily detached, Shaw moisture sensors have a pure 24 ct. gold filter and a rapid response from wet to dry in one second, in still or flowing air or gas. Sensor life is 20 years or more in clean air. Measurements for different gases, or variable flow rates, need no corrections.

Complete in an attractive carry case, there is a sensor extension lead, a rotary converter for parts per million moisture, degrees F. and other units. Special introductory economy price with dispatch from stock.

July 22 2003

SHAW MOISTURE METERS,
WESTGATE, BRADFORD, BD1 3SQ, ENGLAND.
Phone +44-1274-733582. Fax +44-1274-370151.
www.shawmeters.com

Leonard Shaw, Hon. Professor of Hygrometer Technology,
The Royal Institution of Great Britain. Invented dry air hygrometers,
water vapour pressure hygrometers scaled in millibars and pascals,
Peltier cooled mirror hygrometers and Shaw automatic calibration.

World’s largest Hygrometer sales for 50 years.

Accessories

ACCESSORIES ARE NOT SHOWN TO SCALE

CALCULATOR

The Shaw calculator brings together many different measurement units and also enables calculations to be made for moisture levels at different pressures.

On one side is a conversion table showing dewpoint temperature in Fahrenheit and Centigrade, with the equivalent moisture levels in mg/water per litre, lbs/water per million cubic feet, parts per million water vapour by volume and water vapour pressure in mm of mercury.

The other side (illustrated here) enables any dewpoint temperature at any given pressure to be converted to the equivalent dewpoint temperature at any other pressure – with the moisture content in parts per million also shown.

SENSOR HOLDER

The Shaw Sensor Holder is manufactured from solid stainless steel and makes installation of the sensor very easy. The inlet and outlet connections are fitted with high quality stainless steel compression fittings designed for 1/8" (3mm) outside diameter stainless steel or copper pipe. On request we can supply fittings for 1/4" (6.35mm) or 6mm od pipe. We do not recommend using larger pipes as this would cause the system to have a longer response time. The unit has a pressure rating of 245 bars (3600 psig) and is oxygen cleaned as standard.

SU4

The SU4 will reduce the pressure from the dryer to give a flow suitable for measurement. It combines a pressure reduction control, sensor holder and a flow meter for up to 10 litres per minute. (One litre is usual for continuous use). Moisture measurement under pressure will not give the correct answer but room pressure used in the SU4 will read correctly.

Free calculator & coax lead and Fluon pipe to connect to the hygrometer are included.

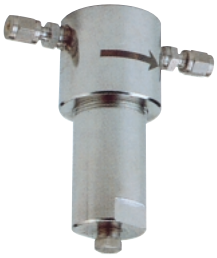
Can use with MLPR Moisture Log if required.

FLOW INDICATOR

This compact flow indicator can be used where visual indication of sample flow is required. A fine needle valve is incorporated, and the unit is calibrated for the range 1 to 5 L/min. air at NTP. Supplied complete with fittings for 1/8" od copper or stainless steel piping with fittings for 1/4" or 6mm od pipe available on request. Maximum pressure 100 psig. (NB: To be fitted upstream of the sensor).

FILTER UNIT

Engineered from stainless steel, the Shaw Filter Unit is an effective device for removing particulate contamination from sample gases.



The filter cartridge is made from glass fibre and epoxy resin, and can be washed in most solvents to extend its life. Filtration efficiency is 99.99% removal of particles of 0.6 micron and above. The unit has a pressure rating of 245 bars (3600 psig) and is supplied as standard with fittings suitable for 1/8" od copper or stainless steel pipe. Fittings for 1/4" or 6mm od pipe are available on request. We only recommend using the filter unit when it is necessary, as it will inevitably lengthen the sample system response time.

AUDIBLE ALARM UNIT

The alarm function fitted to most of our instruments provides a red warning light on the front of the instrument and access to a single pole change over relay which may be used to control external equipment. In some cases an audible alarm is required and Model SAA has been designed for use where no other alarm unit is available. 110 or 230V a.c. power is needed for the Model SAA and it may be located close to the Dewpoint Analyser, or in any other convenient position.

When energised it emits a pulsed tone of 73dbA at 3 metres. A red warning lamp on the front of the unit will silence the output when pressed, but the warning lamp remains on until the alarm condition ends. The unit resets itself automatically. Rated IP65 for outdoor use.

PRESSURE REGULATORS

Three pressure regulators are offered, suitable for inlet pressures up to 28 bars (400 psig) and 400 bars (5800 psig). In all cases the metal parts exposed to the sample gas are stainless steel. The small regulator is capable of reducing the sample gas to 1 bar pressure in a single stage, but with difficult gases like CO^2 it is advisable to connect two regulators in series to give two stage reduction. Supplied with fittings for 1/8" od copper or stainless steel piping. Fittings also available for 1/4" or 6mm pipe on request.

HAZARDOUS AREA APPLICATIONS

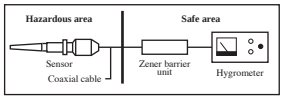
Shaw Zener Barrier Unit

A great many of our instruments are used in potentially hazardous areas where there is a high risk of fire or explosion. Petrochemical works and oil/gas platforms are two obvious cases, but there are many others involving the use of hydrogen or other dangerous gases.

There are two types of use to be considered:

(1) Spot-check readings where the instrument has to be within the hazardous area. The model SADP, described on page 2, has three weeks of daily laboratory checks at Bradford, subject to stringent ISO9001:2000 (pending) quality control and traceable to NPL. Every meter is CE marked and is certified intrinsically safe to: **BASEEFA 2001** Certificate No: baseefa03ATEX0065X (Ⓔ II G EEx ia IIC T6.) **FM** (pending).

(2) Mains powered instruments where continuous operation is needed, but it is possible to locate the instrument itself in a safe area. Where a safe area is available for the location of the instrument, the sensor may be placed in the hazardous area using a zener barrier unit included in the instrument to sensor cable, providing protection to BASEEFA 2001. The system certification is: SYST baseefa03Y0070. Barrier Certification: BASO1ATEX7202 cert no: Ex01E2204.



Drawing label is simplified version of Baseefa 2001 311 Iss 1

SSDIRG

Direct connection of the Moisture Sensor to a Factory Computer.

Simply set 4 to 20 m/A on the computer with the sensor in room air.

That's it! Shaw Automatic Calibration has entered accurate measurement from less than one part per million of moisture up to room humidity, in dry air or gas over the range of -80/0°C DP.

Note that there is no need for a hygrometer, and only two wires to the computer are needed. Shaw sensors can easily be exchanged and calibrated in the housing by the user, providing a guaranteed accuracy of better than one part per million of moisture in dry air or gas.

Shaw sensors can easily be exchanged and calibrated in the housing by the user

SPECIFICATION

Range. -80/0°C DP. (0 to 6000 p.p.m moisture.)

Type. SSDIRG. In line 2 wire 4-20 mA. Calibrated D.P. Transmitter.

Accuracy. Guaranteed better than 1 part per million on dry air or gas.

Sensor type. Shaw Grey spot. Laboratory calibrated 4/20 milli-amps. 20 years life, Gold plated sensor, 24 ct. gold filter. 2 years guarantee.

Weatherproof rating. IP 65. Blue anodised finish.

Dimensions. 64 mm diameter. 170 mm overall length.

Weight. 370 g. Resolution 0.01 mA.

Twisted pair lead. 20 m/A. Length up to 1 Km.

Connection. Lemo 2 pin connector.

Power supply. From computer system. 18/30 volt dc. to Scada/DCS

Sample pressure. To 10 bars, preferably one litre per minute flow to atmosphere to avoid errors due to pressure variations.

Output. Fully isolated from process computer, acts as a current drain. 4-20 mA proportional to dew point, with 2 way power lead

Order. Shaw Dew Point Transmitter. Type SSDIRG.