

CERTIFICATE OF CALIBRATION

Issued by: RS Components Ltd

Date Issued: 04 Apr 2016

Certificate No.

1434123



Calibration and Repair Service

Page 1 of 2 Pages

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MARK CONNELLY

Client	VIAMED LTD KEIGHLEY WEST YORKSHIRE BD20 7DT
Instrument	Thurlby Thandar TF930 Frequency Counter
Serial No.	425571
Client Reference	CE0185
Procedure ID.	665_4919 Rev. P2
Date of Calibration	04 Apr 2016
Performance Status	Pass

Equipment Used to Carry Out Calibration

Equipment ID.

AFG3101 SIGNAL GENERATOR
TGR2050 SIGNAL GENERATOR
FREQUENCY COUNTER 53181A
FREQUENCY STANDARD

Cal 998
Cal 877
Cal 1012
Cal 1095

The measurements reported in this certificate were carried out using equipment whose values are traceable to national standards.

All procedures employed and results reported are in compliance with the requirements of the International Standard ISO/IEC 17025:2005.

The management controls of the RS Calibration Laboratory are registered under the British Standard BS EN ISO 9001 : 2008 No. RS 00362.

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%.

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



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Page 2 of 2 Pages

The instrument was allowed to stabilise in the laboratory for a period of not less than 1 hour before any measurements were made.
The ambient temperature and relative humidity throughout the calibration were $(20 \pm 2)^\circ\text{C}$ and $(40 \pm 20)\%\text{RH}$ respectively.
The instrument readings are recorded in the table below and are those with the instrument set for an appropriate gate time.

Input A	Applied Value	Gate Time	Nominal Amplitude	Instrument Reading	UTL L.S.D Stability
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50 Hz	1 s	42 mV	50.000 012 Hz	1
100 Hz	1 s	42 mV	100.000 03 Hz	1
1 kHz	1 s	42 mV	1.000 000 3 kHz	1
10 kHz	0.3 s	42 mV	10.000 001 kHz	1
10 kHz	1 s	42 mV	10.000 003 kHz	1
10 kHz	10 s	42 mV	10.000 002 4 kHz	0
100 kHz	1 s	42 mV	100.000 03 kHz	1
1 MHz	1 s	42 mV	1000.000 2 kHz	0
10 MHz	1 s	42 mV	10.000 002 MHz	0
100 MHz	1 s	42 mV	100.000 02 MHz	1

Input B

100 MHz	0.3 s	70 mV	100.000 03 MHz	1
100 MHz	1 s	70 mV	100.000 02 MHz	0
100 MHz	10 s	70 mV	100.000 024 MHz	1
2 000 MHz	1 s	70 mV	2 000.000 5 MHz	0
2 MHz	1 s	42 mV	499.999 99 us	1

Measurement Uncertainties

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

END OF CALIBRATION

CALIBRATED BY:- MSC

Compliance to Specification

The specification published by the manufacturer and found in the instrument's handbook has been used to determine performance at the measured points.

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 'UTL L.S.D. Stability' column.

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