

# Model Ex

Intrinsically Safe Portable Dewpoint Meter

## Features :-

- Intrinsically Safe - ATEX Ex ia IIC T3 / T4 Ga
- Overall Range -110°C to +20°C Dewpoint
- User Friendly - Simple Operation
- Guaranteed accuracy  $\pm 2^\circ\text{C}$  Dewpoint
- Portable - Fully Self Contained
- Self-Diagnostics on Start-up
- Digital Indication in  $^\circ\text{C}$  ( $^\circ\text{F}$  scale optional)
- Stainless Steel Couplings
- "C" Type Disposable Batteries
- Excess of 150 Hours of Continuous Operation
- Desiccant Dry-Down Chamber For Rapid Measurements



**Model Ex** is a fully self-contained portable hygrometer from Alpha Moisture Systems which will deliver dependable moisture measurement in industrial and laboratory applications. Designed with the operator in mind, Model Ex is extremely easy to use and the microprocessor technology ensures accurate and reliable readings over long periods with little or no maintenance.

**Model Ex** is certified intrinsically safe to Ex ia IIC T3/T4 Ga for use in hazardous areas without the need for any additional accessories. Designed to operate at atmospheric pressure, Model Ex is available in a total of eight different ranges, encompassing an overall range from -110°C to +20°C dewpoint.

**Model Ex** is supplied ready for use with batteries installed, calibration certificate traceable to National and International Humidity standards, two metres of stainless steel braided PTFE sampling hose, instruction manual and an anti-static carrying case.

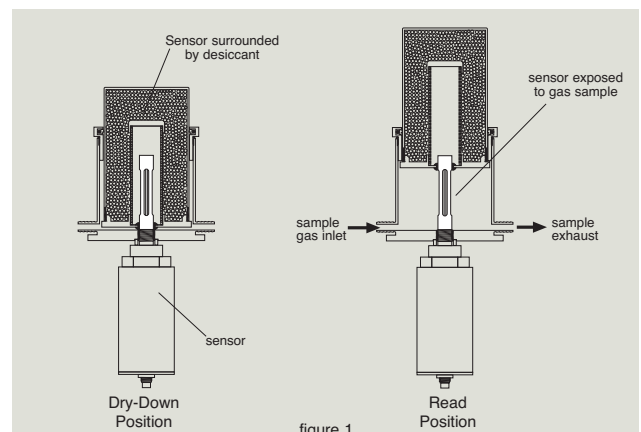


figure 1  
Desiccant Head assembly

To allow rapid spot checks it is essential that the measuring sensor is kept drier than the sample to be measured. The desiccant dry-down chamber is designed to do just this by keeping the sensor surrounded by desiccant when the instrument is not in use, only exposing it to the sample gas when taking measurements. At no stage is the sensor allowed to come into contact with ambient air.

## Alpha Moisture Systems

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# Model Ex Intrinsically safe Portable Dewpoint Meter

## Specifications

### SENSOR TYPE

Aluminium Oxide Ultra High Capacitance Sensor

### INTRINSIC SAFETY CERTIFICATION

Code : Ex ia IIC T4 Ga (Ta = -20°C to +37°C)

Ex ia IIC T3 Ga (Ta = -20°C to +50°C)

Certificate No. : SIRA 02ATEX2133X



### RANGE

Eight different ranges encompassing an overall range of -110°C to +20°C dewpoint (-148 to +68°F)

### DISPLAY

3Ω Digit LCD

### DISPLAY RESOLUTION

0.1°C dewpoint

### AUTOMATIC CALIBRATION

Via potentiometer on front panel.

### POWER SUPPLY

9V DC - Six "C" type disposable batteries.

### BATTERY LIFE

In excess of 150 hours continuous operation.

### ELECTRONICS ACCURACY

Better than ± 1% of range.

### WARM UP TIME

Less Than 60 Seconds

### SENSOR CALIBRATION ACCURACY

±2°C dewpoint. - All units supplied with certificates documenting factory calibration against known moisture levels traceable to

National & International humidity Standards.

### REPEATABILITY

± 0.3°C dewpoint.

### TYPICAL RESPONSE TIME

95% of reading within 20 seconds in normal operation.

### OPERATING CONDITIONS

Temperature : 0°C to +50°C

Humidity : 0-98% RH, Non-condensing

Storage Temperature : -30°C to +70°C

Operating Pressure : Atmospheric to 0.5 barg.

### ELECTROMAGNETIC COMPATIBILITY (EMC)

Immunity : Complies with EN 61000-6-1:2007

Emissions : Complies with EN 61000-6-3:2007

### FLOW RATE TO SENSOR

3 to 20 litres/minute

### CONNECTIONS

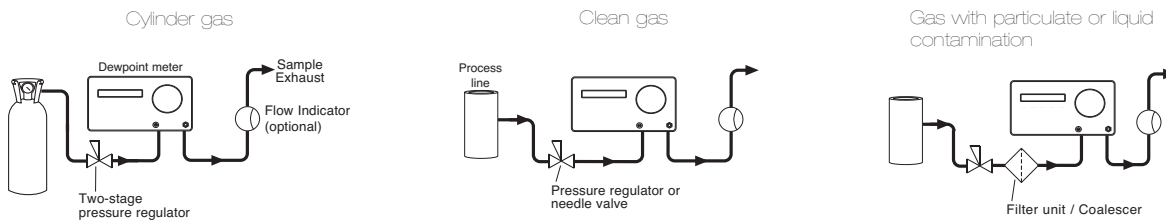
Swagelok stainless steel coupling, 0.25" overall diameter compression tube fitting.

### WARRANTY

One year from date of delivery against faulty materials or workmanship.

Product specification may be subject to change, without prior notice, as part of our ongoing product development programme.

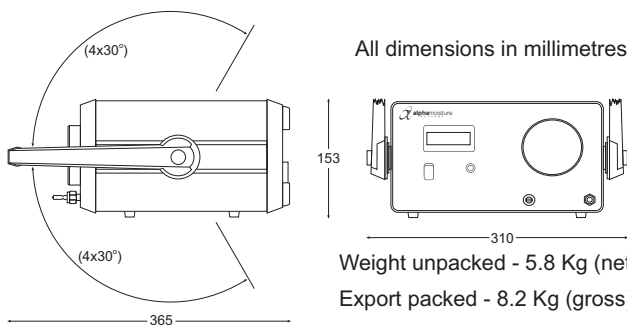
## Installation



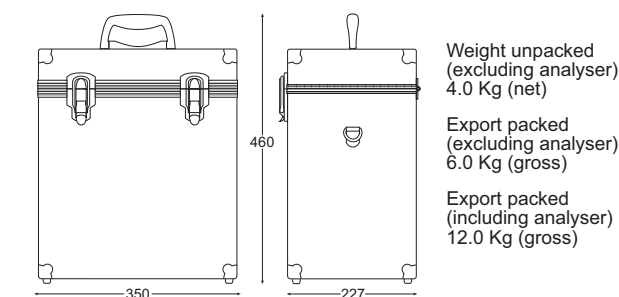
For details on additional accessories please see Accessories specification sheet

## Weights and Dimensions

### INSTRUMENT



### TRANSIT CASE (OPTIONAL)



## Corrosive Gases

The Sensor should not be exposed to corrosive gases (or corrosive contaminants in the main gas sample) as they would chemically attack the sensor and render it useless.

Examples of such gases are mercury (Hg), ammonia (NH<sub>3</sub>), chlorine (Cl<sub>2</sub>) and wet acid vapours i.e. acid vapours in gas with moisture content greater than 100ppm(v). Strong oxidising agents such as ozone (O<sub>3</sub>) should also be prevented from coming into contact with the sensor.

## Ordering Information

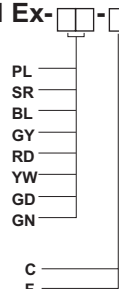
### INSTRUMENT

RANGE	
PURPLE	-110 to +20°C
SILVER	-110 to -20°C
BLUE	-80 to +20°C
GREY	-80 to 0°C
RED	-80 to -20°C
YELLOW	-60 to 0°C
GOLD	-50 to +20°C
GREEN	-30 to +20°C

MEASUREMENT UNITS	
CENTIGRADE	(°C)
FAHRENHEIT	(°F)

### TRANSIT CASE (OPTIONAL)

### Model Ex-



### Model Ex-Tc

Example : If your requirement is for a dewpoint transmitter with an operating range of -80°C to -20°C reading in °C dewpoint then please order as : **Model Ex-RD-C**