

CERTIFICATE OF CALIBRATION

Issued by: RS Components Ltd

Date Issued: 24 Jun 2019

Certificate No. 1585453



RS Calibration

Calibration and Repair Service

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Sharleen Forde

Client	VIAMED LTD KEIGHLEY WEST YORKSHIRE BD20 7DT
Instrument	Thurlby Thandar TF930 Frequency Counter
Serial No.	425571
Client Reference	N/A
Procedure ID.	665_4919_TF930 Rev P10
Date of Calibration	24 Jun 2019

Remarks

This certificate reports recorded values for the instrument 'As Received'.

Uncertainties

The reported expanded uncertainties are 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.



RS Components takes its environmental responsibilities very seriously and as such has printed this double sided document in black and white, on paper from sustainable sources.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes

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UKAS Accredited Calibration Laboratory No. 0310



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Environment

The ambient temperature and relative humidity throughout the calibration were $(20 \pm 2) ^\circ\text{C}$ and $(40 \pm 20) \% \text{RH}$ respectively.

Method

Prior to the calibration the instrument was held within the laboratory for a period of not less than 1 hour.

The instrument readings are recorded in the table below and are those with the instrument set for an appropriate gate time.

	Applied Value	Gate Time	Nominal Amplitude	Unit Reading
<u>Input A</u>	50 Hz	1 s	42 mV	50.000039 Hz
	110 Hz	1 s	42 mV	110.00009 Hz
	110 Hz	10 s	42 mV	110.000087 Hz
	1.1 kHz	1 s	42 mV	1.1000009 kHz
	1.1 kHz	10 s	42 mV	1.10000087 kHz
	11 kHz	0.3 s	42 mV	11.000009 kHz
	11 kHz	1 s	42 mV	11.000009 kHz
	11 kHz	10 s	42 mV	11.0000087 kHz
	110 kHz	1 s	42 mV	110.00009 kHz
	1100 kHz	1 s	42 mV	1100.0009 kHz
	11 MHz	1 s	42 mV	11.000009 MHz
	11 MHz	10 s	42 mV	11.0000087 MHz
	110 MHz	1 s	42 mV	110.00009 MHz
<u>Input B</u>	110 MHz	0.3 s	70 mV	110.00009 MHz
	110 MHz	1 s	70 mV	110.00009 MHz
	110 MHz	10 s	70 mV	110.000086 MHz
	2000 MHz	1 s	70 mV	2000.0010 MHz
<u>Period</u>	2 MHz	1 s	42 mV	500.00085 us

Measurement Uncertainties

10 Hz to 100 kHz	$\pm (1 \text{ in } 10^6 + 1 \text{ L.S.D})$
100 kHz to 1 MHz	$\pm (1 \text{ in } 10^7 + 1 \text{ L.S.D})$
1 MHz to 2 000 MHz	$\pm (5 \text{ in } 10^8 + 1 \text{ L.S.D})$

END OF CALIBRATION

CALIBRATED BY :- SFO

Reported values

The uncertainties quoted refer to the applied values, which include any identified contribution of the instrument under test and not to the ability of the instrument to maintain its calibration.

When in use due allowance should be made for the stability of the reading as found in the 'UUT L.S.D. Stability' column.

The L.S.D component of the above measurement uncertainties refers to the display resolution of the unit.