

## The SHAW Moisture Sensor

**The SHAW Moisture Sensor is an ultra high capacitance aluminium oxide dewpoint sensor for the measurement of trace moisture in gases and compressed air.**

With decades of performance excellence, the SHAW Moisture Sensor has proven to be both reliable and accurate and can be used for the toughest industrial applications. The sensing element has been designed and refined to provide the most stable aluminium oxide sensor available today.

The Shaw Moisture Sensor is certified intrinsically safe and suitable for use in hazardous environments. The sensor is supplied as standard, with a calibration certificate traceable to recognized national/international humidity standards (i.e. NPL, NIST).

When used in conjunction with a Shaw Moisture Meters hygrometer, the system will provide many years of accurate and reliable dewpoint measurement.



### Advantages of the SHAW Sensor

- Wide dynamic range from 0.001 ppm to 0.2 percent by volume
- Stability, low hysteresis and temperature coefficients
- Flow independent
- High selectivity for moisture
- Can be intrinsically safe (when used in conjunction with a Zener Barrier)
- Operates over a wide range of temperature and pressure
- Requires little or no maintenance

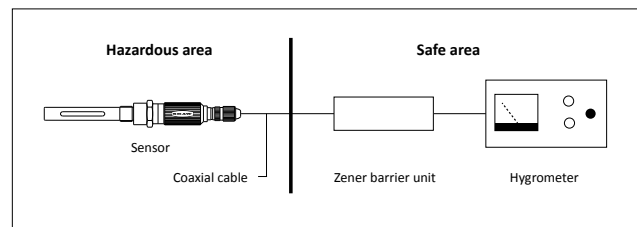
### Intrinsic Safety

The SHAW sensor is certified intrinsically safe and can be used in either hazardous or non-hazardous areas.

A Zener Barrier (shunt diode safety barrier) should be used when installing the sensor in a hazardous area.

Where the sensor is to operate in an area where a flammability hazard may exist, the sensor is located in the Hazardous Zone and the Zener Barrier and Display Unit are installed in the Safe Area. The distance from Sensor to Zener Barrier can be up to 1,000m.

Below is a simple drawing highlighting the location of a Zener Barrier Unit or an Isolator.



## Ordering Information

### Sensor Type {r}: Sensor Range:

<b>P (Purple):</b>	-100 to 0 °C (-148 to +32 °F) DP, 0 - 6,000 ppm
<b>S (Silver):</b>	-100 to -20 °C (-148 to -4 °F) DP, 0 -,1,000 ppm
<b>R (Red):</b>	-80 to -20 °C (-112 to -4 °F) DP, 0 - 1,000 ppm
<b>G (Grey):</b>	-80 to 0 °C (-112 to +32 °F) DP, 0 - 6,000 ppm
<b>B (Blue):</b>	-80 to +20 °C (-112 to +68 °F) DP, 0 - 23,000 ppm


### To order

Example: To order a sensor with a measuring range of -80 to 0 °C (-112 to +32 °F) dewpoint (grey sensor) please order **SE-G**.  
All sensors are supplied with universal guards.

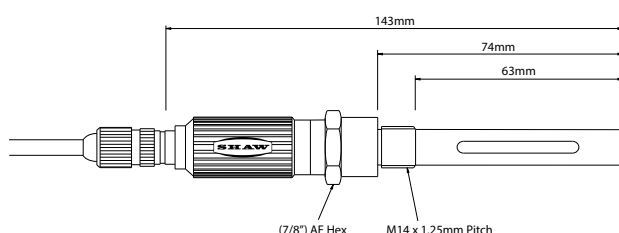
### NOTE:

**This is the range of SHAW Moisture Sensors. All SHAW Moisture Sensors must be used in conjunction with a SHAW hygrometer.**

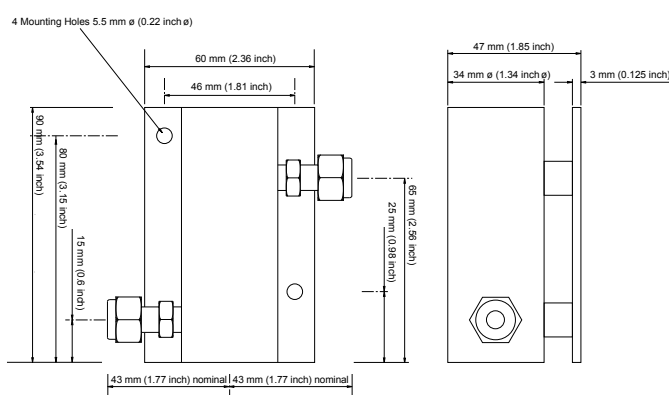
## Specifications

<b>Certification:</b>	 II 1G, Ex ia IIC T6 Ga (Ta = -20°C to + 50°C)
<b>Calibration:</b>	National Physical Laboratory (NPL) traceable calibration available
<b>Accuracy:</b>	Better than ± 2°C over full range
<b>Operating Temperature:</b>	-20°C to + 50°C
<b>Storage Temperature:</b>	-50°C to +70°C
<b>Operating Humidity:</b>	0-90% RH non-condensing
<b>Mechanical Connections:</b>	M14 x 1.25mm pitch
<b>Electrical Connection:</b>	Male coaxial plug
<b>Approvals:</b>	CE certified
<b>Dimensions:</b>	Overall length: 141 mm, protruding 68 mm
<b>Weight:</b>	Approximately 100 g
<b>Sensor Materials:</b>	High purity aluminium, gold, nylon, silver and stainless steel

## Sensor Diagram



## Sensor Holder Assembly Diagram



NOTE: The assembly is shown with 1/4 inch OD tube fittings. The dimension across the tube fittings will vary for all other size fittings.

## For Use With

### Model SADP

World renowned, portable dewpoint meter. Easy to use for fast, reliable trace moisture measurement. Operates at atmospheric pressure.



### SDHmini Range

Portable, hand held hygrometer. Available as standard, logging and intrinsically safe.



### Model Superdew 3

Single channel inline hygrometer designed to measure dewpoint in process gases and compressed air.

