

Product XC air temperature sensor
 Serial number 22Q101
 Date of calibration 09 November 17
 Customer name Starrag USA, Inc.
 Customer address 2379 Progress Drive
 Customer reference Hebron, KY 41048



Calibration certificate

Specification Air temperature sensor accuracy $\pm 0.20\text{ }^{\circ}\text{C}$

Measured values and uncertainties of calibration

Time (mins)	Air temperature ($^{\circ}\text{C}$)		
	Reference	Measured	Error
0	22.05	22.03	-0.02
10	22.05	22.04	-0.01
20	22.06	22.05	-0.01
30	22.05	22.04	-0.01
40	22.06	22.05	-0.01
50	22.06	22.05	-0.01
60	22.08	22.06	-0.02
Mean error			-0.01
Uncertainty (k=2)			0.07

Reference standards	Ref. no.	Certificate no.	Date
XC air temperature sensor	170W74	170W74-171007-00	07 October 17
Test Procedure	PT-50304		01 January 01

Laser measurement system accuracy: When a Renishaw XL-80 laser is used with a Renishaw XC-80 compensator and a Renishaw air temperature sensor (*all within specification*) the laser measurement system accuracy in linear measurement mode will be within: $\pm 0.5\text{ ppm}$ (k=2) - see the system manual for details.

Authorised signature	Signatory	Position	Date
	Joe Pichon	Service Center Manager	09 November 2017

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Renishaw Inc
 1001 Wesemann Drive
 West Dundee
 IL 60118



Calibration Cert # 2707.01

Certificate number
 22Q101-171109-00

L-9908-1144-03

CALIBRATED BY: *unp* Date: *11-9-17*

Product Air temperature sensor
Serial number 22Q101
Date of calibration 08 June 2017

RENISHAW 
apply innovation™

Calibration certificate


Specification *Air temperature sensor accuracy* $\pm 0.2\text{ }^{\circ}\text{C}$

Measured values and uncertainties of calibration

Reference sensors mean temp.($^{\circ}\text{C}$)	0.07	10.02	19.99	29.96	39.94
Sensor mean temperature ($^{\circ}\text{C}$)	0.07	10.02	19.99	29.96	39.93
Mean temperature error ($^{\circ}\text{C}$)	0.00	0.00	0.00	0.00	-0.01

	Max error	Uncertainty (k=2)
Air temperature sensor error	-0.01 $^{\circ}\text{C}$	$\pm 0.04\text{ }^{\circ}\text{C}$

Reference standards	Ref. no.	UKAS	Certificate no.	Calibration date
Reference resistor	RUK14750	0126	T492395	13 th December 2016
Reference resistor	RUK14749	0126	1-7800622654	19 th April 2017
Reference semi-standard PRT	650	0175	17-02-44	10 th February 2017
Reference semi-standard PRT	878	0175	16-11-98	23 rd November 2016

Authorised signature	Signatory	Position	Issue date
	William Lee	Divisional Director	8 th June 2017

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Certificate number
22Q101-170608-00

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