

CERTIFICATE OF CALIBRATION

Issued by: RS Components Ltd

Date Issued: 17 Nov 2022

Certificate No. 1771226



0310

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	CE0185
Procedure ID.	665_4919_MultiCal Rev P4
Date of Calibration	17 Nov 2022

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.

The following calibration results relate only to the items defined above.

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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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
Input A	50 Hz	1 s	42 mV	50.000073 Hz
	100 Hz	1 s	42 mV	100.00014 Hz
	100 Hz	10 s	42 mV	100.000145 Hz
	110 Hz	1 s	42 mV	110.00016 Hz
	110 Hz	10 s	42 mV	110.000159 Hz
	1 kHz	1 s	42 mV	1.0000015 kHz
	1 kHz	10 s	42 mV	1.00000145 kHz
	1.1 kHz	1 s	42 mV	1.1000016 kHz
	1.1 kHz	10 s	42 mV	1.10000160 kHz
	11 kHz	0.3 s	42 mV	11.000015 kHz
	11 kHz	1 s	42 mV	11.000016 kHz
	11 kHz	10 s	42 mV	11.0000160 kHz
	110 kHz	1 s	42 mV	110.00016 kHz
	1.1 MHz	1 s	42 mV	1.100002 MHz
	10 MHz	1 s	42 mV	10.000014 MHz
	10 MHz	10 s	42 mV	10.0000145 MHz
	11 MHz	1 s	42 mV	11.000016 MHz
	11 MHz	10 s	42 mV	11.0000159 MHz
	110 MHz	1 s	42 mV	110.00014 MHz
Period	2 MHz	1 s	42 mV	499.99927 us

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	Applied Value	Gate Time	Nominal Amplitude	Unit Reading
Input B	110 MHz	0.3 s	70 mV	110.00014 MHz
	110 MHz	1 s	70 mV	110.00014 MHz
	110 MHz	10 s	70 mV	110.000142 MHz
	2 GHz	1 s	70 mV	2.000003 GHz

Measurement Uncertainties

10Hz to 100kHz	$\pm (3 \text{ in } 10^{-9} + 1 \text{ L.S.D})$
100kHz to 1MHz	$\pm (2 \text{ in } 10^{-10} + 1 \text{ L.S.D})$
1MHz to 2GHz	$\pm (5 \text{ in } 10^{-10} + 1 \text{ L.S.D})$

CALIBRATED BY :- CJS

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.
END OF CALIBRATION