

# CERTIFICATE OF CALIBRATION

ISSUED BY ROTRONIC INSTRUMENTS (UK) LTD

DATE OF ISSUE: 10<sup>th</sup> November 2011      CERTIFICATE NUMBER: 19898



Calibrated by: P Image

Approved Signatory: C Aicken

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Dates Measurements Performed:  
9<sup>th</sup> November 2011

Calibration Procedure Used: RUKP20

Customer Details : Signatrol Limited, First & Second Floor Offices, 105 Church Street,  
: Tewksbury, Gloucestershire, GL20 5AB  
Customer's Order Number : 43893  
Rotronic Ref Number : 19898  
Instrument Description : Humidity & Temperature Probe  
Manufacturer : Rotronic AG  
Model Type (s) : HC2-S  
Serial Number (s) : 60785 619

The hygrometer was calibrated using ROTRONIC non-saturated salt relative humidity (RH) standards, certified as traceable to National Standards. The probe of the hygrometer was subjected to the relative humidity generated by the RH standard inside a calibration chamber, and the values taken from the instruments display. The calibration was conducted in controlled laboratory conditions 23 °C ± 2 °C.  
Rotronic HP22 Number 0044 was used to observe the results.

Applied Relative Humidity (%rh)	Calibration Uncertainty ** (%rh)	Indicated Relative Humidity (%rh)	Instrument Error (%rh)	Indicated Temperature (°C) *	Ambient Temperature (°C) *
10.0	±0.5	10.0	0.0	22.9	22.6
49.9	±1.1	50.0	+0.1	22.8	22.7
75.2	±1.3	75.2	0.0	23.5	23.3

\* Not included within the scope of the UKAS accreditation

\*\*The uncertainties quoted apply only to values obtained during the calibration and are not indicative of long-term stability of the instrument under calibration.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k = 2$ , providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards and to units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory. (TSDC1 Issue 4)

# CERTIFICATE OF CALIBRATION

ISSUED BY ROTRONIC INSTRUMENTS (UK) LTD

DATE OF ISSUE: 10<sup>th</sup> November 2011

CERTIFICATE NUMBER: 19898a



**rotronic**

LEADING IN HUMIDITY MEASUREMENT



*ck*

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Dates Measurements Performed:  
10<sup>th</sup> November 2011

Calibration Procedure Used: RUKP2

Customer Details : Signatrol Limited, First & Second Floor Offices, 105 Church Street,  
: Tewksbury, Gloucestershire, GL20 5AB  
Customer's Order Number : 43893  
Rotronic Ref Number : 19898  
Instrument Description : Humidity & Temperature Probe  
Manufacturer : Rotronic AG  
Model Type (s) : HC2-S  
Serial Number (s) : 60785 619  
:  
:  
:

The probe was calibrated by comparison with platinum resistance thermometers, which are traceable to national standards, and the values taken from the instruments display. The calibration was conducted in a HygroGen temperature chamber in controlled laboratory conditions  $23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ .

The probe under calibration was immersed to a depth of 120mm

Applied Temperature $^{\circ}\text{C}$	Indicated Temperature $(^{\circ}\text{C})$	Instrument Error $(^{\circ}\text{C})$	Calibration Uncertainty $(^{\circ}\text{C})^*$
0.0	0.2	+0.2	$\pm 0.26$
40.0	40.0	0.0	$\pm 0.17$

\*The uncertainties quoted apply only to values obtained during the calibration and are not indicative of long-term stability of the instrument under calibration.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k = 2$ , providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

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