

# CERTIFICATE OF CALIBRATION

ISSUED BY ROTRONIC INSTRUMENTS (UK) LTD

DATE OF ISSUE: 9<sup>th</sup> November 2010

CERTIFICATE NUMBER: 18287



**rotronic**  
LEADING IN HUMIDITY MEASUREMENT



Calibrated by: P Image / C Aicken

Approved Signatory: R Gee

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Page 1 of 1  
Dates Measurements Performed:  
8<sup>th</sup> to 9<sup>th</sup> November 2010  
Calibration Procedure Used: RUKP20

Customer Details : Signatrol Ltd, 105 Church Street, Tewkesbury, Gloucestershire, GL20 5AB  
Customer's Order Number : 43606  
Rotronic Ref Number : 18287  
Instrument Description : Humidity and Temperature Probe  
Manufacturer : Rotronic AG  
Model Type (s) : HC2-S  
:  
:  
Serial Number (s) : 60508298  
:  
:  
:

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.  
Measurements recorded using HP22 equipment number: 0044

Applied Relative Humidity (%rh)	Calibration Uncertainty ** (%rh)	Indicated Relative Humidity (%rh)	Instrument Error (%rh)	Indicated Temperature (°C) *	Ambient Temperature (°C) *
11.3	0.5	11.5	+0.2	23.3	22.9
50.0	1.1	50.2	+0.2	23.5	23.2
75.2	1.3	75.2	0.0	23.2	22.9

\* 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.  
(TSDC2 Issue 3)

# CERTIFICATE OF CALIBRATION

ISSUED BY ROTRONIC INSTRUMENTS (UK) LTD

DATE OF ISSUE: 9<sup>th</sup> November 2010

CERTIFICATE NUMBER: 18287a



## rotronic

LEADING IN HUMIDITY MEASUREMENT



Calibrated by: C Aicken

Approved Signatory: R Gee

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Page 1 of 1

Dates Measurements Performed:  
5<sup>th</sup> November 2010

Calibration Procedure Used: RUKP2

Customer Details : Signatrol Ltd, 105 Church Street, Tewkesbury, Gloucestershire, GL20 5AB  
Customer's Order Number : 43606  
Rotronic Ref Number : 18287  
Instrument Description : Humidity and Temperature Probe  
Manufacturer : Rotronic AG  
Model Type (s) : HC2-S  
:  
:  
Serial Number (s) : 60508298  
:  
:  
:

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 liquid temperature bath under controlled laboratory conditions  $23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$  at a relative humidity of less than 60%.  
The probe under calibration was immersed to a depth of 150 mm

Applied Temperature $^{\circ}\text{C}$	Indicated Temperature $^{\circ}\text{C}$	Instrument Error $^{\circ}\text{C}$	Calibration Uncertainty $^{\circ}\text{C}$ *
-0.01	-0.01	0.00	0.08
40.00	39.98	-0.02	0.07

\*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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