

# CERTIFICATE OF CALIBRATION

ISSUED BY The Roxspur Measurement & Control  
Calibration Laboratory



0043

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Assessed Signatory

JON WATSON

Date of Issue: 08 November 2016

Certificate Number 100984

**Customer:** SIGNATROL LIMITED  
UNIT E2  
GREEN LANE BUSINESS PARK  
GLOUCESTERSHIRE  
GL20 8SJ

Date Received 20 October 2016  
RM&C Order Ref. L504833  
Customer Order No. 45227  
Calibration Date 08 November 2016

## Equipment Information

Description	GALLENKAMP AUTOTHERM DIGITAL INDICATOR WITH PROBE		
Manufacturer	GALLENKAMP	Serial Number	CE09/JN/10104-1 & 004606
Model Number	AUTOTHERM	Customer Inventory No.	CE1056
Calibrated Range	-70 °C to 190 °C	RM&C I.D. No.	RMC0023067
Scale / Resolution	0.01 °C		
Calibration Points	-50 °C, 0 °C, 30 °C, 130 °C & 190 °C		

## Conditions

Lab Temperature	21.0 °C ± 2 °C	Department	TEMP - BATH
Probe Type	Pt100	Engineer	SHAUN BOLDY
Probe Length	330 mm	Last Certificate Number	81321
Probe Diameter	6 mm		
Min. Immersion Depth	200 mm		

## Procedure : RM&C 023 DTI & RTD

The thermometer under test was allowed to equilibrate within a controlled, stable environment, the temperature of which was measured using traceable reference Platinum Resistance Thermometers. The following results indicate the measured test thermometer temperature against the measured temperature at the time of calibration. The measurement uncertainty was calculated in accordance with M3003 (Edition 3 – November 2012) and as such takes into account such factors as the calibration & drift of the reference standards, stability, repeatability and resolution of reference instruments and that of the unit under test.

The results are valid at the time of calibration only. The temperature scale used was ITS-90. All measurements are traceable to National Standards. Calibration has been carried out using Laboratory procedures (LAB-PROC-023) in accordance with BS EN ISO 17025. The results are valid at the time of calibration only and are "As Found" (i.e. No Adjustments Made).

## Notes :

Probe Serial No: 004606 was calibrated in channel A at -70 °C, 0 °C, 30 °C, 130 °C & 190 °C

No measured errors, in the parameters checked, exceeded a tolerance of ±0.06 °C, not taking into account the uncertainty of measurement.

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

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## Calibration Results

Serial No: CE09/JN/10104-1 & 004606 in Ch A

Reference Temperature °C	Thermometer Reading °C	Measured Error °C	Measurement Uncertainty ± °C
-0.005	0.043	0.05	0.06
-49.932	-49.897	0.03	0.06
-0.008	0.030	0.04	0.06
30.025	30.068	0.04	0.06
130.070	130.117	0.05	0.06
189.993	190.042	0.05	0.06
-0.008	0.041	0.05	0.06

- End of Certificate -

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

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